

ECONOMIC & MANAGEMENT ISSUES IN **RETROSPECT & PROSPECT**



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(Edited by: Eszter Wirth, Orhan Şimşek, Şükrü Apaydın)

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SECTION **1.**

POLITICAL ECONOMY AND ECONOMIC HISTORY

1

WERNER SOMBART AND HIS ANALYSIS OF “THE FUTURE OF CAPITALISM”¹

Mesut SERT²

“...in order to comprehend German fascism, we must revert to Ricardian England”
(Polanyi, 2001, p. 32)

Introduction:

Polanyi’s words mentioned above are frequently quoted and it can be interpreted as a summary of his magnum opus, *The Great Transformation*. In this book, Polanyi tries to show us how capitalism coexists with fascism or how fascism is an ordinary regime of capitalism.

It is unlikely that there could be any text which verifies Polanyi’s words better than the text which was written by Werner Sombart, a famous German economist, at the dawn of Nazi regime in 1932. As a final version of his lecture which was held in the Study Association for Money and Credit Economy [Studiengesellschaft für Geld und Kreditwirtschaft] on February 29, 1932, this booklet is for the most part on the current situation or the problems of capitalism. Writing in the context of the Great Depression, Sombart was not content himself with revealing the problem, but he also proposed a solution that made him a proponent of the Nazi regime.

In this paper, it will be firstly introduced Sombart and his philosophical journey, emphatically relation with National Socialism and then his *Die Zukunft des Kapitalismus* (The Future of Capitalism) is examined in his whole analysis.

Sombart: From “Marxism” to National Socialism

It should be initially said that it is difficult to elaborate Sombart’s thought because of his rapid change in thought. Kuczynski’s words seem to be explanatory in this respect: “He was one of the most colourful and chameleon-like and interesting academic personality that Germany produced in the decades from the 1890’s to the 1930’s” (1968, p. 59).

He was born in 1863 as a son of a well-to-do and cultured member of the middle class. Because of some health problems, he moved to another city and started to study in a different area and lastly studied law in Berlin. During his time in Berlin, he studied economics, political science, history and philosophy, and he also attended the seminars of Gustow Schmoller and Adolph Wagner, famous Katheder-socialists. These seminars aroused his scientific interest and had a big impact on his thought (Kuczynski, 1968, p. 57).

1 This paper is the result of my one-year research stay under the supervision of Prof. J. Backhaus in the University of Erfurt, Germany, which supported by the Scientific and Technological Research Council of Turkey (TUBITAK). Special thanks to my colleague Arif Rüzgar for his encouragement and help in translation from German into English and Taner Akpınar for his comments.

2 Ph.D., Akdeniz University.

He got his Ph.D. from the University of Berlin in 1888 with the dissertation about the *Roman Campagna* (Sombart, 1888a) under the supervision of Schmoller. In his dissertation, Sombart investigated the soil condition, climate, the production techniques and social relationships of Campagna in a systematic and historical way by using primary sources from Roman State archives. It was considered as "scientifically probably the best, he ever wrote" (Cited in Brocke, 1996, p. 23) as well as praised as impressive by Adolph Wagner. His dissertation is also important with regard to the conclusion reached. For Sombart, rural impoverishment was not always a matter of fact and therefore should not be accepted as a natural fact; on the contrary, this situation could be changed politically. He saw the exploitation of the rural proletariat by the aristocratic landowners as an economic plague-spot and a cure of it could only come from a state policy that would try to change the prevailing property right structures (Brocke, 1996, p. 24).

Although he can be interpreted as a Marxist with reference to his writing on *Roman Campagna* (Sombart, 1888b), it could be early to reach this kind of comment in case of Sombart. In fact, there has been a long debate especially on his relation with Marxism and National Socialism. However, one consensus comes along with this dispute that his thought has undergone repeating changes. Most of the authors agreed that "initially he approached economic or social problem from the point of view of Marxist and gradually moved toward a far more conservative position" (Kuczynski, 1968, p. 58).

There is no doubt that his work Campagna is the first stage of this motion but it can also be viewed as a text which asserted basic elements of his later analysis especially in *Die Zukunft des Kapitalismus* (Sombart, 1932) rather than his Marxist orientation. Firstly, the names of Marx and Engels were not mentioned in Campagna, and "the writing of Zola, not Marx's had put young Sombart in touch with socialism" (Brocke, 1996, p. 26). Secondly, the classification which was developed along the lines of social interest groups is not Marxist because "Sombart includes, for example, the church as an interest group and he underlines the importance of little and capital-intensive great tenants and farmers which crosscut class categories" (Peukert, 2012, p. 531). Additionally, his proposition in the direction of nationalization of big holding does not necessarily mean that he was a Marxist or social democrat as stigmatized at that time³. This only shows us he is an "incorrigible opponent of free market mechanism"⁴ as well as the basic idea which will be met separately but without changing the essence in his *Die Zukunft des Kapitalismus*.

At the end of 19th century, another text which causes to be stigmatized as a Marxist was his article on Marx (Sombart, 1894), written just after the publication of the third volume of Capital. The importance of this article which was written with solicitation of Heinrich Braun, the publisher of Archiv für soziale Gesetzgebung, was to initiate the Marxist discussion within German economics. His *Zur Kritik* article became a model for many others and he was one of the first scholars doing so, long before Bernstein, Tönnies etc. Along with the comments of Rosa Luxemburg and George Lukacs this article was seen as the best that had ever been written in German language on Marx (Brocke, 1996, pp. 27-28).

3 It seems very probable that this also retarded his academic advancement (Sutton, 1948, p. 317). Between 1897 and 1907, his six nominations for professorship have been turned down by the Grand Duke of Baden mainly for this reason (Peukert, 2012, p. 528). Grand Duke Friedrich wrote in a hand written letter to his Prime Minister and Minister of Justice, Culture and Education, Wilhelm Nökk: "...Sombart will not be able to educate either students of the Technische Hochschule (technical university) nor other students, because he is not sufficiently educated himself. The struggle against Social Democracy has to begin in the school, and in the technical universities, it has to be taught in a manner for us to fight the dangers of Social Democratic movement. For this purpose, another teacher would be more appropriate" (Cited in Brocke, 1996, p. 40).

4 According to Peukert, his opposition to liberalism and capitalism is also the reason for aversion against him (2012, p. 528).

In this article, Sombart saw the publication of the third volume of *Capital* as an intellectual event, in spite of the bad arrangement by Engels and he made an intelligent interpretation of Marx especially on the second part of the article which is about the value and surplus value (Brocke, 1996, pp. 27-28). According to him, value is the only concept of mind and does not correspond to motives or real tendencies and that's why the transformation problem is not a real problem (Peukert, 2012, p. 535).

Zur Kritik text is also remarkable because of the letter which Engels wrote a few months before his death in 1895. In his laudatory letter, Engels wrote that:

"...it is the first time that a German professor has made the effort to try to understand from his writings what Marx really has been saying and to explain why criticism of the system of Marx will not lead us to its refutation but will only contribute to its further elaboration" (Cited in Brocke, 1996, p. 28).

Although it is not clear that whether these lines are adequate to characterize Sombart as a Marxist, these probably lead him to provoke to complete Marx's work. In his letter, Engels puts also the needs to complete *Das Capital* by a true historical exposition of the origins of capitalism and drew Sombart's attention to the fact that the ideas of Marx should not be interpreted as a doctrine but as a method and they do not provide clear-cut dogmas but beacons for further research as well as the method for this research (Brocke, 1996, p. 28).

Sombart's effort in the following years is mainly and primarily seen as "the verification, completion, correction, and continuation and finally finishing off of the work of Marx" (Brocke, 1996, p. 29). The importance of the sentences in the preface of *Der Moderne Kapitalismus* which is usually quoted to assert his Marxist orientation can now be understood well. He wrote in the third edition that

"...This work is intended to be nothing but the continuation and, in a sense, the completion of the work of Marx work... Anything that is good in my work, I owe to the mind of Marx. Marx spoke the first proud words about capitalism. In this work, the last modest words about this economic system are said" (Cited in Brocke, 1996, p. 61).

In consideration of these lines, one can observe that he was a Marxist at the beginning of his philosophical journey, but it can also be true that a lot of changes would also go along with this journey. These changes can concretely be followed in three of his books.

Sombart's first study which is directly on Socialism, *Sozialismus und soziale Bewegung im 19th Jahrhundert* (Sombart, 1896) appeared in 1896. It was the output of his Zurich Lectures which was organized by Otto Lang, the leader of the Swiss Social Democracy. It was a pamphlet with 130 pages but went through several editions, each increasing in volume⁵ and translated into more than twenty languages⁶ (Sutton, 1948, p. 316; Kuczynski, 1968, p. 58). In the meantime, the only thing which changed was not only volume but also the content of the book. Generally agreed that "the first nine editions were sympathetic to the Socialist movement" (Epstein, 1941, p. 525). But his perception of socialism seems different from Marx since the outset. Even in the first edition, Sombart criticized Marx not to recognize the existence of the communities like nation and drew attention to the importance of national differences. He wrote in *Sozialismus und soziale Bewegung* that

5 The fifth edition (1905) ran to 329 pages, the sixth (1908) to 395 pages. The English translation, *Socialism and the Social Movement* published in 1909, was of the sixth German edition (Epstein, 1941, pp. 524-525).

6 First English translation published immediately after the first German edition which translate by A.P. Atterbury in 1898 (Sombart, 1898) and then in 1909 (Sombart, 1909) published another translation by M. Epstein from sixth German edition.

"The socialist movement can be stopped at any moment if at any time the national antagonisms emerge powerfully. Then the social conflicts must fall silent, because the existence of both contesting group is threatened... The moment can come when society says to itself: all international conflicts are now meaningless against the threat of the external enemy" (Cited in Brocke, 1996, p. 31).

As well as the national element of his Marxist analysis, his explanation on the birth of social movement in Europe attributed to the industrial revolution will be met again in his *Die Zukunft des Kapitalismus*⁷.

Even it is still thought that he was a Marxist notwithstanding these differences above, he had moved away from Marx in later edition of *Sozialismus*, especially from the fifth edition in 1905. He rejected essential theories of Marxism such as the theory of capital accumulation and the social hardship theory⁸, the crash theory and the concentration theory, which made the "entire Marxist theory of capitalist development" an empty shell (Brocke, 1996, p. 33).

In 1924, the 10th edition consists of two volumes and was altered the title as *Der Proletarische Sozialismus* (Sombart, 1924). As understood from the title, this book was about and criticized Soviet Union experience. Besides having a "vitriolic language" (Epstein, 1941, p. 525), it was "violently antisocialist in general and anti-Marxist in particular" (Kuczynski, 1968, p. 58). National aspect of his analysis can also be followed in this book. He proposed that two forces determine the history: socialism and nationalism, and he wrote that "...on the one hand the struggle for food-division and on the other for feeding-place on earth" (Cited in Brocke, 1996, p. 32).

The final edition of the book appeared in 1934 under the title of *Deutscher Sozialismus* (Sombart, 1934). It was viewed that this book was a proof of his volte-face⁹. It could not be known whether it was the result of senility but it was obviously "a plea for the Nazi political system" (Epstein, 1941, p. 525). Although he expressly stated to have a national socialist orientation, the book was very ambivalent in many parts. For example; the leader is necessary but it may also be a leading group, racial segregation is rejected but Jews should not exert higher professions, the economy should be planned but private property of means of production should also exist (Peukert, 2012, p. 537).

Most of the arguments which were elaborated in the book had already been written in his previous study *Zukunft*. The baseline of the book which can be summarized as being against the 150 years old economic epoch and the primacy of the economy was the same. The most notably, he called for resolute leadership in both study.

In an environment which National Socialism was on the rise, Sombart seems like to hope playing a part in Nazi politics. He clearly conceded the *Deutscher Sozialismus* as "a political, not a scholarly work" (Brocke, 1996, p. 75). In furtherance this, at the end of his inaugural speech for the Prussian academy in June 1934, he declared that in this book he tried to show "in which way scientific knowledge can be made useful, also for politics" (Cited in Brocke, 1996, p. 75).

However it seems that he did not get what he expected. Even "he openly confessed to the 'Führerprinzip' (leadership principle)" (Brocke, 1996, p. 77) in *Deutscher Sozialismus*, nevertheless official National Socialism never accepted

7 According to Sombart the birth of social movement in Europe was a natural and necessary reaction to the "complete shift of all forms of existence" that were created by industrial revolution (Brocke, 1996, p. 30).

8 In 1906 (Sombart, 1906) he described the living condition of the proletariat and stressed that besides material condition, "all old ideals broke down, man is alone and looks for community in the socialist grouping" (Peukert, 2012, p. 536).

9 This point is questionable and there is a debate whether there is a U-Turn in Sombart's thought. For detail see (Töttö, 1996); (Blum, 1996). In our opinion it could be mention "the continuity of Sombart's thought on socialism over almost 40 years" as Peukert asserted (2012, p. 537).

Sombart as its interpreter. The official newspaper of The National Socialist declared stiffly that “There is only one way, that of our leader Adolf Hitler and not a second one of Herr Professor Sombart” (Cited in Brocke, 1996, p. 78).

As a final word concerning to his relation with Marxism and National Socialism, he stated himself as follows in his autobiography (Sombart, 1987); “My Socialism although it was built on a scientific basis...has been a combative writing...I said yes to Marx, but extracted from his doctrine such conclusion that would make the insertion of the proletariat into the national community possible” (Cited in Brocke, 1996, p. 38).

In the history of economic thought, Sombart is commonly remembered in relation to National Socialism¹⁰, but his writings especially on Capitalism¹¹ which were really impressive and important to understand the genesis of Capitalism are generally ignored. It can be concluded that there is one truth that Sombart opposed liberalism and capitalism since the outset when considering his life and writings.

In the following part, one of his writings *Die Zukunft des Kapitalismus* will be examined associatively his other wrings as well as summarized widely.

The Future of Capitalism

Firstly presented as a lecture in the Study Association for Money and Credit Economy¹² [Studiengesellschaft für Geld und Kreditwirtschaft] on February 29, 1932, at the deepest point of the Great Depression, and then published with the title of *Die Zukunft des Kapitalismus*, The Future of Captalism is an important text to represent a summation of Sombart’s intellectual background as well as to show his relation to National Socialism. This book is known with his proposal towards planned economy and the conclusion which meant to be a call for resolute leadership; both seem to draw attention as followed from the newspaper published in this period¹³.

The book starts with three important sentences that can also assess as an abstract. “The economy is *not* our ‘destiny’, [Schicksal]”, “an autonomy [Eigengesetzlichkeit] of the economy’ does *not* exist” and “leap from the realm [Reich] of necessity to that of freedom’ we do *not* need to wait for communism” (5)¹⁴.

If we consider these lines, the question which has to be answered is that what determines the future of the economy. Sombart answers this question by stressing “...the economy is not a natural process [and] it will be designed by the free decision of mankind’s cultural institution” (5). For Sombart the men who make a decision are a special men; they are an “intentioned men [wollender Menschen]” and “...the future of the economy or a particular economic system is at the discretion of [these men]” (5).

10 Peukert summarized his relation with National Socialism as “temporary support” and “irresponsible Bohemian flirtations” (2012, p. 528).

11 In this respect his *magnum opus Der Moderne Kapitalismus* (Sombart, 1902) and other complementary books e.g. *Luxus und Kapitalismus* (Sombart, 1912), *Der Bourgeois* (Sombart, 1913a), and *Krieg und Kapitalismus* (Sombart, 1913b) are important.

12 This association was founded in November 1931 by the Lübeck industrialist Dr. Heinrich Dräger et al., and composed of industrialists, bankers, economic journalists and a few university professors notably Sombart (Brocke, 1996, pp. 65-66).

13 The newspaper *Deutsche Allgemeine Zeitung*, which stood close to heavy industry, reported in January 1933 that Sombart had put forward the “most stimulating thesis of a planned economy” that one had been able to read so far and it honoured him as a scientist who in years to come would be seen as “one of the intellectual fathers of National Socialism” (Brocke, 1996, p. 68).

14 All of the page numbers in bracket which quotation in this part of the paper is from (Sombart, 1932) and all the italics and quotation marks are in original. It is also given the original German words in bracket when it is necessary.

Intentioned men are an important component of his methodological analysis which was developed constitutively in his *Die Drei Nationalökonomien*¹⁵ (Sombart, 1930). As Peukert pointed out "...the free will is a necessary assumption of Verstehen" (2012, p. 541). In Sombart's Verstehen methodology he differentiates three types of understanding; *Sinnverstehen* (understanding of meaning), *Sachverstehen* (understanding of circumstances) and *Stilverstehen* (understanding of style). The last category is also related to the understanding of individual motives and is called by Sombart as *Seelenverstehen*. It means that "all action has to be reduced to human intentional motives" (Peukert, 2012, p. 541).

The conclusion of all these for Sombart is that "the future form [Gestaltung] of the economy is not primarily a knowledge [Wissens], but a will problem [Willensproblem]" (5). If the problem is introduced like this, there will be nothing to do in a scientific manner. But Sombart underlines three of things which can be done by a scientist "...even if you are not equipped with a 'crystal ball'" (5). First, "The *possibilities* [Möglichkeiten] that exist for the choice of goals", second "The *necessities* [Notwendigkeiten] which are bound the realization [Verwirklichung] of the intended purposes", third "The *probabilities* [Wahrscheinlichkeiten] that arise for the choice of purpose and selected means of their realization" (6).

To collect a possible conceptual of the facts and to be able to judge in all these directions Sombart emphasizes the necessity of having "...an exact knowledge of the present and dominant force" (6). According to him, there is a difference between a scientist and a man of practical life with regard to having knowledge. Latter "knows [of course] a lot of details of events but they often lose sight of the overall context" (6), because of "thinking in weeks, days and hours" (7). In order "not to get lost in the contingencies [Zufälligkeiten] of the day" and "to feel the pulse of the time beyond it" (6) scientists should "think in terms of years, decades and centuries" (7). Conveniently this view, he begins "to design a sketch of the *present phase* [Zustandes] of *capitalism*" (7) in following part of the paper.

In the first part, Sombart draws a framework of the present situation of capitalism which will be concluded to define a new epoch. He starts with the admission that despite losing its domination, capitalism "is also seen today as a common [verbreitetes] economic system" (7). Since he is aware of "the situation [Lage] of capitalism is understandably very different in different countries" (7), he limited his study "to the old capitalist countries of Europe, in particular, Germany" (7).

According to Sombart the important things for capitalism is to develop new forms of economic life, and the uniqueness of it comes from this. In his words "the capitalist economic system itself has undergone [erfahren] significant changes...which proves [erweist] the uniqueness of an economic system" (8). These are "changes in economic sentiment [Wirtschaftsgesinnung], the order [Ordnung] and the Technique [Technik]" (8).

In respect to the economic sentiment, Sombart names "...the capitalism peculiar *economic sentiment* [Wirtschaftsgesinnung] as capitalist spirit" (8) and claims that "this has undergone very significant changes in recent decades which are suitable to change [in] its essence". According to him "this essence was the tension between rationalism and irrationalism, speculation and calculation, bourgeois and robber spirit [Bürger- und Räubergeist]" (8) in the past. Although this tension has decreased and the rational moment has increased significantly, he believed that "...a fully rationalized mind is not a true capitalist spirit any more" (8). He reached this conclusion through the observations of his time. According to them, Sombart experiences the "...reducing the importance of specific entrepreneur and intuition" (8), that can be defined as a changing from "the daring, the daredevil, the adventurers and conquerors"

¹⁵ This is the only book which is directly on his methodology.

to “the safety and continuity” (8). This changing causes “...reducing the pursuit of profit and losing readiness” (9) on the one hand and “...concentration, cartelization and the share system” (9) on the other hand.

The second significant change in the capitalist economic system is the changes in *the order*. Sombart said that “The order, proper to the capitalist economic system is the free, which we also call individualistic” (9) order. But “[this] economic order has become now in the course of the last generation and from year to year more tied in crucial points” (9). According to him there are very different kinds of ties [Bindungen] and some of these are “ties of individual entrepreneur through bureaucratization; ties of the entrepreneur with each other through cartels, etc.; ties through the state for a long time workers protection and worker insurance, in modern times through dispute settlement and price control (Cartel regulation!); ties of the workers through work councils, collective agreements, etc” (10).

According to Sombart “Finally - and perhaps the most importantly - the *Technique* of business [Wirtschaftens] has changed fundamentally” (10). “[T]he old market mechanic which is essentially based on the capitalist economic system has been turned off [ausgeschaltet]. This market mechanic was known to have the following automatic course of event [Hergang]: supply and demand determined the ‘market situation’, the market situation determined commodity prices, commodity prices determined wages, and wages determined the profits. None of this is now anymore. Rather, the prices are arbitrarily controlled by the cartels (if not the state), the wages are arbitrarily governed by the unions without regarding to the market situation, so that in recent years we have seen the spectacle that prices and real wages remained at the old level, while the market situation has reached an unprecedented low” (10-11).

All these changes seem to Sombart as a new era of capitalism. In Sombart’s words “[t]hese changes, which are clearly perceptible on all sides, and which the capitalist economic system has experienced extensively as well as intensively, have led me to speak of a new epoch...which I have called the epoch of *late capitalism* [Spätkapitalismus], according to my classification of economic epochs” (11). Mentioned classification of economic epochs relies on his capitalism analysis which is firstly introduced in *Der Moderne Kapitalismus*. In Sombart’s best known and his magnum opus *Der Moderne Kapitalismus* (Sombart, 1902) is delivered a historical – systematical analysis of capitalism and the development of capitalism is divided in to the three stages: Early capitalism [Frühkapitalismus] ending before industrial revolution, High capitalism [Hochkapitalismus] beginning about 1760, and Late capitalism [Spätkapitalismus] beginning with WWI.

As well as designation of current time as Late Capitalism, Sombart underlines another point which should also be considered in this time; “*relation with foreign economies*” (12). In the second part of the paper, he will first examine “the transformations within the national economies...with regard to their future” (12) and then will analyse the foreign relation in the third part.

In regard to the *future* of national economies, Sombart sees “...three possibilities for a future formation which correspond to three different points of view: the conservative, the reactionary and the reformer-revolutionary” (12).

“The *first possibility* is that everything stays the same [and] the current situation is basically preserved” (12). According to Sombart this also means that “we ‘keep quiet’ and we give a subsidy... we protect the farmers and promote the export industry” (13). In this *conservative* standpoint, “at least in Germany all parties, except for the

ruler [Regierenden], are dissatisfied with the status quo: some complain about the extensivities, others remain of capitalism, and all the lack of planning, contingency and purely arbitrariness of regulatory intervention" (13).

The *second* possibility, on which is insisted by large part of the business community, is *reactionary* point of view. In this option, "The film is rolled back: we return to the innocence of the so-called free market economy, to a genuine, unadulterated capitalism with unlimited entrepreneurial initiative and domination [Herrschaft]" (13). But Sombart does not think that "this return to 'free' market economy will accomplish [vollziehen]" (13). To clarify his claim, Sombart firstly insists that "the introduction of 'free trade' in 18th century rested on a misunderstanding" (14). Free market economy was a result of Isaac Newton's doctrine of the movement of stars which dominated in that time. After transferring this idea to human society and combining with the metaphysical idea of the pre-established harmony, free operation of individual economic agents replace with the movement of the stars. In Sombart's words "the harmony of the spheres' would bring about the 'harmony of interests' on earth" (14). Secondly, for Sombart, this idea is not only very specific but also is a result of historically determined conditions and if all these condition must be met, this idea will continue to remain, at least strange [absonderliche Idee]. He counted the conditions which emerged the idea of free as follows: firstly "The 'free trade' was used as a weapon of the capitalist in the struggle with his conflicting hostile powers" (15) and in this context "the capitalist interests played a role as general interests" (15). Secondly "the productive forces deployed in a previously unprecedented and subsequently never experienced manner" (15) and thirdly in relation to the 'progress' on technical and economic areas of the economic units were small sized" (15).

After these two – conservative and reactionary – options Sombart's suggestion for the future of the economy can be found in the last option, *reformist or revolutionary* standpoint. He expresses the importance of this standpoint via contrasting it with others. If we consider to the future, we put it to the present and the past in a contrasting way. According to him, "[t]he present characterizes planless tie and regimentation, the past [characterizes] planless freedom and individual arbitrariness, [and] the future can only be characterized by the planned design of the economy" (18).

For Sombart predicting *Planned economy* is "the basic idea of the future" (18). Due to the opinion that the major task of a scientist should be the dissolution of the catchwords [Schlagworte] like planned economy, Sombart is going to make clear the concept of planned economy in the following part of the paper.

In order to "...get an idea of the concept of planned economy" (18) Sombart puts forward planned economy "in contrast to wild, chaotic, disordered, planless and senseless economy" (19). Then he makes "some general statements...which characterize their *essence*" (19) and "highlights the features which are *necessarily* connected with the concept" (19). According to Sombart, there are three features; these are "comprehensiveness [Umfassendheit], uniformity [Einheitlichkeit] and variety [Mannigfaltigkeit]" (20).

Regarding to the *comprehensiveness* or *totality*, Sombart said that "planned economy only exists when planning refers to the totality of economies and economic processes within a larger circle" (20). Since economic world is distinguished as production, circulation, distribution and consumption, "the planning must extent in *all* these areas, especially the consumption" (20). But it does not mean that "every spoonful of soup we eat should now be allocated to us in a planned manner" (21) rather "there will be enough indifference and thus free zones in every total planning, especially in the area of consumption, within which everyone can do what they like and do whatever they like" (21).

Another characteristic which a perfect planned economy must have is “*uniformity* [that means] the planning must start from *one* place” (21). This feature is related to the authority where the planning is to be made. At this point, Sombart distinguishes between national and international institutions and gives importance to national institutions. According to him because of the structure and the nature of the League of Nations in that time, “[where] the planning has to be made obviously cannot be an international institution” (21) and the place where the planning must start from has to be national” (22). In Sombart’s words “...the planned economy must be a national economy, the national economy is necessarily planned economy” (22).

Sombart also underlines a misunderstanding which is connected with the concept of the planned economy that planning abolishes freedom of individuals in terms of both producer and consumer through regulation of economic life. But, according to Sombart, “neither the producer nor the consumer is completely free today. That is determined by the requirements of the ‘market’ on the one hand, and the competition on the other hand” (22). This means that “if the state or the custom [Sitte] does not intervene to regulate...only things are produced and come onto market that can be produced with [or for] profit” (22).

The third essential feature of planned economy is the *variety*. According to Sombart “...planned economy cannot be *thought* without the characteristic of the variety” (23) and “a variety of the organization of the economic life must arise necessarily in different directions” (23). Initially the *aim and direction of planning* should take accounts of the diversity of national units. From this point of view Sombart says that “It is sheer madness to try to develop a common plan for all economies” (23). In Sombart’s opinion the plan must consider “the absolute and relative *size* of economies” (24), “the different *social structure* of a country” (24) and finally “...the *national character*, the *cultural level* and the entire *history* of a country” (25).

As a conclusion of all these, Sombart stresses that “[n]othing is wronger than adopting a monism of economic forms of planned economy and equating them, for example, with the public economy [öffentlicher Wirtschaft], public enterprise [Gemeinwirtschaft], state capitalism [Staatskapitalismus] or collectivism [Kollektivismus]” (25). In Sombart’s planned economy, public and private sector are in compliance contrary to Soviet type of planning. He differentiates his suggestion to the Soviet type planning and says that “...every perfect planned economy...will have to foresee the coexistence and interlocking of a multitude of economic forms and systems. Private Ownership and Market Economy and Collective Needs Management [Bedarfsdeckungswirtschaft]...will be there;...cooperative and state or public sector [Gemeinwirtschaft] will be there. And - as far as we are concerned here in particular - the capitalist enterprise [Unternehmung] with largely self-reliance on its directors [Leiter] will certainly not be missing, because there will always be many tasks of economic life that can be best solved in capitalist form” (27-28).

Sombart reaches an early conclusion on the ground that the argument which was asserted before and says that “We are obviously dealing here with a kind of legality [Gesetzmäßigkeit] which governs the organization of economic life and which blind [or rabid] capitalism [bilindwitüge Kapitalismus] must submit to [or obey] [fügen]” (26). In his opinion, contrary to the prediction of *Karl Marx*, by doing this or under this rule, “there was no such *a* form of capitalist giant company [kapitalistischen Riesenunternehmung]” (26).

To achieve this there should be an *authoritative intervention* [autoritative Eingriffe] by the public authorities, namely the state” (30). They have many *means* [Mittel] of implementation [Mittel] like “*moral* or *educational* means, which are especially important in the planning of consumption” (29). He also “distinguish[es] a direct [and] an indirect

regulation" (30) both already known. According to him "we are already applying the measures that we will continue to apply in the future. What will distinguish them from the present is just a small thing - *the overall plan*" (32)..

According to him "[t]he most important direct regulation includes the following measures: the most radical, and in some cases inevitable, the nationalization [Verstaatlichung] or urbanization [Verstadtlichung] of whole sectors of the economy. Less brutal measures are [e.g.] the monopolization [Monopolisierung], the controlling [Kontrollierung] and the licensing [Konzessionierung] of certain economic activities. The mildest form of the regulation is the subsidization of this or that branch of production, this or that transport company, this or that goods distribution enterprise..." (30). Regarding the indirect regulation which can exert far-reaching effects on the structure of the national economy, he gives "...wise tax policy,...purposeful trade policy and ...intelligent monetary policy" (31) as the examples.

In the third part of the paper, Sombart analyses the economic relations among the nations. He first presents the main features of international situation as he did in previous parts which is about national economy. In his opinion economic relations among the nations is important because "...the future design of the economy and in particular, the future of capitalism will be significantly influenced by [it]" (32). In his view "all the peoples of the earth more or less commerce with each other [and] the *nature* of this commerce is always matters" (32). Although "there have been 'world economic' relations in all ages"... 'World economy' had a different character at all times" (33). He characterizes *the unique structure of the high capitalist world economy*, in a single sentence, [as]... the exploitation of the white race on earth, [or]... Earth through Western Europe" (33-34).

According to Sombart "this very special kind of world economy had three preconditions [Voraussetzungen]" (34). The first of these was "based on a well-functioning exchange, balancing and adjustment mechanism [which] was founded on peace, free trade and credit" (34). The second precondition was "the 'construction' of all exotic economies [which] was set in motion with the help of European capital, either directly or through public bonds" (34). Third was "namely that Western Europe seized and paid for the land products of all the countries of the world, whether as food or as raw materials" (34-35).

Sombart propounds that "...all these three preconditions on which the world economy rested can no longer apply in the present and certainly in the future" (35). In Sombart's word, what is happening in our eyes "is first of all the collapse of the free trade mechanism in which the world economy had hitherto been constrained: *no peace, no free trade, no good will*" (35). He sees tariff barriers and embargoes on imports, termination of loans as a signs of the times.

Although there may be people who do not attach much importance to these events and trust that the old balance will produce again on the international scale, Sombart thinks that "it would not be possible if only the conditions of the old world economy, the material conditions, were to be fulfilled again" (36), but he also sees there is a little chance.

Regarding the second precondition, it seems to Sombart quite inconceivable that "Western Europe could ever again become the financier of all over the world" (36) because of "the ambition of the exotics to finance themselves, which they will be able to do more and more" (37). He uses the Marx's well known schema, absolute and relative surplus value, to prove the correctness of this thesis. According to him "[b]oth the absolute and the relative surplus value will not rise in the near future as they have in the past" (36). Sombart asserts that "the absolute surplus value [will not rise] firstly because the population will not grow as much as it has grown so far...second[ly] working

hours will certainly not be extended...third[ly] the pace of economic activity will be wisely slowdown” (36-37). In terms of the relative surplus value, “[it] will not increase because of the absolute level of wage, ie. the price of labor force will rise, but not the productivity of labour, at least not nearly in the proportion in which it has risen in the last hundred years” (37).

“The third condition of the old world economy: the peculiar exchange of goods between Western Europe and the rest of the world...cannot be maintained [because of] the industrialization of the agrarian nation’s ” (37). In these countries “the ability to absorb industrial products will diminish and industrial exports to Western Europe will shrink” (37). In this respect, he disagrees with the idea that the structure of capitalism in the new countries will mean a new incentive to industry export for old capitalist countries. In his opinion “The young capitalist countries will essentially build up their means of production by their own means and will have to do away with imports more and more, perhaps after a short transition period” (37).

He summarizes the situation on which current capitalism is, as a one sentence: “With the ‘rule of the white race’ on earth is finally over, as well as with the ‘free trade’ within the states and many other beautiful things from the time before the World War” (39).

The result of all these evoke to Sombart a buzzword - *autarky* [*Autarkisierung*] *self-sufficiency* – “that has been playing a major role in the battle of opinions lately and that is no less ambiguously defined than the other ominous word planned economy...dealt with earlier” (39). In his opinion “autarky/ self-sufficiency does not need to mean that an economy is completely or, in the jargon of the daily press, wholly-owned, [and] devoid of all and every international relation...but it means less autonomy for everyone, even the smallest economy” (40). In the pursuit of self-sufficiency he says that “it will be necessary to consider each national unity in its individual character as in the case of planned economy” (40). However there is a possibility that small economies which have a similar economic condition “will [also] merge into an economic blocks in order to build a fairly self-sufficient economy” (40). In this respect he sees a closer connection with the south-eastern European countries as a right solution for them.

He points out that current situation of Germany is far away from autarky and defines it as “[a] point where we *must import* goods on a large scale in order to maintain our standard of living” (42). He stresses that “[t]he relationship between imports and exports has been reversed: import has become the primary, we *must* introduce and carry it out. In our language, we have transformed ourselves from an exporting country into an importing country. But with that we have lost our independence, we have ceased to be self-sufficient even in the humblest/modest application of this word (43).

Since it is hard to become self-sufficient as were hundred years ago, he suggests that “the way leading to this goal of national independence is *...re-agrarianization*” (44). According to him it “seems a crucial role to play in the internal construction of our [German] economy” (44).

In the final part of the paper he summarizes his effort by giving information about “...the possibilities, necessities and probabilities for a future form of economic life in general and capitalism in particular” (44). But in his opinion, “this will get its shape only to a small extent from the economic or whatever ratio: essentially, it is determined by the completely irrational *ideological attitude* [*weltanschaulichen Einstellung*] of the men who decide their destiny” (44-45).

According to Sombart, as underlined at the beginning of the paper, the only thing which is important in this process is the free decision of men and their will. In his opinion "the bearer [Träger] of the resolute will to reorganize the economic life may be different: he can emerge as an individual will as in the case of Lenin, Kemal Pasha, Mussolini; he can also be a collective will: it will depend on historical contingencies or indeed, on the peculiarity of the men" (45). Whatever the type "this will must be *strong, uniform-purposeful* and yet *lucid/clear-sighted [klarsichtig]*. That is why he will not be able to deny scientific knowledge" (45)

He lastly expresses his wishes as a citizen that "our country has the grace of such a will... Because we are aware that without him we sink into chaos" (45).

Conclusion

When Sombart died in 1941, it is true that he did not leave a good reputation behind him and he is mostly remembered with his relation with National Socialism by mostly being ignored his writings on Capitalism. In this context, *Die Zukunft des Kapitalismus* is an important text even though it is a small part of his oeuvre.

The importance of this text mainly comes from the last part which is explicitly a call for resolute leadership. It is undoubtedly that Sombart paved the way for National Socialism but it is noting much new. Even if his relation with National Socialism was contradictory, it can be said that he opposed liberalism and capitalism since the outset, which seems to peak in the World War I. In that period Sombart advocated anti-liberal and anti-democratic ideology of *German Sonderweg* against English liberalism.

Even if some parts were controversial i.e. how does planning and private property coexist and some not reveal clearly i.e. re-agrarianization, this text is also important in regard to give a good summary of his thought on Capitalism. It has connotations from his previous writings like *Der Moderne Kapitalismus* in respect to genesis of Capitalism, *Der Bourgeois* regarding to capitalist spirit etc.

Written in the dawn of Nazi regime which corresponds to the deepest point of the Great Depression, this text presents a good and explanatory picture of the current situation of Capitalism. The key feature of this picture is the recognition of the bankruptcy of capitalist economic system, which all offers are to overcome this collapse. Considered from this point of view it seems that Polanyi's double movement is at work and Sombart's wish on the embodiment of a resolute will come true as verifying it.

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2

FROM CONCESSIONARY FOREIGN CAPITAL TO PUBLIC PRIVATE PARTNERSHIP PROJECTS

M. Mustafa AYDIN¹, Saadet AYDIN²

Introduction

In the academic literature, there is no standard definition for public service term. However, with the broadest definition, the public service includes state employees and general administrative tasks (Evans, 2008, 3). Public service, which is outside the rules of market operation, should not be considered only as social goods production and service provision due to market failures and market insufficiency. In addition to this production, political, sociological and psychological reasons and redistribution objectives should be considered (Spicker, 2009, p. 970). The concept is determined by the capitalist model of production of the social structure. The fulfillment of common needs by the state creates a contradictory situation for the capitalist structure (Karahanoğulları, 2002, p. 4). The Constitutional Court of the Republic of Turkey defined the concept of public service as regular and continuous activities to meet the common needs of the society by taking the public interest into consideration (Gözler, 2003, p. 230). In the execution of public service; license, escrow, joint escrow, concession and public private partnership (PPP) procedures are used.

When we consider the execution methods of the public service within the framework of the financing models of the projects, it is possible to differentiate into three categories as state financing, public private partnership and privatization. In the narrow sense, we can define the model of public private partnership as a model of state and private sector participation (Leblebici Teker, 2008, p. 5).

Table 1: Project Financing Models

| State Finance | Public Private Partnership Models | Privatization |
|---|--|---|
| The project is funded and operated by the government. Risk and proceed belongs to the state. | <ul style="list-style-type: none">• Build-Transfer• Build-Rent-Operate-Transfer• Build-Transfer-Operate• Build-Operate-Transfer• Build-Own-Operate | <ul style="list-style-type: none">• Public service is owned and operated by the private sector.• Risk and proceed belongs to the private sector. |

Source: Leblebici Teker D. (2008). *Sağlık Sektöründe Proje Finansman Modelleri: Türkiye için Bir Model Önerisi ve Bir Hastane Fizibilite Analizi*. *Mufad Journal*, 37, p. 5

Güzelsarı (2012) defined PPP model, in the broad sense, as “integrated, comprehensive legal and institutional form of the methods where private sector participation is ensured to design, finance, construction and operation of the necessary infrastructure and facilities, or renewal, maintenance, repair and operation of an existing public investment for the realization of a service” (p. 30). When the practices in the world are examined, PPP varies among

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short term contracts, concession contracts, consortiums, partial privatizations etc. models. Private financing, special purpose companies and multi-structure, secondary market, securitization, complexity, commercial confidentiality and limited liability, outsourcing/subcontracting, deregulation, limited surveillance and marketization are the basic elements of PPPs (Güzelsarı, 2012, pp. 42-44).

Although not the same method as privatization, PPPs are the primary means of marketization of public services. PPPs have become the main method for the public service encounter, without the ownership being fully transferred to the private sector in the framework of various principles and rules. In order to eliminate the economic and social problems arising from the privatizations and suppress the social opposition in this direction, the PPPs have become an important option in the provision of new projects and services. The process of marketization of public services started with privatization practices and became widespread with PPPs (Şahin & Uysal, 2012, p. 158).

PPPs, which cause the management relations to evolve to a new widened stage, expand the private profit by deprivatizing the risk, damage the integrity of the administration that cause control and management problems, are the results of seeking flexibility in the organization and financing of public services. Under the name of PPP, the negative consequences of the privatization on large sections of society, such as the rise of unemployment, the marketization of public services and the arise of general level of prices, are tried to be eliminated by assing positive meanings such as participation, cooperation and dialogue (Akıllı, 2013, p. 97).

Historical Development Process of PPPs

Although the concept of public private partnership has been widely used since the 1990s, the provision of public service through private individuals is based on a fairly old history. Throughout history, there are many examples of the provision of public services by state and/or private individuals. In the 1970s, public private partnership practices started to become widespread in infrastructure investments in early capitalized countries. The PPPs, which became the main tool for the marketization of infrastructure investments and privatization, were implemented in all capitalist countries in the 1990s (Güzelsarı, 2009, p. 47).

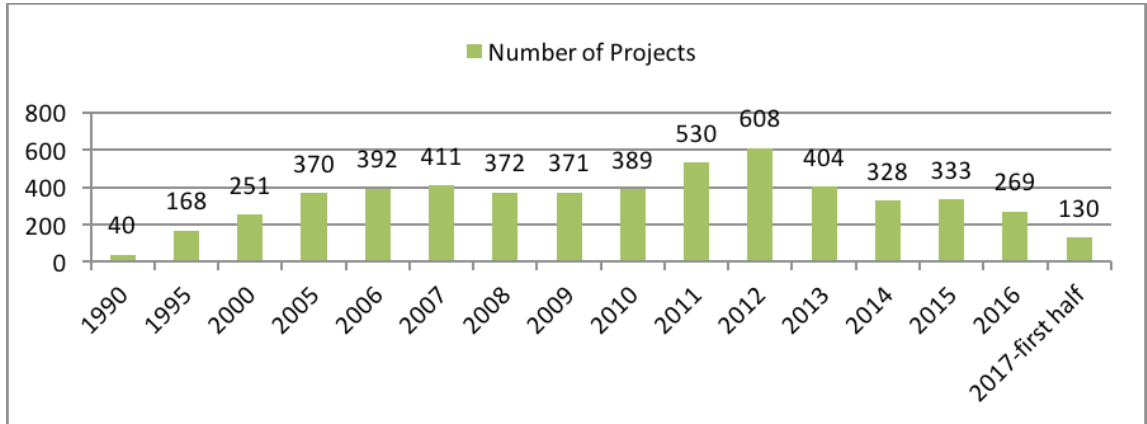
In the 1980s, there was a transition from Keynesian policies to monetarist policies with the governments of Margaret Thatcher in UK, Ronald Reagan in USA. With this transformation, public expenditures were interrupted and welfare state practices were rapidly deteriorated, the role of the state in economic life was reduced, capital movements were liberalized and privatization was rapidly raised. During this period, some public services were transferred to the private sector via PPPs. The Government of the Conservative Party, led by John Major, developed the PPP model in 1992 and introduced the “Private Finance Initiative” model (Yalçın, 2014, p. 140). The attitude towards the PPPs was maintained not only by the Conservative Party governments, but also by the Labor Party governments in line with the “Third Way” approach.

The globalization process plays an important role in the marketization of public services and the spread of PPPs. With the globalization, competition has taken an international dimension and has started to affect the public sector as well as the private sector. This pressure on the public sector has led to the emergence of new regulations under the name of improvement and reform. Economic, social and political factors exist in the widespread use of PPPs that are one of the most effective tools for this improvement and reform process. They can be classified as

micro factors related to the effectiveness of public expenditures and macro factors related to budgets and public investment resources (Şahin & Uysal, 2012, p. 159).

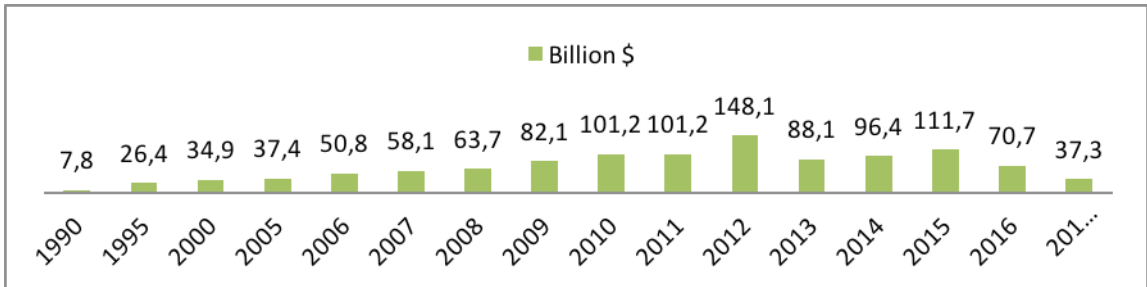
When the World Bank PPI Database 1990-2017 data are taken into consideration, it is seen that the number of PPP projects reaching financial closure in developing countries has been following a continuous trend from 1990 to 2013. As of 2012, the number of projects started to decrease. 2012 has the highest number of projects in the reference period with 608 projects (Kalkınma Bakanlığı, 2017, p. 15).

Graphic 1: Number of PPP projects in EMDEs, by financial closure (1990 – 2017-first half)



Source: PPI Database, World Bank, as of June 2017

Graphic 2: Investments in PPP projects by financial closure (1990-2017)



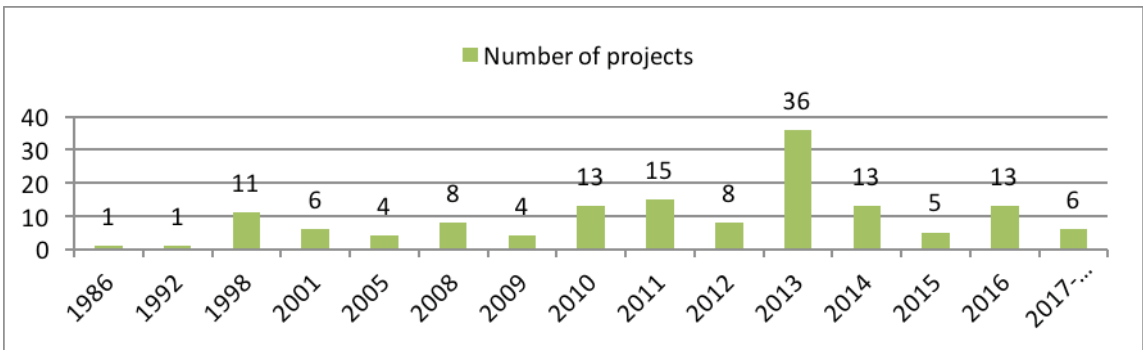
Source: PPI Database, World Bank, as of June 2017

Especially after the year 2000, there is a steady growth in project investment amounts realized with PPP model worldwide. The investment amount of the projects by the financial closure reached the highest point in the history in 2012 and the projects amounted to USD 148,1 billion. In 2016, the amount of investment in PPP projects that had a financial closure worldwide, decreased by 37% compared to the previous year. In the first 6 months of 2017, PPP investments increased by 24 percent compared to the first six months of the previous year and reached USD 37,3 billion. On the other hand, worldwide data for the first six months of 2017 are the lowest second level of the last decade, down 15% from the first half of the last five years (Kalkınma Bakanlığı, 2017, p. 15).

PPPs in Turkey

With the Stabilization Decisions of January 24th 1980, Özal Government caused a big breakage in the Turkish economic life. In this process where the country was reshaped in line with neoliberal regulations, important tasks were assigned to privatization and PPP projects in our country as in the world. In the second half of 1980 the World Bank has offered a PPP model (Build-Operate-Transfer – BOT) to Turkey as if it was a brand new and innovative contrivance. When these projects were on the agenda, the Undersecretariat of Treasury argued that the guarantee system would be against the economy of the country, but this objection was not taken into consideration by the politicians of the period. The lack of a legal basis for the relevant models in the 1980s made it difficult to implement these projects. In the following years, the legal ground has been completed and treasury guarantees for PPP projects as well as financing guarantees have been added (Eğilmez, 2017). In the period from the first half of 2017 until 1986, a total of 221 PPP projects in Turkey has been put in practice. Of these 221 projects implemented, 187 are in operation and the remaining 34 are under construction. In the first six months of 2017, the number of PPP projects has been detected as six.

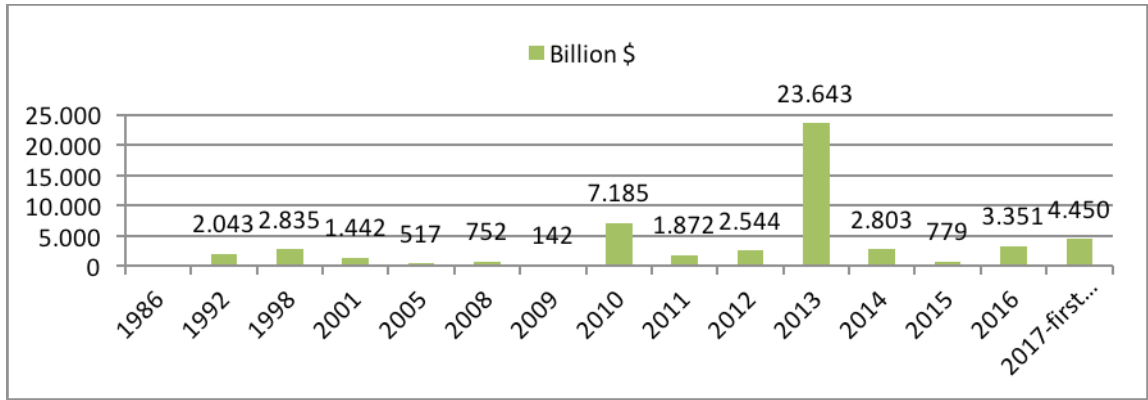
Graphic 3: Number of PPP projects in Turkey (1986-2017)



Source: Development Bank of Turkey

As of the first six months of 2017, the total investment size of the PPP projects reached US \$ 60,7 billion. In the first six months of 2017, which was the last year of the data set, the project investment amounted to US \$ 4,5 billion. The contract value of the PPP projects realized between 1986 and 2011 exceeded US \$ 132 billion (Kalkınma Bakanlığı, 2017, p. 16).

Graphic 4: Investments in PPP projects in Turkey (1986-2017)



Source: Development Bank of Turkey

PPP models and sectors that are being implemented in Turkey can be illustrated as follows (TEPAV, 2016):

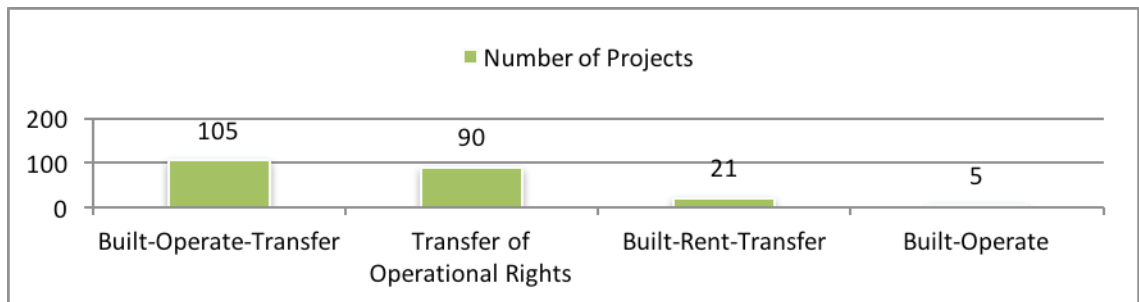
Table 2: PPP models and sectors in Turkey

| Build-Operate-Transfer | Build-Operate | Build-Rent-Transfer | Transfer Of Operational Rights |
|--|---|--|--|
| <ul style="list-style-type: none"> • Highway • Port • Airport • Marina • Customs • Electricity | <ul style="list-style-type: none"> • Thermal Power Plant | <ul style="list-style-type: none"> • Hospitals • School • Dormitories | <ul style="list-style-type: none"> • Airport • Port • Plant • Electricity distribution |

Source: TEPAV. (2016). *Kamu Özel İşbirliği Modeli. Lefkoşa, 5 Şubat 2016*

As it can be seen, between the years 1986-2017, Build-Operate-Transfer model is the leading model among the PPP projects with 105 projects. The BOT model is followed by Transfer of Operational Rights with 90 projects, Build-Rent-Transfer with 21 projects and Build-Operate with 5 projects, respectively

Graphic 5: PPP project models in Turkey (1986-2017)



Source: Development Bank of Turkey

According to the Ministry of Development data, the total investment size of the PPP projects has been 61.5 billion dollars. The total contract value of the same projects is 134 billion dollars. To put it simply, the difference between the value of the contract and the amount of investment is actually the transfer of resources to the company that performs the service. Further clarifying, the public sector gives up 134.8 billion dollars to obtain during the contract period and the private sector has this income with 61 billion dollars. When the investment amounts of the projects carried out and the size of the loans received by the companies are taken into consideration, the volume of the debt that the treasury will have to bear in the future also arises.

Table 3: PPP projects by sector in Turkey (USD)

| | Distribution of contract values by sectors | Distribution of investment by sectors | Distribution of transfer of operational rights by sectors | Distribution of project by sectors |
|------------------------------|--|---------------------------------------|---|------------------------------------|
| Highway | 19.442.664.787 | 19.420.207.512 | 22.457.274 | 42 |
| Airport | 69.403.042.697 | 18.124.481.751 | 51.278.560.947 | 18 |
| Marina and Tourism Facility | 1.745.147.478 | 894.836.663 | 850.310.815 | 17 |
| Railway | 264.759.825 | 264.759.825 | 0 | 1 |
| Culture and Tourism Facility | 136.797.635 | 136.797.635 | 0 | 1 |
| Customs Facility | 430.332.119 | 424.166.633 | 6.165.486 | 15 |
| Industrial Plant | 1.391.262.727 | 1.391.262.727 | 0 | 2 |
| Health Facility | 11.707.542.480 | 11.707.542.480 | 0 | 21 |
| Energy | 27.689.783.120 | 9.166.253.529 | 18.523.529.592 | 86 |
| Port | 2.656.809.804 | 127.245.286 | 2.529.564.518 | 22 |
| TOTAL | 134.868.142.671 | 61.530.308.754 | 73.210.588.631 | 225 |

Source: Development Bank of Turkey

RAILWAYS IN THE OTTOMAN EMPIRE

Railways emerged as a product of industrialization in early capitalized countries. In countries where the Industrial Revolution did not occur, the railroads emerged as a result of other different requirements. The Ottoman Empire was also among these examples. The fact that almost all of the Ottoman railways were built by early capitalized countries presents a colonial view. In addition to serving the various objectives of the central government, the Ottoman railways formed a pattern that served the economic interests of the early capitalized countries (Yeneroğlu Kutbay, 2012, p. 4). With the Industrial Revolution, early capitalized countries began to rapidly weave their territory with railways. However, the lack of adequate dynamism of the Ottoman Empire did not only concern itself (Gül, 2014, p. 4).

Table 4: The development of railways in the Ottoman Empire 1870-1910

| Year | Anatolia (km) | Rumelia (km) | Total (km) |
|------|---------------|--------------|------------|
| 1870 | 174,5 | - | 174,5 |
| 1875 | 176,8 | 1.132,5 | 1.309,3 |
| 1880 | 178,3 | 1.309,6 | 1.487,9 |
| 1885 | 282,5 | 1.309,6 | 1.592,1 |
| 1890 | 609 | 1.440,5 | 2.049,5 |
| 1895 | 1.519,4 | 1.785,1 | 3.304,5 |
| 1900 | 2.171,9 | 2.553 | 4.724,9 |
| 1905 | 2.370,8 | 2.553 | 4.923,8 |
| 1910 | 2.370,8 | 2.553 | 4.923,8 |

Source: *Devlet Sahnâmesi, İstanbul: Dârü'l- Tıbbati'l Âmire, 1328, pp. 443-457 as cited in Güran T. (2014). 19. Yüzyılda Osmanlı Ekonomisi Üzerine Araştırmalar. İstanbul: Türkiye İş Bankası Kültür Yayınları, p. 82*

The turning point for the Ottoman railways was the establishment of the Ottoman Public Debt Administration, which was established during the reign of Abdulhamid II. External debts were among the most important factors in determining the railway policy in the Ottoman Empire. The Ottoman Governments were only faced with new concession demands when they were able to borrow or demand a loan against rail concessions (Yıldırım, 2002, p. 314). Risks arising from the payment difficulties of the Ottoman Empire disappeared with the establishment of the Ottoman Public Debt Administration. In the following years, organic relations developed between Ottoman Public Debt Administration and railway companies (Özyüksel, 2013, p. 21). The following table shows the increase in Ottoman debts with the establishment of the administration.

Table 5: Distribution of Ottoman Debts, 1881-1914 (Million British Pounds)

| | 1881 | | 1890 | | 1898 | | 1914 | |
|--------------------------|------|------|-------|------|-------|------|-------|-----|
| | | % | | % | | % | | % |
| France | 45 | 34,3 | 44,6 | 37,6 | 53,4 | 42,2 | 75,3 | 53 |
| United Kingdom | 43,5 | 33,2 | 27,4 | 23,1 | 22,6 | 17,9 | 19,9 | 14 |
| Germany | 8,3 | 7,5 | 13,8 | 11,7 | 19 | 15 | 29,9 | 21 |
| Belgium | 6,6 | 5 | 10,3 | 8,7 | 14,4 | 11,4 | 12 | 8,4 |
| Austria | 7,9 | 6 | 7,7 | 6,5 | 7,5 | 5,9 | | |
| Holland | 7 | 5,3 | 5,3 | 4,5 | 3,5 | 2,8 | 5,1 | 3,6 |
| Italy | 5,4 | 4,1 | 3,2 | 2,7 | 1 | 0,8 | | |
| Debts in imperial | 7,3 | 5,6 | 6,2 | 5,2 | 5 | 4 | | |
| Total | 131 | 100 | 118,5 | 100 | 126,4 | 100 | 142,2 | 100 |

Source: Pamuk Ş. (2018). *Osmanlı Ekonomisinde Bağımlılık ve Büyüme (1820-1913), İstanbul: Türkiye İş Bankası Kültür Yayınları, p. 77*

Ottoman railways can be grouped as follows (Yıldırım, 2002, pp. 321-322):

Railways constructed by foreign companies

I- Railways on the European part of the empire

Cernovada-Constanta line

Varna-Ruscuk line

Orient Railway

Thessaloniki-Monastery line

Thessaloniki-Istanbul line

II- Railways on the Anatolian part of the empire

İzmir-Aydın line

İzmir-Kasaba line

Anatolia line

Baghdad line

Bursa-Mudanya line

Adana-Mersin line

III- Railways in the Arab part of the empire

Jaffa-Jerusalem line

Beirut-Damascus-Havran line

Tripoli-Homs line

Riyak-Aleppo line

B- Railways constructed by the Ottoman Empire

Hejaz railway

The most important reason that pushed European capitalists to build railways in Anatolia; had been raw materials and market necessities. When determining the railway route, they chose the regions that produced the raw materials they needed or those that were the hinterland of the production center. When Table 6 and Table 7 are considered together, the structure and change of European capitalist investments by sectors can be observed.

Table 6: Distribution of foreign capital by sectors in 1888

| | French | British | German | Other Countries | Total | Sector's Total Share |
|---|--------|---------|--------|-----------------|-------|----------------------|
| | % | % | % | % | % | % |
| Railways | 12,3 | 63,3 | 3,1 | 21,2 | 100 | 33,4 |
| Ports | - | - | - | - | - | - |
| Municipal Services (water, gas, etc.) | 5,9 | 65,3 | - | 28,8 | 100 | 9,3 |
| Banking | 50 | 50 | - | - | 100 | 31,6 |
| Commerce | 54,7 | 45,3 | - | - | 100 | 8,1 |
| Industry | 47,5 | 42 | - | 10,6 | 100 | 12 |
| Mining | 20,7 | 79,3 | - | - | 100 | 5,6 |
| Total (without external debts) | 31,7 | 56,2 | 1,1 | 11 | 100 | 100 |
| External Debts in 1890 (nominal value) | 37,6 | 23,1 | 11,7 | 27,6 | 100 | |

Source: *Pamuk, 2018, p. 68*

Table 7: Distribution of foreign capital by sectors in 1914

| | French | British | German | Other Countries | Total | Sector's Total Share |
|--|--------|---------|--------|-----------------|-------|----------------------|
| | % | % | % | % | % | % |
| Railways | 49,6 | 9,8 | 36,8 | 3,8 | 100 | 63,1 |
| Ports | 69,1 | 12,8 | 18,1 | - | 100 | 4,3 |
| Municipal Services (water, gas, etc.) | 44,6 | 9,5 | 8 | 38 | 100 | 5,1 |
| Banking | 38,2 | 33,1 | 19,7 | 9 | 100 | 12 |
| Insurance | 81,8 | 18,2 | - | - | 100 | 0,7 |
| Commerce | 70,7 | 17,6 | 7 | 4,7 | 100 | 5,8 |
| Industry | 30,8 | 42,1 | 7,6 | 19,6 | 100 | 5,3 |
| Mining | 73,5 | 16,5 | 6,4 | 3,7 | 100 | 3,7 |
| Total (without external debts) | 50,4 | 15,3 | 27,5 | 6,8 | 100 | 100 |
| External Debts (nominal value) | 53 | 14 | 21 | 12 | 100 | |
| Total | 52 | 14,4 | 23,2 | 10,2 | 100 | |

Source: *Pamuk, 2018, 69*

The reasons underlying the construction of the Ottoman railways can be listed as follows: Suppression of rebellions and strengthening of central authority, integrating Europe to revive economic stagnation and strengthening the communication. Among these factors, the predominant was the military factors that aim to strengthen the state authority (Gümüş, 2011, p. 167).

İzmir-Aydın Railways

According to Luxembourg, the European capital -especially the British capital- acted very early to seize the region that developed as the old trade route between Europe and Asia. In the 1850s and 1860s, the İzmir-Aydın-Dinar and the İzmir-Kasaba-Alasehir railways were built by the British capital (Luxemburg, 2013, p. 248).

Table 8: Distribution of foreign capital investing in railway in the Ottoman period

| Line | Capital as Gold Frank | Source of Capital |
|------------------------|-----------------------|-------------------|
| İzmir-Kasaba | 141.000.000 | French |
| Sham-Hama | 172.000.000 | French |
| Thessaloniki-Istanbul | 170.000.000 | French |
| Jerusalem-Jaffa | 14.000.000 | French |
| Mudanya-Bursa | 3.800.000 | French |
| Lebanon | 4.000.000 | French |
| İzmir-Aydın | 114.400.000 | British |
| Anatolia | 269.000.000 | German |
| Mersin-Adana | 10.000.000 | German |
| Thessaloniki-Monastery | 60.000.000 | German and French |
| Orient | 50.000.000 | German and French |
| Baghdad | 207.000.000 | German and French |
| Total | 1.215.200.000 | |

Source: Somervell, W., H., et al. (1936). *Türkiye'nin İktisadi Bakımdan Umumi Bir Tetkiki*, Ankara: Köy Öğretmeni Basımevi, p. 429, as cited in Güven H., S. (1981). *Atatürk Döneminin Ekonomi ve Ulaştırma Siyasaları*, *Amme İdaresi Dergisi*, 14(4), p. 97

The first line built in the Anatolian part of the Ottoman Empire was the İzmir-Aydın railway. This line is important for understanding the colonial or semi-colonial relations. In the construction phase of the İzmir-Aydın railway, the effects of the change in Britain's position in the world economy are observed. İzmir, the exit city of one of the richest agricultural regions of Anatolia, was one of the most important port of the Ottoman and Mediterranean. İzmir, which became a settlement of European traders from the 16th century onwards, had caused British traders to increase their population in the city due to the commercial and agricultural opportunities it offered (Kurmuş, 1977, p. 55). The only obstacle to the further development of the above-mentioned opportunities by exploding into the inner regions of Western Anatolia was the transportation. The concession for the İzmir-Aydın railway, which started in 1857, was given to the British. The railways, which are both the product and the triggers of the Industrial Revolution, have paved the way for the exploitation of country resources in the periphery countries. In contrast to other railway lines in the Ottoman Empire, a 6% profit was guaranteed for 50 years, without a mileage guarantee on the İzmir-Aydın railway, which was then increased to 8% (Özyüksel, 2013, p. 10). Some of the concessions granted for this railway line were as follows (Kurmuş, 1977, p. 59):

The goods needed for the construction and operation of the railway could be brought to the country without any customs duty.

The company could use the mines, forests and territories free of charge.

The Ottoman Government could not interfere with the company management.

All attempts to compete with this line would be blocked.

İzmir-Aydın railway, which had been able to direct the agricultural richness of the region to İzmir port with its feeder lines, had a colonial appearance. The disconnection between the feeder lines seemed to be a network that served colonial purposes rather than combining domestic markets (Yeneroğlu Kutbay, 2012, pp. 5-6). As Özyüksel (2013) emphasizes, with the British efforts, the productive forces dependent on the British industry had developed on the route through which this line passed. In this way, the Ottoman economy, which was articulated to the capitalist world economy, became open to the cyclical shocks of capitalism (p. 10).

Until 1888, Germany was organizing its relations with the Ottoman Empire according to their relations with Russia. In 1888, Germany changed its attitude in the relations with the Ottoman Empire. The main reason for this change of attitude was the need for new life spaces. Despite its late industrialization, Germany was in the process of rapid industrialization. The area required for this policy to come to life was the Ottoman Empire, which included Anatolia, Mesopotamia and Northern Syria (Efe, 1995, p. 95). Germany's most important railway projects in Ottoman territory were the Anatolian Railway, which was built from İzmit to Ankara and Baghdad Railway from Konya to the Persian Gulf. The Baghdad Railway was a railway network from Berlin to Baghdad. According to Avcı, this project can be compared with very similar projects such as Trans-Siberian and Trans-Continental lines according to the conditions of the period (Avcı, 2015, p. 264).

A concession agreement was signed between the Ottoman government and Deutsche Bank officials on 4 October 1888 for Anadolu Railway. With this agreement, Germany purchased Haydarpaşa-Izmit line in exchange for 6 million francs and obtained the concession of extending the line to Ankara. Germany completed this line in three years and showed a very successful business (Efe, 1995, p. 96). The negotiations started with the German finance groups and the Ottoman government for the Baghdad Railway ended on 24 December 1899. The concession was granted to Deutsche Bank with the agreement signed. On 5 March 1903 the Baghdad Railway concession agreement was finalized and signed. The concession would be valid for 99 years for this 2800 km long line. This line would be extended from Konya to Adana, Mosul, Samarra, Baghdad, Basra and then to the Persian Gulf. On 13 April 1903, the Germans established the Baghdad Railway Company under Ottoman law to finance the construction. The Ottoman Government would pay 11,000 francs per annum for the operation of this line and 4500 francs for the tracking per kilometer (Avcı, 2015, p. 271).

Table 9: Kilometre guarantees paid to various railway companies (in million francs)

| Year | Anatolian railway | | İzmir – Kasaba line | | Sham-Hama line | Baghdad railway |
|------|------------------------|----------------------|---------------------|----------------|----------------|-----------------|
| | Haydarpaşa-Ankara line | Eskişehir-Konya line | Old line | Extension line | | |
| 1896 | 4,023 | 0,179 | 0,675 | - | - | - |
| 1897 | 0,400 | 2,238 | 0,505 | 0,755 | 0,740 | - |
| 1898 | 1,566 | 2,996 | 0,471 | 3,946 | 0,750 | - |
| 1899 | 4,096 | 2,996 | 0,483 | 4,043 | 0,750 | - |
| 1900 | 2,961 | 2,999 | 0,488 | 3,843 | 0,750 | - |
| 1901 | 0,756 | 2,999 | 0,256 | 3,561 | 0,375 | - |
| 1902 | 0,140 | 2,999 | 0,218 | 3,532 | 1,023 | - |
| 1903 | 2,167 | 2,999 | 0,074 | 3,608 | 2,229 | - |
| 1904 | 2,181 | 2,999 | (-0,045) | 3,598 | 2,210 | 0,508 |
| 1905 | 1,112 | 2,888 | 0,124 | 3,442 | 1,896 | 2,777 |
| 1906 | 1,165 | 3,000 | 0,190 | 3,326 | 1,439 | 2,026 |
| 1907 | 1,812 | 3,000 | 0,339 | 3,471 | 2,093 | 2,749 |
| 1908 | 2,956 | 3,000 | 0,058 | 3,654 | 2,395 | 2,732 |
| 1909 | 2,554 | 3,000 | 0,024 | 3,809 | 2,218 | 2,713 |
| 1910 | 0,576 | 2,420 | (-0,043) | 3,256 | 1,873 | 2,586 |
| 1911 | - | 1,045 | (-0,010) | 2,710 | 1,840 | 2,438 |

Source: Özyüksel M. (2013). *Osmanlı İmparatorluğu'nda Nüfuz Mücadelesi: Anadolu ve Bağdat Demiryolları*, İstanbul: Türkiye İş Bankası Kültür Yayınları, p. 21

According to Luxemburg (2013a), Turkey has been the most important area of operations of German imperialism. Deutsche Bank, which was at the focal point of Eastern policy, opened this path to Germany. Abdulhamid II gave the Germans the right to operate the Izmit line, which was built by the British, and the concession of the line from İzmir to Ankara. In addition to this main line, the concessions of the side lines extending to Üsküdar, Bursa, Konya and Kayseri were given to the Germans. In addition to these concessions, Deutsche Bank had acquired the privileges of establishing and operating a port in Haydarpaşa in 1899. Thus the German sovereignty over trade and customs affairs was established through this port. In 1907, the Germans were given the concessions to drain the Karaviran Lake and to irrigate the Konya Plain. "Behind this great peaceful cultural work lies the 'peaceful' destruction of the peasantry in Asia Minor." (p. 191).

Deutsche Bank was not the only winner in the construction of the Baghdad Railway. Provision of necessary materials for the construction of the railway had been fixed in the agreements with Mauser and Krupp. Because of these agreements, the Ottoman Government quickly became indebted to the Germans (Avcı, 2015, p. 275).

Table 10: Germany's exports of iron, iron products and machinery to Ottoman Empire between 1880-1913

| Year | Iron and iron products | | Machinery | |
|------|------------------------|-----------|-----------|-----------|
| | Ton | 1000 Mark | Ton | 1000 Mark |
| 1880 | | | 73 | 160 |
| 1881 | 1499 | 881 | 131 | 206 |
| 1882 | 1080 | 655 | 178 | 221 |
| 1883 | 2375 | 961 | 101 | 208 |
| 1884 | 2918 | 1264 | 146 | 223 |
| 1885 | 5361 | 1652 | 165 | 290 |
| 1886 | 5102 | 3122 | 166 | 309 |
| 1887 | 5164 | 3024 | 232 | 345 |
| 1888 | 2715 | 3340 | 253 | 416 |
| 1889 | 8221 | 12520 | 413 | 636 |
| 1890 | 18650 | 12370 | 960 | 922 |
| 1891 | 38870 | 10270 | 1702 | 1607 |
| 1892 | 13450 | 12120 | 1737 | 1408 |
| 1893 | 37550 | 13360 | 3358 | 2681 |
| 1894 | 27140 | 8036 | 1646 | 1028 |
| 1895 | 46270 | 14740 | 2148 | 1917 |
| 1896 | 26140 | 7938 | 1676 | 1273 |
| 1897 | 9340 | 3639 | 660 | 684 |
| 1898 | 8729 | 4431 | 1127 | 1166 |
| 1899 | 5500 | 3520 | 1215 | 1322 |
| 1900 | 10150 | 5219 | 898 | 874 |
| 1901 | 27170 | 7730 | 549 | 611 |
| 1902 | 21350 | 7682 | 1166 | 1148 |
| 1903 | 24830 | 7638 | 1750 | 1438 |
| 1904 | 61060 | 21408 | 4067 | 3499 |
| 1905 | 26580 | 12459 | 2478 | 3733 |
| 1906 | - | - | - | - |
| 1907 | 78170(a) | 15750(a) | 2537 | 3158 |
| 1908 | 50030 | 12210 | 2758 | 3576 |
| 1909 | 32240 | 8046 | 2606 | 3201 |
| 1910 | 71110 | 16040 | 4183 | 4640 |
| 1911 | 100500 | 23590 | 6478 | 7111 |
| 1912 | 125600 | 25450 | 5886 | 6598 |
| 1913 | 78870 | 18720 | 4093 | 4357 |

Source: *Statistisches Jahrbuch für das Deutsche Reich, 1880-1913*, as cited in *Kaynak M. (1985). Osmanlı Demiryolları ve Demiryolu Araç ve Malzemeleri İthalatı. Hacettepe Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi, 3(1-2), p. 269*

Note: (a): Iron and iron alloys for the years 1907-1913

Other concessions granted to the Germans within the framework of Baghdad Railway can be listed as follows (Avcı, 2015, p. 276):

The right to operate underground resources at a distance of up to 20 kilometers on both sides of the railway line was given to the companies that built the railway.

The operation rights of the state-owned lands through which the railway lines passed were transferred to the Baghdad Railway Company.

The company could benefit from forests and quarries for use in construction along the line.

According to the agreement made in 1903, the railway company was given the right to carry out archaeological researches.

Regular boat tours could be organized on the Euphrates and Tigris rivers and new ports would be established in Baghdad and Basra.

In 1907, the concession was granted to create the irrigation infrastructure of the Konya Plain.

In 1904, Deutsche Bank acquired oil exploration concession in Mezoptamya and obtained a 25% share of Iraqi oil with a treaty reached in 1912.

The Anatolian Railway Company was granted the concession of operating the ferry between Haydarpaşa and the European side.

Since the Ottoman railways did not appear as part of the Industrial Revolution, as in the early capitalist countries, it did not lead to the development of the railway and connected industries. On the contrary, the capitalist foreign countries in the Ottoman Empire enlarged their market opportunities. This evaluation showed itself in the development of railways in the Ottoman Empire and in coal imports. In the last years of the Ottoman Empire, coal imports increased significantly. As Kaynak pointed out, on the one hand, the Ottoman Empire was exporting coal, on the other hand, coal imports increased in a short period of four years between 1908-1911 (Kaynak, 1985, p. 271).

Table 11: Coal import of the Ottoman Empire between 1908-1911

| Year | Coal Import (Ton) |
|------|-------------------|
| 1908 | 203.000 |
| 1909 | 189.000 |
| 1910 | 347.000 |
| 1911 | 422.000 |

Source: *Eldem V. (1970). Osmanlı İmparatorluğu'nun İktisadi Şartları Hakkında Bir Tetkik. Ankara: Türkiye İş Bankası Yayınları, p. 101, as cited in Kaynak, 1985, p. 271*

Conclusion

Public Private Partnerships, which are public and private participation forms, include the transfer of public services to the private sector by the state. Although not evaluated within the framework of privatization, PPP models are one of the most important marketization tools of neoliberalism. Beginning in the 1980s, PPPs were widely used by states to overcome the structural problems of neoliberalism and to transfer capital to certain capital groups by the public. PPPs in Turkey shows a parallel historical development with PPPs worldwide. The process, which gained momentum with the Özal governments, has peaked with Justice and Development Party (Adalet ve Kalkınma Partisi – AKP) governments. The most commonly applied PPP model in Turkey is build-operate-transfer model. Although PPPs are presented as a new practice in the literature, they have a very similar view to the concessions given to foreign capital for railways in the late periods of the Ottoman Empire. Although PPPs are presented as a new practise in the literature, they are very similar to the privileges given to foreign capital for railways in the late periods of the Ottoman Empire. The Ottoman Empire could not build railways due to both technical and economic reasons. For these reasons, the early capitalized countries were granted concessions on various subjects to construct railways. One of the important points in the development process of Ottoman railways, which was built in line with the raw material and market requirements of European capitalists, was the establishment of Ottoman Public Debt Administration. After the establishment of the Ottoman Public Debt Administration, the construction of railways in the Ottoman lands gained speed; the number and the issues of concessions granted in this direction expanded. We can list the factors in Germany’s orientation towards the Ottoman market as follows; the crisis that Germany and the capitalist world werre experiencing, the decline of profit margins due to the crisis, the satisfaction of railways in the early capitalized countries, and the need to distribute the surplus in iron and iron alloys to new markets. The most substantial field of action for Germany, which was late capitalized, was the Ottoman Empire. German major capital groups such as Deutsche Bank, Siemens, Mauser and Krupp were not only involved in the construction of railways, but also they were the hegemonic power in many areas such as port operations, customs, finance capital and trade. The Ottoman Empire, which fell into a semi-colonial position, was constantly over-borrowed to the German and German capitalist groups. The Ottoman Empire, which fell into a semi-colonial position, had been heavily indebted to the German and German capitalist groups and had been under the hegemony of these groups.

Turkey signed an agreement with Siemens on April 2018 for ten high-speed trains. The contract value, which is 340 million Euros, includes maintenance, repair and cleaning of the trains. In addition to this agreement, there are continuing talks on the modernization of the railways between the government of the Republic of Turkey and Siemens. The value of this modernization project is 35 billion Euro. In addition to this concession, credit negotiations between the Turkish government and the German government are emphasized. AKP governments convert the regime in Turkey within the framework of the ideology of neo-Ottomanism. Without taking lessons from the mistakes of Abdulhamid II, they are dragging Turkey into the same quagmire. In his work “The Eighteenth Brumaire of Louis Bonaparte” Karl Marx pointed out “all great world-historic facts and personages appear, so to speak, twice. The first time as tragedy, the second time as farce.” (p. 17). In this respect, his historical consciousness is still valid today.

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3

THE RISING HYBRID STRUCTURE IN GLOBALIZATION: ECONOMIC NATIONALISM AND PROTECTIVE POLICIES

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Introduction

The mortgage crisis that emerged in the United States has not only turned into a global characteristic and influenced the world order but also led to significant changes in the global trading system, and nation states have begun gravitating towards inward-looking nationalist politics.

It can be said that nationalism, which is one of the basic concepts used by social segments and ideological structures to define themselves, has turned into a state that makes one question the internationally accepted borders and institutions after the global crisis. Indeed, in India, considered as the world's largest democracy, Indian nationalists have won the elections. In Japan, a nationalist government has come to power, and Russian-Ukrainian events have shown that Russian nationalism is on the rise.

It is also observed that, in Italy, the "Lega Nord" supports right politics. The party which has anti-globalization and anti-EU views and argues for downsizing of the state, achieved great success, by polling 17 per cent Rome and Turin, two important cities of Italy, in the general elections of March 4, 2018. Moreover, a direct product of conservative and hardly nationalist steps in USA, reaction drawing moves of Donald Trump, who was elected president in November 2016 in the USA, and Le Pen's voting rate of 21.7 percent despite Emmanuel Macron, the leader of En Marche, ranking the first with a voting rate of 23.7 in the first round of voting in France show that a considerable segment of France support extreme rightist policies, and all these are considered as one of the most significant risks to the functioning of the global economy.

Although the dynamics of rising nationalism vary from country to country, the transition from unipolar world order to a multipolar world order, the rise of reaction to the globalization eroding the nation state in terms of neoliberal policies, and the financial crisis and the following debt crisis having extremely painful economic consequences for some rising European countries can be shown as the common reasons. In this context, it is observed that, as part of an increasing nationalism with an excuse to protect the national economy, protectionism has been resorted to through certain ways such as special taxes, administrative regulations, interference with freedom of contract and exchange rates instead of traditional protectionist measures (customs duties, etc.).

In this study, especially the relationship between economic nationalism rising after global crisis and neo-liberalism will be discussed, and then the driving forces of economic nationalism will be scrutinized and the possible effects of this socially and economically spreading course on the global economy will be discussed.

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1. Common Reasons of the Rising Economic Nationalism

1.1. The Triggering Effect of Regional Forces in the Relationship between Neo-Liberalism and Nationalism

Unlike classical liberalism, neo-liberalism is not against state intervention. However, it is not also an intervention that social democracy has envisioned. In other words, the state should not distribute capital but be strong and able to secure it constitutionally and institutionally for the free operation of the free market. In short, the state has a role of protecting the operational process of the market unlike the social democratic state in neo-liberalism (Harmes, 2011).

In fact, although neo-liberalism envisions a strong state, it has positioned itself against the state to a certain extent. In connection with this, its first demand is the centralization that creates a free market, guaranteeing the right of property. Secondly, it demands a structure where the profits of individuals and companies and the capital mobility are made freely in sub-national territories. The aim here is to limit the central state and limit the state's social aids. At the same time, neo-liberalism has brought this perspective to the international arena. Free trade, international capital and capital movements are supported in terms of emancipating individuals from the state. Like in federalism, this provides significant elbow room to the individual (Harmes 2011).

Neo-liberalism clearly requires internationalism as part of functioning of the free market economy. In this context, social forces such as lobby groups and think tanks support international organizations and agreements, such as the World Trade Organization (WTO) and the North American Trade Agreement (NAFTA), and regional powers. However, neo-liberals believe that there must be certain limits of such internationality. Nation state should fulfill its functions in terms of proper functioning of the market and not be fully integrated into international institutions in case of potential interruptions in the functioning of the free market. It is evident that neo-liberalism is against a broad form of internationalism and the structure of the international regime which prevents free market and capital circulation. In contrast, neo-liberals prefer national financial and supervisory policies. In this context, neo-liberalism is in harmony with some nationalist policies. For example, the neo-conservatives and neo-liberals in the United States are against the promotion of the free market and also the expansion of the international regime

However, upon the global crisis, noteworthy has been the emergence of alternative regional organizations and alliances in addition to the global organizations that are the cornerstones of institutional liberalization such as NATO, UN and IMF. Regional forces taking their positions in the global arena has evidently turned the international system into a multipolar structure. This multinational structure and regional organizations following the global crisis have increased the nationalist and conservative tendencies, and regional integrations have negatively influenced the global competition.

1.2. Rising Reactions to the Neo-liberal Cosmopolitanism of Globalization and Social Movements

Depending on the Neo-liberalist understanding that dominate the global capitalist system, developments such as trade agreements, reductions in tariffs imposed and expanded trade networks have brought the world economy to a holistic structure. The organic integration of countries within a holistic structure (Claessens and Schmukler, 2007; Gozzi, Levine, and Schmukler, 2008) results in the economic changes taking place in a country (assuming the existence of a world economy where liberalism prevails) to have effects on the economy of another country.

The more constructive the positive effect of this structure on economies is the more destructive are the negative effects it creates.

The fact that many developed and developing economies switched to financial liberalization too quickly and without any control before going through certain evolution and ensuring macroeconomic balances has caused them to face the crisis. In other words, the contradiction created by the flow of capital has led to the operation of an autonomous and uncontrolled market mechanism because of the liberalization of capital markets and capital movements in the globalized economy. In the short term, the expansion of the markets due to globalization brought about economic crises, economic inequalities and economic insecurity in the global markets (Koray 2002: 119). In this context, the gradually opening gap between the periphery and core countries has led to neo-liberalism creating its own opposing forces.

As a matter of fact, the crisis that began in Taiwan in July 1997, which affected many Asian economies later, can be given as an example. Looking at the year 1997, no serious deterioration is stands out in the macro indicators of Asian countries. However, the crisis caused by the financial sector caused by large and uncontrolled capital movements was reflected in the real sector and labor market, and even deeply affected Russia, Brazil, Turkey, Argentina and even Japan the following year (Went 2001: 149-159). Similarly, the global financial crisis that emerged in the last quarter of 2007 in the USA revealed the consequences of the non-supervisory market mechanism and the consequences of the foam resulting from a greedy understanding of profit.

The dramatic narrowing in production in the USA and Europe after 2008 and the increase in the unemployment figures strengthened the erosion in the invisible hand theory of the market, and the idea that state should not intervene in economic life gradually weakened, resulting in an increasing gravitation towards monetary and fiscal policies based on Keynesian principles, so much so that many monetary and financial institutions rescued by nationalization in the USA and Europe and deposits taken under the state guarantee in the announced measures packages were among the basic policies (Coşkun 2011: 125-144). These practices demonstrate that such process is not specific to only the periphery countries and the countries that have economic deficit. Core countries like the United States are also involved in this game because both the USA, as the leader of the last hegemonic cycle of the capitalist world system, and the core countries have found the solution to the new crisis that the system faces in the rise of protectionism, and the protectionist movement has risen since 2010.

All these developments indicate that capitalism creates not only crises but also its own opposing forces. They can be either reactionary or libertarian and democratic (Brand 2011, p.79). Neoliberal finance capitalism also produces pressure for alternative quests for multiple crises. This process involves random and uncoordinated quests to rescue the existing system, avoid unwanted outcomes, or create a better system (Sekler 2007:12). There are many tendencies that are evident in this search process, i.e. post-neoliberal strategy; and protectionist policies and trade wars play an important role in these strategies.

2. Involvement of also the Core Countries in this Game

Today, when the sustainability of economic growth is discussed after the global crisis, many core countries are playing the nationalism card outside of the economy to provide the power needed to be able to sit comfortably in the global hegemony seat. In this respect, it can be said that wrapping the economic goal in a nationalist political discourse is also effective in terms of the advantages it provides to the decision-makers to be backed by the society.

Protectionism and economic nationalism constitute a major potential threat to trade, apart from threatening the regimes based on global rules. In this sense, putting the World Trade Organization system at risk does not only mean the loss of economic specialization gains but also poses a great potential threat in terms of stability and therefore security.

Although the legal gaps in the WTO clearly bring legitimacy to policies about protectionism, there are also means for countries that have suffered these policies to resort to legal remedies. Indeed, the Mechanism of Dispute Settlement is an important example of this. It was observed that there has been a dramatic increase, particularly after 2007, in the number of countries affected by protectionist applying to this mechanism. Therefore, the results of the cases filed with the MDS are important for the WTO to prove its legitimacy (Mutlu 2015: 81-82).

2.1. Protectionist Policies implemented in the Core Countries after the 2008 Crisis

The world economic history has witnessed that protectionist measures implemented after a crisis are not an option against the liberal economy. As a matter of fact, even though protectionism and raising the customs walls resulted in the Great Depression of 1929 to last a long time, which is a lesson to be learned from the Depression, many core countries that did not learn from this resorted to protectionism after the 2008 crisis and tried to eliminate the social effects of the crisis in the short run. In these countries, who are considered as the inventors of the market economy, the fact that certain protectionist measures were brought forward once again resulted in globalization and crisis dialectics.

Post-crisis protectionism in the core countries was seen on 4 basic platforms.

2.1.1. Protectionism in Finance and Capital Markets

The protectionist tendencies after the financial crisis became stronger also in finance and capital markets. Funds flowing into emerging economies have begun to decline rapidly as of 2007. France and the United Kingdom laid it down as a condition that the banks that have received capital or credit support would allocate these funds to their home country or use them only in the foreign operations of national companies. Another protectionist tendency was shown by France, who laid it down as a condition that French automotive companies would close their factories in other countries and in mainly Central and Eastern Europe and move them to France in exchange for the financial support to be provided by the government. Switzerland tried to provide indirect benefits by not taking into account the loans given to local companies in certain capital ratios. This was made into a prerequisite for banks that use the TARP (Troubled Asset Relief Program – the crisis scheme put into force in 2008 by the US Government for financial institutions) scheme. The most dangerous of protectionism models is undoubtedly financial protection. Many banks across the world that have adopted a more nationalistic approach following government supports, and especially the large and important banks in New York, London, Frankfurt, and Tokyo, returned to their home countries. In particular, some banks were forced by their governments to invest in their own countries (Hufbauer and Stephenson, 2009: 2). International banks stopping their operations in foreign countries both resulted in the loan crisis and brought bailout plans to the agenda for the real sectors that had difficulty finding loans. The most significant threat created by financial protectionism is that state aids steer for sectors outside the banking sector. Some of the protectionist practices include Sweden's bailout package for the automotive industry, France providing a support of 6 billion Euros to the automobile manufacturers and asking

in return they do not take their employment and production outside the country, and Italy not losing Alitalia to foreigners (www.euractiv.com.tr/).

2.1.2. Protectionism in Monetary Markets

After the 2008 crisis, the steps taken by countries to protect their economies were also seen in money markets. First, countries that resorted to interest rate discounts, which are traditional policy instruments, sought remedies in unconventional money policies when the declines in the interest rates were not enough for the economy to recover. Initially, a 600 billion Dollars' Quantitative Easing program was launched by the Federal Reserve System (FED) to create 2% inflation in the economy and reduce unemployment to 6.5% (Brahmbhatt, Otaviano and Ghosh, 2010).

The fact that the US caused the value of the dollar to decline at the expense of saving its economy from stagnation and negatively affecting the exports of other countries increased the reaction that the USA resorted to a protectionist policy by interfering with the exchange rate. Countries adversely affected by this situation, particularly Japan and Brazil, took action as soon as possible against the US policy on foreign exchange intervention

On the other hand, earlier in 2013, Japan criticized the US for applying this policy to gain advantage in trading and announced that it launched a bond purchase program. Retaliating by applying a monetary expansion policy that resembles to that of the USA to withdraw its economy from the stagnation that it has been in for 20 years and reach the 2% inflation target, Japan has been criticized for causing the exchange wars like the United States to and (Kuroda, 2013; Flanders, 2013).

ECB, like Japan, had to resort to monetary measures to ward off the potentially long-term threat of deflation from the region and to prevent consumer prices falling in the Eurozone in general due to the weak growth pattern in the Eurozone, continuing issues in the banking sector, the risk of deflation arising from low inflation rates and the fragility of the economic recovery. In addition, just like the FED, the ECB took up the interest as a weapon aiming to prevent the economic activity from slowing down by contributing to growth by boosting production, ensuring private banks borrow from ECB at lower costs and increasing the amount of money in circulation. In this context, the ECB announced that, starting from 11 June 2014, it would reduce the policy interest rate to 0.15 percent from 0.25 percent and the deposit interest to below zero to -0.10 percent with a drop of 10 percent. Thus, the ECB became the first leading central bank ever to impose negative interest rates in the history. In the following periods, the deposit interest rate was gradually reduced to the level of -0.40 percent. (<https://www.ecb.europa.eu>)

At its latest meeting on 27.04.2017, the ECB reduced the purchase of bonds back to 60 billion Euros and extended the duration of the program by December 2017. However, it is also emphasized that it would continue the program after December, if necessary (<https://global.handelsblatt.com>)

2.1.3. Protectionism in Labor Markets

Measures to protect local employment were also applied due to unemployment rates, which have increased rapidly after the crisis and reached record levels in the EU and the US. Attitudes towards third-country nationals particularly perceived as potential competitors for the labor market have become harsher. More non-resident employees were laid off, and new recruits were chosen among residents instead of non-residents (Hufbauer and Stephenson, 2009:

3). In this sense, however, it is highly likely that extreme nationalist and racist behavior will undermine cultural integration, particularly within the EU, as protests against foreign workers and stricter policies against migration and immigrants are considered to be the most important supporters of this situation (Archer, 2009: 3). These fears are causing the emergence of anti-immigrant demonstrations in society. For example, British refinery workers protesting the Portuguese and Italian workers employed in a refinery project have shouted slogans, “British jobs for British workers” during their strike in February 2009. Unions’ particular emphasis on that foreign workers would not be able to work in England was an indication of increased protectionism. On the other hand, British workers reacted when the French-invested “Total” oil company in Britain announced that they would employ 300 contracted Italian and Portuguese workers in a project they would undertake (Baytar, 2011). In the period when the effects of the crisis were greatly felt, this attitude of the French-invested oil company Total led to massive demonstrations in Britain (Crumley, 2009). British workers, who wanted to meet with the former Labor Party leader and the then Prime Minister Gordon Brawn, asked him, during a meeting held in 2007, to keep his promise that British workers would be recruited for jobs in the UK, and the French company decided to employ British workers (Baytar, 2011).

Again, a large-scale demonstration like the one in the UK was made by Irish workers who reacted to the employment of Polish workers in the construction industry in Ireland. After Poland was granted membership to EU in 2004, approximately 300,000 Polish workers flocked to Ireland due to the boom in the construction sector in Ireland. But as the real estate market in Ireland collapsed with the 2008 crisis, thousands of Polish workers had to return to their countries; however, there were snowballing reactions to those Polish workers who did not prefer returning but staying in Ireland, causing a local-foreign workers’ competition between Irish and Polish workers during the crisis when layoffs were on the rise. Parallel to this, the continuing strikes in the energy sector in the UK during the first quarter of 2009 were interpreted as a sign that the period of opening the labor market in Europe to foreign workers had come to an end(<http://www.dw-world.de>).

In addition, it had become an evident perception that immigrants had the opportunity to benefit from the rights and privileges of the host country (Noi 2007: 115) and that they had benefited from social funds through state aid without any contribution (Freudenstein 2011: 48 not listed as a reference). In this case, it is revealed that the pressure for migration increases as the labor market shrinks in the case of Europe, as in the case of the whole world, and harsher methods are implemented in order to keep people out of the migration-receiving countries, which lead to the immigrants becoming the targets of social exclusion (Yılmaz, 2009)

It is clear that the cost of reconciling the economic crisis with the readjustments in the global work division and accompanying structural changes has been paid by the migrant working class and the poor of the society in almost every country. Moreover, it has become even more difficult to enforce social policies to protect the labor force at a national level, independently from foreign markets (Koray 2005: 340).

2.1.4 Protectionism in Foreign Trade

Whereas protectionism was implemented through customs duties in the past, it is observed that, after the global crisis, protectionist policies have been implemented through additional taxation of imported products, invisible trade barriers and administrative regulations, interference with freedom of contract and bilateral agreements.

- **Additional Taxation of Imported Goods:** Additional taxes that are imposed as safeguards in many countries, including Turkey, have surpassed the customs tariff applied in terms of the WTO and have had serious restraints on imports. In fact, the World Trade Organization sets out these cases as “escape clauses” from free trade. The WRO Safeguard Agreement is among such safeguards, but it regulates that such measures can only be taken under very necessary circumstances and conditions. In short, according to the WTO rules, a member may apply a safeguard measure only upon existence of the following three conditions:

- a. Increase in imports, which is related to unforeseeable developments;
- b. Serious injury caused or threatened to be caused to local producers; and
- c. Such injury resulting from the increase in imports (causal link) (Akman 2015: 8)

- **Invisible Trade Barriers and Administrative Regulations:** Invisible barriers include all administrative and technical regulations that directly affect the import volume.

Today, the desire for rapid industrialization of especially the developing countries has led to their increased control over foreign trade. Invisible foreign trade barriers among such protectionist policies include regulations relating to packaging and labeling, health-related bodies, quality standards, industrial standards (such as ISO 9000), customs procedures and formalities related to these procedures, national standard regulations, licenses, certificates of origin, bureaucratic procedures at the borders, and embargoes imposed due to various reasons.

- **Bilateral Trade Agreements:** The World Trade Organization has calculated that global trade volume will increase by 600 billion dollars if the Doha Round global trade negotiations, aimed at promoting the global exchange of goods and services, are started again and completed successfully. Despite that, there has been an increase the number of bilateral trade agreements signed in the recent years. The main reason why countries steer for bilateral trade is shown to be the slowness of the steps taken in the name of liberating the international trade within the scope of the World Trade Organization. Even though the multilateralism of these agreements have certain benefits such as removing the barriers to the trade of certain goods (opening new service and investment markets, competition policy, public policies, intellectual property rights, e-commerce, and employment markets) and allowing for creation of regional free trade zones, it also has risky aspects in terms of the global trade. There is a possibility that norms and standards will increase depending on the bilateral trade agreements, which will result in division of markets and reduce the potential for global growth. The fact that the number of bilateral agreements rose above 414 in 2012, which was less than 10 in the 1990s, reveals the extents of the danger. In particular, two negotiation platforms established by the United States are important. The first is the Transatlantic Trade and Investment Partnership (TTIP) agreement signed with the EU for the service sector while the other is the Trans Pacific Partnership (TPP) signed among 10 Pacific countries for goods, services, intellectual property, investment, public institutions and competition policy, from which the new US president Trump has withdrawn.

In fact, protectionist measures are traditionally applied to protect local producers against foreign competition. Today, when it is not possible to raise customs walls, much as this situation was changed by President Trump, mostly non-tariff measures are preferred for this practice. An example is the arrangement of ‘domestic goods’ campaigns to encourage the use of domestic goods. Non-tariff barriers, which have begun to become more evident with the global crisis, appear before the exporter in a lot of ways. For example, the US Consumer Product Safety Improvement Act (CPSIA), which entered into force on 12 November 2008 causing considerable debate in the US, is one such regulation. (<http://www.turkak.org.tr/TURKAKSITE/DuyuruListe.aspx>)

Indeed, the “Report on Trade-Restrictive Measures” published by the European Commission noted the number of “protective measures” applied to by EU countries since 2008 when the crisis emerged was 688. EU countries included in the Report have adversely affected many trade partners by using the shield of protectionism against the free trade (liberalism) to preserve their strategic sectors (European Commission Directorate General For Trade, 2013).

On the other hand, while Europe followed a common protectionist policy against non-European countries in order to get out of the recession and the spiral of debt, it is noteworthy that Member Countries resorted to trade-restrictive measure policies to protect particularly their strategic sectors against both member states and non-member third states. It was seen that many EU countries, which advocated the need for implementing a common policy rather than resorting to competition-restrictive policies among member countries, adversely affected their trade partners by **providing government support** to their leading sectors or **taking measures against partnerships between a foreign country and such companies and sectors** (Publication, 2010).

As a matter of fact, the adoption of the **anti-dumping tax** that the European Union Council would impose on the B-99 biodiesel fuel imported from the US in 2009 was not welcomed by its trade partner USA that has the largest economy in the world. Upon the complaint of the European Biodiesel Association, which represents a large part of EU biodiesel production, that US-origin biodiesel was sold cheaply on the European market due to incentives, and even more cheaply than the vegetable oil that is the raw material of biodiesel, in 2008, the Council decided to impose anti-dumping tax on these products for a period of 5 years at rates ranging from 213 to 409 Euros per ton (www.bulten.ikv.org.tr). Moreover The European Union Commission imposed taxes for a period of 5 years on the biodiesel imports from also Argentina and Indonesia on the grounds that they sold under the cost price. The EU announced its decision that it would tax biodiesel producers, such as Molinos Rio de la Plata SA, Aceitera General Deheza SA and Pelita Agung Agrindustri, by 25.7 percent, an amount up to 245.67 Euros per ton. The European Union, which began implementing intensive antidumping against non-member third states, introduced antidumping on screws, bolts, paraffin and steel-wire products imported from China, and especially the solar panels imported from China, causing a loss of approximately 21 billion Euros to the Chinese economy. For starters, the customs duty of 11% was increased to 47% in August 2013 based on the decision of the Council of the European Union (Global Trade Alert a).

Based on 14th GTA Report titled “What Restraint? Five years of G20 Pledges on Trade” issued by Simonj Evenet, the increasing protectionism tendency of the US and EU member countries in many sectors, especially iron and steel, electronics, chemical and plastic products, motor vehicles and agriculture, negatively affected the trade partners. Examining the data given in the same report for the G8 -the locomotive of the EU- consisting of nations like France, Germany, Italy and England who chose to protect their strategic sectors particularly after the crisis, the report shows that 233 protective measures have been applied to the agricultural and horticultural sector since 2008 when the crisis emerged.

The basis of this report, The “**restrictions on public procurement**”, which are among the top 10 measures resorted to in the protectionist policies implemented after the crisis, are another type of restrictive measure taken against the third countries by the Union. Approved by the European Parliament, this measure prohibits Member States of the European Union from submitting bids exceeding 5 million Euros for public transport, railway, information and communication technologies and medical equipment tenders of third countries (if market access is not mutual) (www.euobserver.com). Many of the advanced and emerging economies, including Canada, USA, Korea, Mexico, and others, were negatively affected by this decision. (<http://www.europarl.europa.eu>).

Trade protective measures ranked the first on the list with 484 measures implemented by the countries included in the report published by GTA in 2013. It is seen that **state aids** and **bailout packages** rank the second in the list with 339 measures that were still in force as of 2013 when the report was published (GTA's Pre-G8 Summit Report: Protectionism's Quiet Return (2013)). The leading countries of the Union such as Germany, France, Italy and England provided bailout packages and state aids to particularly its strategic sectors like **automotive, aviation and energy**, negatively affecting the commercial interests of foreign firms with whom they share the market. For instance, In a study conducted by Ernst & Young on small and medium-scale German companies, it was seen that they implemented the protectionist measures at a rate of 43% before the crisis whereas it escalated to 78% after the crisis and used as a shield against the global stagnation, according to Ernst&Young (Crumley, 2009). The support of 94.7 million Euros by the German Government to the German automobile company Volkswagen between the years 2011 and 2016 upset the foreign trade balances of countries such as Argentina, Belgium, Brazil and Italy with whom she shares the market (<http://ec.europa.eu>). Another sector in which Germany has extensively resorted to protectionism has been the aviation sector. The competition between Airbus, which was established in partnership with Germany, France, Spain, the United Kingdom and the Netherlands, and Boeing aviation companies established in Washington, USA in 1916, increased in the post-crisis years. The announcement by the German government that it would provide a development fund of around 1.1 billion Euros for the newly produced Airbus passenger aircraft type A350 was not welcomed by Boeing, its largest US-based competitor (<http://www.airbus.com>).

France, another example where the devastating effects of the crisis were seen, made similar moves with Germany. The French government, which incentivized 6 billion Euros for its domestic automotive companies such as the world-renowned Peugeot-Citröen (PSA Group) and Renault, laid it down as a condition that these companies would close their factories in other countries – in mainly Central and Eastern Europe, especially in the Czech Republic and Sweden– and move them to France in exchange for such financial support (United Nations Publications, 2010). Furthermore, leading automobile manufacturers of the automotive sector providing support to the sector by borrowing loans from their national banks at low interest rates is among the other moves made by many countries and particularly France to protect the sector. The French Government's announcement to PSA Finance Bank, which is a 100% subsidiary of Peugeot and Citröen automobile manufacturers and which finance almost 30% of the sales, that an amount of 1.2 billion Euros was under the government guarantee again negatively affected their 42 trade partners that exported automobiles to France (Global Trade Alert c).

Another sector in the French economy that is as important as the automotive sector is the energy sector. France's efforts to protect strategic sectors by turning to the use of domestic goods after the crisis also manifested themselves in the energy sector. As a matter of fact, the move of the US-based "General Electrics" company to buy the energy division of Alstom, which started to serve the whole world after it was established in France in 1928 and which is one of the leading companies in the energy and transportation sector, or to make joint investments caused concerns in France (<http://uk.reuters.com> /a). According to reports from the French press, General Electric, the leading electronics company in the United States, announced that they were willing to pay 13 billion Euros to buy the energy division of Alstom. In April, the French Government took action for this issue that considerably occupied the agenda of the country and published the decree on prevention of foreign purchases in the sectors of strategic importance to France on May 14, 2014. This protectionist government decree, which was published after General Electrics' attempts to purchase the energy division of the French Alstom company, is referred to as the "Alstom Decree". The resolution that was adopted for the defense and security sectors in May 2005 was amended as of May 2014 to include three more strategic sectors, which are energy, transportation and water. Transfer of

any company in gas, electricity, transportation, water supply and public health sectors of the country to foreign entities would be subject to the approval of the Ministry of Economy as per this regulation.

A similar kind of the protectionist policies applied by France, such as provision of state aids to local sectors and prevention of local companies from merging with foreign companies, was seen in Italy. In 2008, when the devastating effects of the crisis on economies were started to be seen, the news that the Italian Government would provide state support to FIAT, the local automobile company, had adverse effects on the other countries that were competing with Italy in the market. The huge support of 46,301,000 Euros provided by the Italian authorities for investment in production of vehicles as part of the regional development was foreseen to have negative effects on the commerce since the products manufactured were subject to trade between EU Member States. It was reported that the automotive sectors of 36 countries, including particularly Germany, who is the manufacturer of the world-renowned automobiles such as Volkswagen and Mercedes, and France, the USA and Belgium would be negatively affected (Kroes, 2009, a).

Another step taken by Italy to support local production was the joint venture agreement signed by Fondo Strategico Italiano S.P.A and Qatar Holding on November 19, 2012 with an initial capital of € 300 million. As a result of the agreement signed, the new company “IQ Made in Italy” established to invest in Italian companies that operate in many sectors such as food and food distribution, fashion, furniture and design, tourism, lifestyle and entertainment was planned to reach 2 billion Euros in capital within 4 years (<http://www.fondostrategico.it>). Since Fondo Strategico Italiano SPA, which is funded by Casa Depositi e Prestiti (CDP), which is owned by the Italian Government by 80.1% and Italian banks by 18.4%, is, in a way, a government-controlled incorporated company, many sectors in which this company invested would have received indirect government support/incentive. So, it may be said that the Italian Government contribute to exports by providing support to the strategic sectors (<http://www.cassaddpp.it>). Furthermore, the financial support foreseen by the government so that ITTIERRE S.P.A, a well-known company in the fashion industry, could recover from the financial difficulty it found itself in after the crisis was created by providing government guarantees on the loans amounting up to 64.2 million Euros. The situation of ITTIERRE S.P.A can also be illustrated as an example of the protectionist policy measures that the Italian Government implemented by helping out its strategic sectors (Kroes, 2009, b).

On the other hand, the Italian Government took actions that are similar to that of the French Government that introduced restrictions through regulations to acquisitions by foreign entities in order to prevent foreign companies from taking over local companies. The fact that French companies tried to buy out the foreign-invested Italian energy company Edison, the jewelry company Bulgari and the dairy company Parmalat forced the government to take measures to bring restrictions to acquisitions by foreign companies. The bill that bring restrictions to foreign companies that want to take over the strategic Italian companies was enacted into a law on March 23, 2011 (<http://www.agenziaentrate.gov.it>). Besides the automobile, fashion and jewelry sectors mentioned above, the fact that Italians did not want to sell Alitalia to foreigners – the aviation sector – and the German Siemens Company wanted to buy the Italian Industry Group Finmeccanica, which is a subsidiary of the Italian Ansaldo Energy Company – the energy sector – raised an issue in Italy confirms the government’s efforts to protect the local sectors (Global Trade Alert b).

Moreover, according to the 21st Report of GTA specifically called “Will Awe Trump Rules?” which was published by Evenett and Fritz in 2017, protectionist measures escalate trade tensions. These kind of attempts which have strong destructive effects on trade, have seen a steady increase after the post-crisis period. Based on the calculations,

these new harmful interventions reach to a yearly average of more than 800 measures (Evenett&Fritz,2017). Furthermore, on the latest GTA report- Going Spare: Steel, Excess, Capacity, and Protectionism- issued by Evenett and Fritz in 2018, they have discussed the discriminatory measures on steel sectors which are hardly exposed to protectionism by comparison with other sectors. In this context, With 379 discriminatory policy interventions implemented since November 2008 that strongly affect the steel sector, USA is the top of the list. Moreover, in the same report and considering in all sectors among G-20 countries, it has been clearly seen that USA has considerable margin over other G-20 countries in terms of implementing protectionist measures. Approximately, 1250 policy instruments have been legislated by the USA since 2008. Based on list, with nearly 750 policy instruments, India ranks as second country which frequently implement to other countries, while Russia takes place the third one. In consideration of data investigated by GTA, despite the fact that protectionist policies were also implemented by countries in pre-crisis period, the rate of their usage highly increased after post-crisis era. USA has often placed as the leading country implementing to these kind of protectionist policies, soever, many G-20 members have also applied to them. Particularly, It has engaged in more and more protectionist interventions since the election of President Trump and significantly margin over G20 members, implemented to these measures. Moreover, based on the same report, the 189 hits in 2017 exceeded totals in respect to the periods of second Obama administration (2013-2016), excluding current economic sanctions , enacted by Trump administration against several countries such as China, Iran, Turkey, EU as well. (Evenett& Fritz, ,2018).

To sum up, President Trump has been on the top of the world agenda since he was elected because of imposing nationalist and protectionist sanctions which draw world's reaction . The trade war has gone to global extent due to the fact that other countries have retaliated to USA sanctions. On the other hand, some steps such as the anti-immigrant attitudes of Trump administration and US withdrawal from Iran Nuclear Deal can be seen as typically pre-protectionist and anti-liberal policies. Such initiatives highly erode the globalization.

2.2. Global Hegemony Erosion by Economic Sanctions: Normalization of Nationalism with the Trump Administration

Trump, who was elected president on November 8, 2016, came to the fore with his anti-immigrant and Islamophobic rhetoric during his nomination. Trump, who already signaled that he would pursue a nationalist policy based on his phrase "America first", said that the USA would choose a protectionist tendency in her economic cooperation, following his statements that the USA would limit its imports and focus on domestic production.

On the pretext of the stagnation in the US, Trump's nationalist and conservative steps to create 25 million new jobs and increase growth by 1.5% in the country over a period of a decade tend to make the crisis more complicated as in the 1930s. In fact, President Barack Obama adopted a conservative policy in the economy due to the crisis that emerged in mortgage markets in the USA in 2008, even though he did not show a negative attitude towards immigrants.

Investments in China that are worth hundreds of billions of dollars (74.56 billion Dollars in 2015 and this figure increased by 52.6% in 2016), the high customs duty to be imposed at the rate of 45% will cause losses to not only China but also many American companies. On the other hand, considering that Trump signed a total of 15 decrees in the first two weeks of his presidency, closely related to the United States and the whole world. The most important of those decrees include "restriction on refugees and making obtaining visas difficult", "wall to the border to Mexico", "removal of Obamacare" and "withdrawal from Trans-Pacific Partnership (TTP)".

As it can be seen, Donald Trump's protectionist policies are not only about economic sanctions but also about several restrictions like prohibiting entry into the US by most people from Iran, Libya, Somalia, Syria and Yemen. The presidential decree that Trump signed on January 27, 2017 regarding the immigrants, rekindled the racism debate. This decree, which suspends the US immigration admission program for 120 days and prohibits Syrian refugees from entering the US until after a significant change happens, will increase the concerns that the domestic disturbance in the USA may increase, resulting in devastating outcomes (www.thebalance.com).

According to a report released by the Committee for a Responsible Federal Budget (CRFB), a complete cancellation of Obamacare is estimated to cause 23 million people in the US to lose their insurance and the budget deficit of the new government to rise by 350 billion Dollars over the next decade (www.thebalance.com).

Another presidential decree signed by Trump on January 25, 2017 was for withdrawal from the Trans-Pacific (TPP) agreement that would abolish the borders between the 12 countries on the Pacific coast (the USA, Australia, Brunei, Canada, Chile, Malaysia, Mexico, New Zealand, Peru, Singapore, Vietnam and Japan) (<https://www.donaldjtrump.com/press-releases/donald-j.-trump-foreign-policy-speech>).

The underlying reason for Trump to withdraw from the deal is his desire to block the introduction of foreign products into the country and his fear that the already high levels of unemployment in the United States will increase. As a matter of fact, the plan to provide employment to 25 million people within a decade has been targeted by taking into account the employment area to be achieved upon the withdrawal of the US from TPP. Stating at every meeting that the prosperity of American citizens is above all, Trump said withdrawing from TPP would create employment and prosperity for American workers (www.time.com).

It can be said that this step of Trump will seriously undermine the global economic relationship. As a matter of fact, the TPP, which is planned to be put into force in 2018, has been subjected to harsh criticism by countries not involved in the agreement that the agreement causes protectionism and negatively affects third countries' economies (Graceffo, 2017). The primary criticism to TPP was that especially the textile producers and exporters in the region would be protected against the third countries that are not parties to the deal through patents and protective measures. However, the reason why the US has decided to withdraw from the agreement with her new president is not the reactions against the protectionist policies to be implemented against the third countries who are not party to the agreement but, on the contrary, its desire to surround its country with walls of protectionism.. Amplifying his rhetoric that undermines neoliberal policies and harshly criticizing the US firms that manufacture outside the country, Trump continues taking steps against free trade (<https://www.thebalance.com>). As a matter of fact, the fact that General Motors exported what it manufactured in Mexico to the United States without paying tax was criticized harshly and threatened to pay a high border tax unless it manufactured in the USA. In addition, Trump directed similar criticism to Toyota, one of the leading brands of the automotive industry, and finally forced Ford, the second largest automotive manufacturer of the United States, to withdraw from Mexico and manufacture locally. As a result, Ford announced that it would cancel the \$ 1.6 billion investment it would make in Mexico, but instead would invest \$ 700 million in the US state of Michigan, creating employment within the country (Shepardson, 2017). These hard and sharp embargoes of Trump on Mexico, which contradict the functioning of the free market, have created panic in other countries. This uneasiness is clearly seen especially in the European Union countries.

The damage caused to the American economy in the long run will be dramatic, given the possibility of reprisals by other countries against those nationalist economic policies and the interventions planned in the functioning of the free market. Emphasizing at every turn that the US dollar should not be strong, Trump argues that the strong dollar will weaken competition by negatively affecting the US exports. However, the anticipation of a trade or exchange war upon the reaction of the countries against this situation will put world economies in a tight spot. (<http://www.bloomberght.com>).

As can be seen, the explanations of free-trade opponent Donald Trump who builds his policies on protectionism as to removal of the barriers to attract foreign capital to the country by lowering capital taxation prove the inconsistency between the policies to be implemented. As a matter of fact, the biggest example is that he plans to abolish the “Dodd-Frank Wall Street Reform and Consumer Protection Act”, which was implemented after the 2008 financial crisis, bringing new regulations to Wall Street by increasing financial supervision. The amendment to this law, which introduces significant prohibitions on the operations of banks and non-bank financial institutions for speculative purposes in their own interests, is intended to make borrowings easier (www.democrats.financialservices.house.gov)..

So far, It has been expressed the pre-protectionist and nationalist tendencies of the President Trump administration, but the most harmful sanctions in economic field were announced by the U.S. in the first months of 2018. The decision of tariffs on all imports of steel and aluminum, including from China and the announcement of economic sanction against \$50 billion worth of Chinese goods, namely more than 800 products, with a 25% tariff fired the first shot of trade wars that has main debate topics on the world's agenda recently. China which reacted against this decision by retaliating, rolled out a list of more than 659 US goods with worth roughly \$50 bn (www.bbc.com). Furthermore, on 24th September, Donald Trump's administration put into effect the additional tariffs of 10 percent on \$200 billion of Chinese products, including furniture and appliances, chilled meat with the rate set to increase to 25 percent by year-end. In response to this new attempt of US, China imposed taxes on 5207 US products, approximately \$60 billion (www.cnn.com). The prominent reason why US imposes sanctions against China is that US sees China as their real trade enemy, trying to steal their interest. Moreover, theft of intellectual property and China's refusal to let US companies compete fairly threatens millions of future American jobs. Second reason of these aggressive attempts against China is that US has a massive trade deficit with China approximately \$375 bn, based on 2017 US data. So, President Trump is willing to cut it back by using tariffs. However, protectionist measures won't have any deep impact on the overall U.S. deficit. The first reason is that the US trade deficit with China was up 9 per cent, while she has 16 per cent with Europe (www.brookings.edu).

On the other hand, the another country, imposed by US Administration is Iran. After the Trump's decision to withdraw from Iran Nuclear Deal which was signed with Iran in 2016, he announced the economic sanctions against Iran. The first set of sanctions, including in automotive industry, supply or trade of metals such as aluminum and steel, graphite, coal and some specific software for integrating industrial processes, put into effect on 6th August. Furthermore. Sanctions also includes in Iran's trade in gold sales. The second one, hindering the country's ability to export oil, will take effect on 4th November. The National Iranian Oil Company (NIOC) will also see sanctions along with petroleum-related transactions that include the purchase of petroleum, petroleum products, and petrochemical products from Iran. Along with the impact on Iran's energy sector, sanctions will also affect transactions between foreign financial institutions and the Central Bank of Iran. Moreover, some firms such as Boeing, Airbus that have deals with Iran, revoked their licences after Trump's decision. It means that billions of dollars of sale agreements of those countries with Iran are in jeopardy (www.independent.co.uk).

Conclusion

The breaking in globalization, which eroded the economic and financial system after the 2008 crisis, has strengthened protectionist and anti-liberal tendencies grounding on nationalist rhetoric.

It can be said that the nationalist and protective steps will narrow the world trade down and this narrowing will actually feed right-wing populist politics. Rapidly rising unemployment rates as a result of the stagnating economies due to particularly the 2008 crisis and the Euro debt crisis have accelerated the rise of right-wing parties. As a matter of fact, the popularity of Viktor Orban in Hungary, Lega Nord in Italy, and Theresa May in England originates from their strong opposition to immigrants and employment of foreign workers.

The right populist leaders, who try to find the reason of employment losses in their country in the freedom of movement and globalization have been backed by the public by putting the problem of unemployment to the agenda. They have emphasized that their own people were unemployed because of the cheap labor of other countries or the refugees migrating to the west due to war. For this reason, they advocate the necessity of implementing protectionist and nationalist policies. Yet, it seems difficult to get out of this conjuncture that the world countries goes through, which has begun with the economic crisis and continued with an international political crisis, with nationalist and protectionist policies.

In particular, President Trump's steps about economic sanctions against other nations and the response of countries, subjected to these kind of protectionist measures by US with retaliation, rise the tensions both in economy and diplomacy. Especially, the recent trade war starting between US and China jeopardises both economies and It will give rise to more cost and less benefit. Furthermore, this will destroy the stability, which has allowed multinationals to build efficient global supply chains. According to the explanations of Fitch Ratings, they have stated that if the trade war goes on , It may bring highly costs roughly 2 trillion dollars on global trade. Based on OECD report, named "The Long View: Scenarios for the world economy to 2060", trade war would have an adverse affect on long-term living standarts and business life. Moreover, they also worry about global growth rate due to the fact that the rising import tariffs among countries may fall down the world trend. On the other hand, Michigan University that calculates the US Consumer Confidence Index, stated that the index fell because of arising uncertainty.

Lastly, It has seen that the new blocking efforts are getting rise among countries because of trade wars. For instance China and Russia subjected to economic sanctions by US are becoming closer .On the other hand, EU-Japan have similar initiatives as China and Russia have recently done. However, such convergences aren't permanent solution in global world that each of actors are interconnected . So, It should be wise not to deepen the distinctions. Instead of rising tension by retaliating, multilateral negotiations should be conducted by countries, otherwise they will face to economic shrinkage. Briefly, there is no winner in trade war and such initiatives. Even if it provides interest to countries, the situation will reverse in long-term. The erosion of the global economic order will hurt economies and such sanctions will turn globalization into a hybrid structure that move along with protectionism.

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4

FROM FIRST FINANCIAL BUBBLES TO 21ST CENTURY CRISES

Kerem GÖKTEN¹, Leyla Gizem EREN²

1. Introduction

Economics seems to move away from its social dimension by introducing new tools such as mathematics and econometrics. These new tools help economists to be exact about the parameters of economy. Economists have two options in this situation. They either need to predict the crises with these new tools and gain reputation or they use historical tools and had a risk for labelling fusty. The modern economists are more advantageous than Adam Smith, with their new tools and databases. Every data that needed could be reached with an easy search and this could be accepted as a new kind of division of labour which is not similar to Smithian World. But the consequences of Smithian division of labour and the division in the new computational approach are not so much different. Saving time is the both the goodness of the division of labour and the computational approach. But while this was the real destination of the computer technology it was not the one and the only utility of it. It also helps to calculate the endless equations and data to predict the exact date of the crisis. This is a theoretical argument which unfortunately could not be supported by the practice. Economists have developed skills and tools for predicting crisis but that does not work well enough especially in the periods of crisis which were the only time to evaluate the effectiveness of the tools.

Asian Tigers praised by the International Monetary Fund (IMF) experts' just before the crises in Southeast Asia occurred (Bullard et al., 1998: 505-506). Why are statistical tools not enough in predicting the crises, where could be the problem? Could this problem be in the tools? In the computers? In the economists? Or in another part? Economics convergence to mathematics and econometrics make the discipline to diverge from society and history. Rationality is a useful and an important assumption which helps in analysing the economic issues but on the other hand it is hindering the historical and social dimensions of economics.

This chapter gives importance to the social and the historical dimension of economics and in this context the history of crisis and the similarities of crisis will be elaborated and by this way it will try to put a light on the linear path of crisis. This chapter especially focuses on the history of one of the early global crises namely the South Sea Bubble and tries to show the similarities of this bubble with the financial crises of 2008. In the second section firstly the ethymology of crises will be evaluated and next the historical crises and especially the South sea bubble will be examined. After elaborating the important part of the historical crises lastly the crises of 2008 will be analyzed.

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2. From Equilibrium to Crisis or from Crisis to Equilibrium

Economics deals with conditions of equilibrium and attaining these conditions is the fundamental principle in economics. Equilibrium is a term which was gathered from physics is described as a stationary position in which the vectors are in the opposite direction to neutralize each other. Asking a strange question such as the timing of a man will be when could be accepted as an equilibrium position? How could be such a position? Consider a Quenn's guard standing still. Could that guard be in a position of equilibrium? Definitely not. Could it be possible to be in equilibrium in the sleeping without snoring and moving? It is definitely not possible while your bodily function continues. A human being can attain equilibrium when he dies. The end of living is the condition for absolute equilibrium. If you want to end this equilibrium you need to give an external shock and to resurrect with an electroshock therapy. To put it shortly it could be argued that in medicine it is better to end the equilibrium condition by an external intervention. This means that in medicine crisis make you to loose the equilibrium condition. But this does not mean that equilibrium is not important in medicine. There is a disparity between the absolute equilibrium and the equilibrium which could be both important in medicine and economics. Medicine's main aim is to end the condition of absolute equilibrium. But on the contrary it could be said that equilibrium conditions are important in medicine. In all diseases doctors first duty is to investigate the blood tests which gives the equilibrium conditions of human chemicals. The equilibrium in the blood tests could be accepted as an indicator against the absolute equilibrium. Crisis in the equilibrium of blood tests needs to be improved by an external shock to gain the equilibrium but not the absolute one. Crisis is a concept which was gathered from medicine. The crises are related with equilibrium but not with the absolute equilibrium. It is interesting that there is a reverse relationship between crisis and the equilibrium in economics. In economics, first one is a situation in which the equilibrium condition could not sustain or to attain absolute equilibrium - the death of the market system. In this context, there is a huge relationship in between crisis in economics and medicine. In both fields crisis is an end situation – the end of life and the end of self regulating market system.

The history of economics fosters the analogy between medicine and economics. This analogy could be found in Physiocracy. Dr. Quesnay may accept as the establisher of this correlation. He attempted to relate the blood in the vessels and the money circulation. The economic system became body politic with Quesnay (Foley, 1973: 121).³ But the history of political arithmetic is a little bit earlier than the body politic. William Petty is the originator of this idea and he could be accepted as the father of mathematical economics and econometrics. Calculation of the land of Ireland was Petty's duty (Rothbard, 2006: 299). After the developments in the methods and tools of calculation, economics and economists has a change or transformation. They left the political side behind and the exactness of the science became brilliant. The change in the science has reflection on the responsibilities of the economists.

Economists have a two responsibility in the modern world. Firstly, they are responsible for forecasting the time of crisis and secondly the true diagnosis of and the true prescription for the crisis. Forecasting the time of a crisis is something like lottery winning. Generating a true prescription begins with a true diagnosis. The true diagnosis's initial condition is observing and testing the symptoms. So the tests and observes are the most important duty for the economist working on crisis. The tests and observations depends on two conditions. The first is the economic theory and the second is the tools of the economics namely mathematics, statistics and econometrics.

The mainstream economic theory did not have a solution to overcome the crises. Say and Ricardo's approach to the "impossibility of crises" has taken place in the unconscious of "economists". The crises are somehow the crisis of the

3 Eren (2015:18) related the number of 5 billion of net produce to the five litre of blood in the vessels of human.

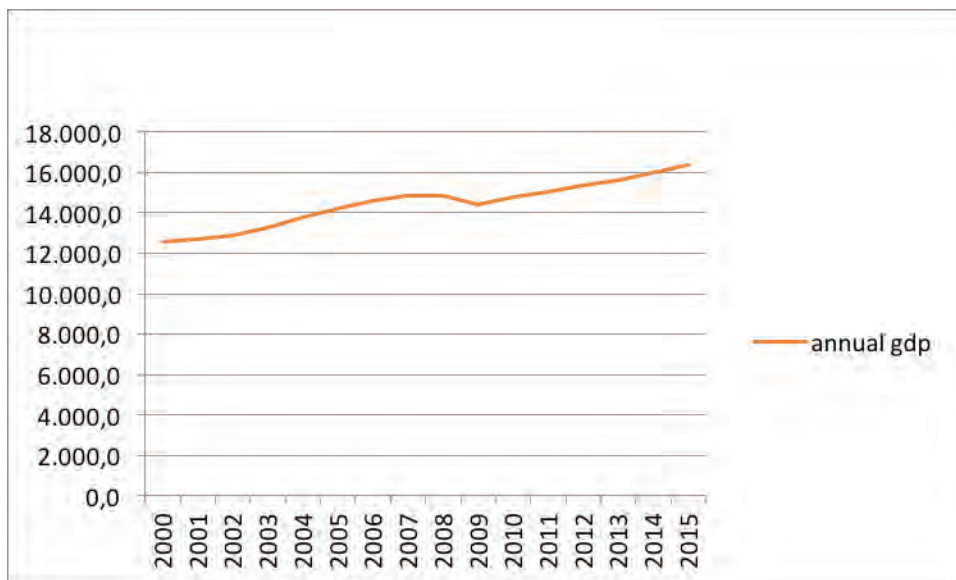
economic theory⁴. The crises are an interesting step in the evolution of the economic theory or economic theory could be read as a reaction to crises. When the gap between economic theory the real world has been diverged, the economic theory needs to update itself or needs a revolutionary alteration. But economic theory did not succeed in transforming itself or it did not have an inner power to succeed this. The lack of inner power has been substituted by crisis. Crisis generates an option for economic theory to be transformed. This argument needs to be supported with evidence. The South Sea Bubble of 1720 ends feudalism and generates the classical school of political economy (Ricardian revolution). The crisis of 1848 could be read as the beginning of Marxian political economy. Financial crises of 1870's is the birth date of marginal revolution and the beginning of neoclassical economics. The great depression of 1929 gives us Keynes's general theory. The crisis of the Keynesian welfare state, which began in the late 1960s and became prominent in the 1970s, increased criticism and the monetarist counter-revolution (Johnson, 1971: 1, 7-8). These could be accepted as the evidences for the transformation in the economic theory.

The conception of wealth had a change by the South Sea Bubble. After the crisis, wealth did not seem as consisting of finance and trade. On the contrary, production will be accepted as the source of wealth. The above process had a long history that removes the possibility to be evaluated in this chapter. The main aim of the next section is to investigate the importance of South Sea Bubble and the 2008 crisis.

3. From the history of crisis to 2008 Crisis: Same Story Different Places

Economists in 2007 were not waiting or predicting a crisis in USA. Before the che crisis of 2008 in USA the data give no signals of crisis (Eren; Saraçoğlu, 2017: 88). The first and the second figure show the usual conditions of 2007. The GDP were increasing in 2007 and the its growth continues till 2008 and turns downward after 2008.

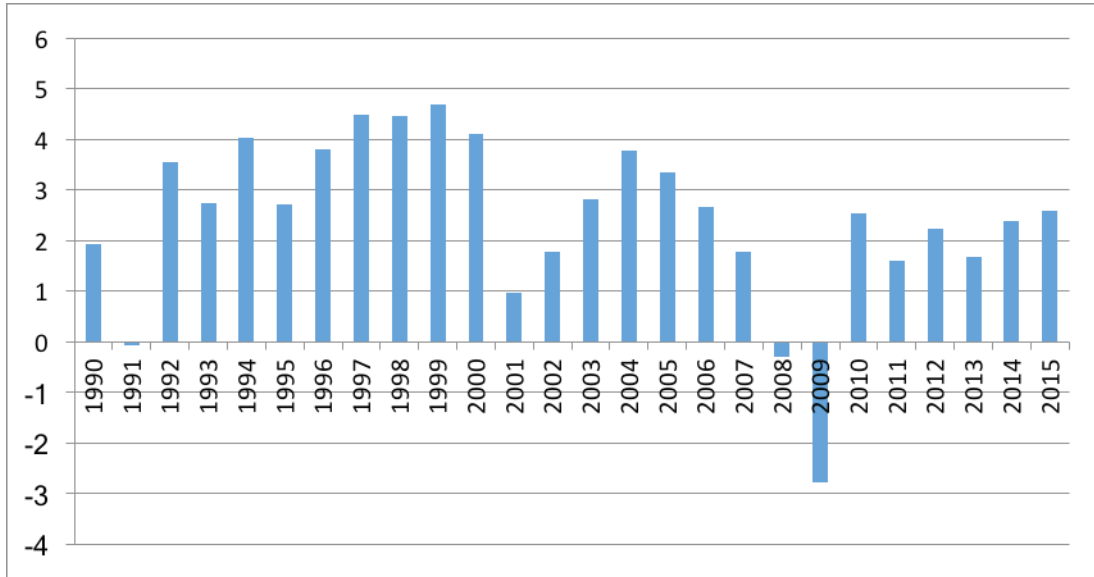
Figure 1: Annual GDP of US (in billions of chained 2009 dollars)



Source: Bureau of Economic Analysis, 2016

⁴ Apaydın (2015) has a relevant research on how the schools of thought deal with the issue of crisis.

Figure 2: Growth of US GDP (calculated from billions of chained 2009 dollars)



Source: Bureau of Economic Analysis, 2016

At the beginning of September, the control of the housing finance institutions Fannie Mae and Freddie Mac was transferred to the federal government. September of 2008 also witnessed the bankruptcy of Lehman Brothers, who invested in housing related assets and this leveraging failed by the downturn of the housing markets. Lehman's vulnerability were high and after the downturn of the market, it sink downwards the economy with it (Ataman Erdönmez, 2009: 91). The US economy shrank 0.3 percent in 2008 and 2.8 percent in 2009. The unemployment rate in 2009 was 60 percent higher than in 2008. Gini coefficient of US goes upwards after the crises for two more years (ILO, 2018; The World Bank, 2018).

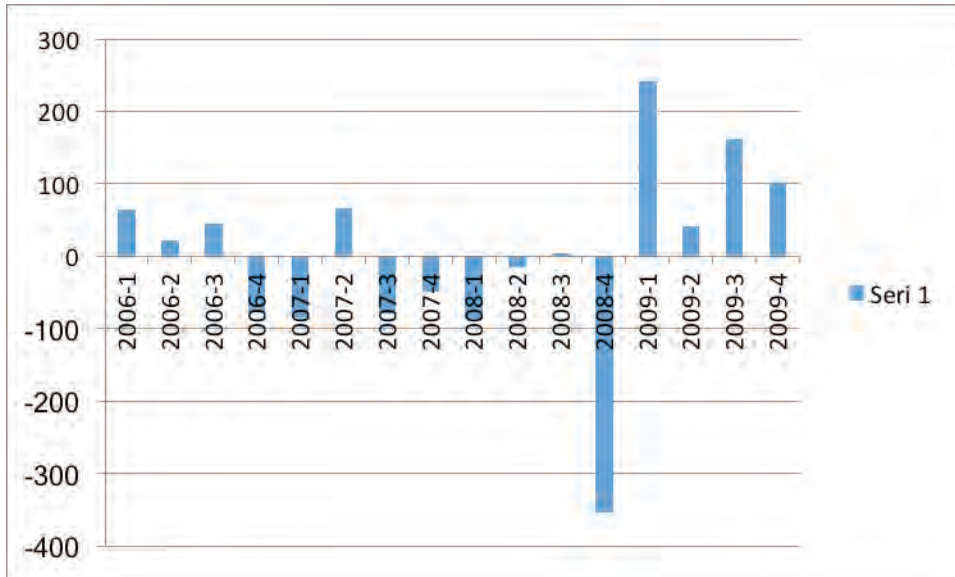
The crisis seems accidental for the ones who does not interested the history of capitalism and either the history of crisis (Eren; Saraçoğlu, 2017: 88). But the costs of these accidents are so much that the faith to global markets and the invisible hand disappeared. Schlefer (2012) is thinking like us about the invisible hand: *"of course, the dynamic but turbulent history of capitalism belies any invisible hand. The financial crisis that erupted in 2008 and the debt crises threatening Europe are just the latest evidence"*.

Individual mistakes or the wrong policies could not be the reason for the crisis. According to Marxist theory, the capitalist system has a tendency towards crises, and the fall in profitability ratios is the main source of them (Clarke, 1994:1; Savran, 2009: 37-39). In the last quarter of 2006, profits from current production have begun to decline (US Bureau of Economic Analysis, 2016). This is the beginning date of the blowing of the balloon or the bubble, and it has exploded in September 2008.

Profitability is both for reason and the cause for crises. The decline in profitability generates the crisis, and the crisis is interestingly lessening the decline in profitability. The decline in profits ends immediately after the crisis and it began to rise. The Figure 3 below shows the decline in profits in the US economy. In the final period of 2008, the

huge decline in profits generates the crisis and interestingly in the first period after the crisis, the profits began to rise. The reason of this could be explained by the reserve army of labour. The size of the reserve army was higher in the period of crises and it has a direct effect on the level of wages. It prevents the increases in the level of wages. The capitalists have the opportunity to decrease the wages and also unpaid overtime workings became widespread.

Figure 3: Profits from current production



Source: Bureau of Economic Analysis

As mentioned above the history of crisis to teach us that the crises are the natural consequences of the capitalist system. The etymology of the concept of crises gives us an important clue.

The Greek word *krino* is the origin of the word *crisis*. The “decisive moment” is the meaning word *crisis*. It is the moment of decision in removing the blockage. This indicates those crises are already an end and a beginning or a turning point in the economy. The crises are the transition point between economic recession and recovery. In this context it is an end or an opportunity to a new beginning (Merriam-Webster, 2018; Vanhoutte, 2018: 142-143).

The crises have the same patterns. The signs of disease are seen firstly in the financial part of the economy but the real effect of the crisis was seen in the production sector.

The interest rates are low and this generates a demand to stocks which increases the price of stocks. The increase in the new investors in the stock market increases the stock prices and the high stock prices could continue. The prices of the stocks exceed the real value of the business firms. When the increase in new investors stops, there is a stock market turbulence began. We could accept this as a historical fact. Kipper and Wipper crisis (1621) which occur during the thirty years’ war. To finance the thirty years’ war, the Holy Roman Empire made a debasement in the currency (Bundesbank, 2017). The Netherlands experienced a similar financial crack called *tulip mania* in 1636. This similarity could be explained as the deviation of asset prices up from its intrinsic values then fall to its

intrinsic values even below. There are some recent examples such as Mississippi Bubble, South Sea Bubble, Black Friday, Great Depression, 1982 Latin American debt crisis, 1997 Asian Financial Crisis and the dot.com crash. In all these crises, asset prices exceeds its intrinsic values and then fall again. In dot.com crisis of March 2000, the NASDAQ rate nearly fivefold in four years time (Figure 4). In less than a month, a trillion dollars worth of stock value had disappeared (Atakısı et al., 2010: 50; Eren; Saraçoğlu, 2017: 90; Geier, 2015).

Figure 4: NASDAQ Composite Index (1997-2002)



Source: Fed St. Louis, (2018)

This same story has occurred in the 2008 financial crisis. With the Dwyer's (2009) words: "Stock prices fell roughly 50 percent from peak to trough from October 2007 to March 2009".

It is difficult to explain such an important crisis by a domino effect triggered by individualistic mistakes or weakness. The problem lies within the system. According to the invisible hand paradigm, there is a harmonious order and economy tends toward equilibrium or with the words of Shaikh (1978: 219) "*capitalism is capable of automatic self-reproduction*". If not capable in so doing there must be room for external influences.⁵ In the aftermath of the crisis, mainstream economists contradictorily hoped for state intervention. So there is a tension between the economists anti-crisis faith and after-crisis policies. The intervention to the system ruins the spontaneous working of the system and generates the crisis. Here we see the traces of the methodological dilemma of the bourgeois economy against the crisis: Explaining the source of the problem with external factors, not the nature of the system. The bourgeois economy, which based on equilibrium and therefore rejects the crisis, refers to individuals, accidents and monsoon rains in explaining the crises (Savran, 2009: 31-39).

Üşür had speculated and make a distinction namely "historical reconstruction crisis" and "transition crisis". In the restructuring crises, there is no fundamental change in the rule and general functioning of the system. The transition crisis made an alteration in the mode of production. It is the reason of transforming from one mode of production to another mode (1999: 42-44).

5 According to Holcombe (1999) "there is an inherent tension between the concepts of an equilibrium outcome versus the invisible hand process".

The transition crises in the history of capitalism are not often seen. The crisis of feudalism in the 16th century was the end of feudalism.⁶ 1917 Russian crisis could be accepted as a transition/structural crisis. That crisis gave a birth to a new social formation namely socialism. Or the “crisis of socialism” in 1989 in China could be accepted as structural crisis (Üşür, 1999: 43; Gökten, 2016: 32). In this context South Sea Bubble is a reconstruction crisis.

4. The First Bubbles: Mississippi and South Sea Bubbles

4.1. Mississippi Bubble

The South Sea and Mississippi Balloons are connected to each other, although they have their own conditions⁷. The monetary expansion efforts of the Kingdoms of France and England, which face the problem of paying their debts, have sparked speculation (Kindleberger; Aliber, 2005: 59). John Law is responsible for the collapse called Mississippi Bubble. Law, known as a gambling and financial genius, was influential on French government circles starting from 1715. Law’s previously rejected national bank proposal was adopted by the success of the General Bank experience that began in 1716. Thus, General Bank was transformed into Royal Bank (Dale, 2004: 69-70).

Law’s second stage of debt refinancing was the Mississippi Company. For this purpose Law used a defunct company. This company was the Mississippi Company which holds the monopoly of the trade in French Louisiana. Law received the Kingdom’s permission in order to finance the development of Louisiana by share issue. In 1718, the company also took the monopoly of tobacco and spread its activities to a wide geography (Dale, 2004: 71-72). Following the trust of the investor, Law issued shares in succession. These stocks were the subject of a full speculative frenzy. In January 1719, the shares that were offered to the public on 500 livre per share increased to 10,100 livre in the last month of the year. After this performance, Law was brought to the finance ministry, the country’s highest administrative position. The people who invested in the shares of Mississippi became rich in a few months. High demand for Mississippi shares caused an increased amount of banknotes in circulation. Astronomical increase in money supply created the inflationary environment. The price of goods doubled from July 1719 to December 1720. In Paris real estate prices soared twenty-fold and demand for luxury goods has increased dramatically. In January 1720, Mississippi Company shares lost about 20 percent. Within this period investors wanted to get their earnings in the form of gold coins instead of banknotes. Law accused investors and tried to limit the payments in gold. In May 1720, Law decided that Company’s shares were overvalued and began to devalue shares. Due to investor panic and devaluation, the company’s shares declined to 1,000 livres at year’s end. In 1721 September, the value of the shares will decrease to 500 livre which is the value of the public offering (Garber, 2000: 100-103; Dale, 2004: 78, 134; Colombo, 2012)⁸. The collapse of the Mississippi project led to a series of bankruptcy and suicide, as well as the deepening of the financial problems of the Kingdom of French.

6 Sariöz Gökten (2013: 78) mentions the “general crisis of 16th century” as the transforming force for feudalism. Also there was a crisis in Ottoman Empire in this period. According to Köktaş (2016:226) “The equilibrium of Classical Ottoman” could not continue with the crisis of 1585.

7 According to Garber, “government connivance was at the heart of these schemes. Each involved a company that sought a rapid expansion of its balance sheet through corporate takeovers or acquisition of government debt, financed by successive issues of shares, and with spectacular payoffs to governments” (2000: 87). The different sides of the contemporaneous twin crisis are as many as their similarities. Law gathered the financial powers in France. South Sea Company has not been able to replace the Bank of England and therefore has no authority to control the money supply (Julia, 2011: 112). South Sea Company had to compete with other share issuing companies. Mississippi Company shares were bearer shares so they could freely tradable. In return ownership of South Sea Company shares had to be registered on the company’s books (Dale, 2004: 79-80).

8 John Law soon became a fugitive while he was the strongest man in Europe. He had to leave France, and he settled in Venice where he lived until his dead (Dale, 2004: 137).

According to Colombo (2012) the Mississippi Bubble was not technically a bubble. Mississippi is an example of bad monetary policy based on uncontrolled increase in money supply, rather than a financial crash caused by panic and speculation.

4.2. South Sea Bubble

South Sea Company which was founded in 1711 was a merchant company trading to South Seas and especially Spanish America. The South Sea Company has been established as a public-private partnership in order to reduce the debt of the United Kingdom. It was like a shadow national bank. United Kingdom's issued bonds for the public debts were the assets of the South Sea Company. Although the company was founded in 1711, the business in question, however, began in 1717. The first voyage had limited success. George III of Great Britain became governor of the company in 1718, in order to gain confidence in the entrepreneurs (Smith, 2007: 577; Atakısi et al., 2010, 51). "Under the Treaty of Utrecht (1713), the South Sea Company was granted the Asiento to provide 144,000 adult slaves for Spain's American colonies over a thirty year period" (Brown, 2010: 28). The profitability in slave trade is controversial. According to Carswell, (1993:55) it is "not profitable" on the other hand Paul (2011: 3-4) is not agree with Carswell and criticize the mainstream historians and concludes that slavery was profitable. In fact, as you will see below trade was always of secondary importance for the company.

The Whigs were dominating the Bank of England. South Sea Company was a tool for Tories to restructure the national debt without becoming dependent upon the Whigs (Paul, 2011: 57). The argument that "the company" basically emerged as a counter balancing organization to the Bank of England and East India Company could be accepted. Particularly in the government debt auctions, the Bank of England faced the South Sea, where the South Sea was always one step ahead. Therefore as has already been mentioned, the South Sea Company was basically taking over the debts of the state. The conversion of government debt into equity for the South Sea was the company's main profit. Although the origin of this company was based to the Tories, the managers of the South Sea had ability in getting close, into the party in power. There is a relationship in between the South Sea managers and the leading members of the parliament. South sea managers have given stocks to the leading members of the parliament which could be seen as bribes (Hoppit, 2002: 142; Atakısi, 2010: 49-51; Eren; Saraçoğlu, 2017: 93-94). Thomas (2003: 12) also mentions these bribes (amounting 1,3 million £) and manipulations. The sharp rise in the share prices helped the members to gain money. The number of the people who wanted to invest in the company could increase by this process. The people were mad about "the company", the ladies sell their jewelries to buy the shares (Melville,1921: 54-55).

Patterson and Reiffen's (1990: 167) words "The "aggressive marketing scheme" it pursued triggered a bull market, which benefited not only its own new issue of shares, but those of other incorporated and unincorporated joint-stock companies as well". The impressive increase in a few months will turn into a destruction that spreads to the same period of time.

As mentioned above The Mississippi Company had a direct effect on the South Sea Company's financial operations from the beginning. The success of John Law's financial experiments influenced the English government. France, which improved its financial indicators, was a threat and an example for England. As well as debt management the abnormal profits made by The Mississippi Company and its investors generate motivation for financial circles (Dale, 2004: 83). The bursting of the Mississippi Bubble at the beginning of the summer of 1720 had caused a

stock exchange crash not only in France, but in Europe's most important financial centers. While the share price of the South Sea Company was initially unaffected by this crash, the perception of the investor began to deteriorate towards the end of summer. There were concerns that the South Sea Company would share the same fate due to its proximity to the Mississippi Company. Although investor psychology was deeply affected by the failure of Law's experiment a stock market crash does not have to be explained by external conditions. The market valuations were not sustainable, the gap between the valuation of the stock and subscription prices was widening. The inner fragilities of the Company's financial structure highlight the internal factors that help to explain the timing of the crash (Dale, 2004: 138-140; Dale et al., 2005: 263).

Beyond these the important government legislative regulation correlated with South Sea bubble. The Bubble Act has led to results beyond the expectations of the company, which is influential on Parliament. The Act aimed at restricting rivals' activities and new entrants to the market but ironically has caused general selling on the market (Thomas, 2003: 13-14). With the words of Dale (2004:142-143):

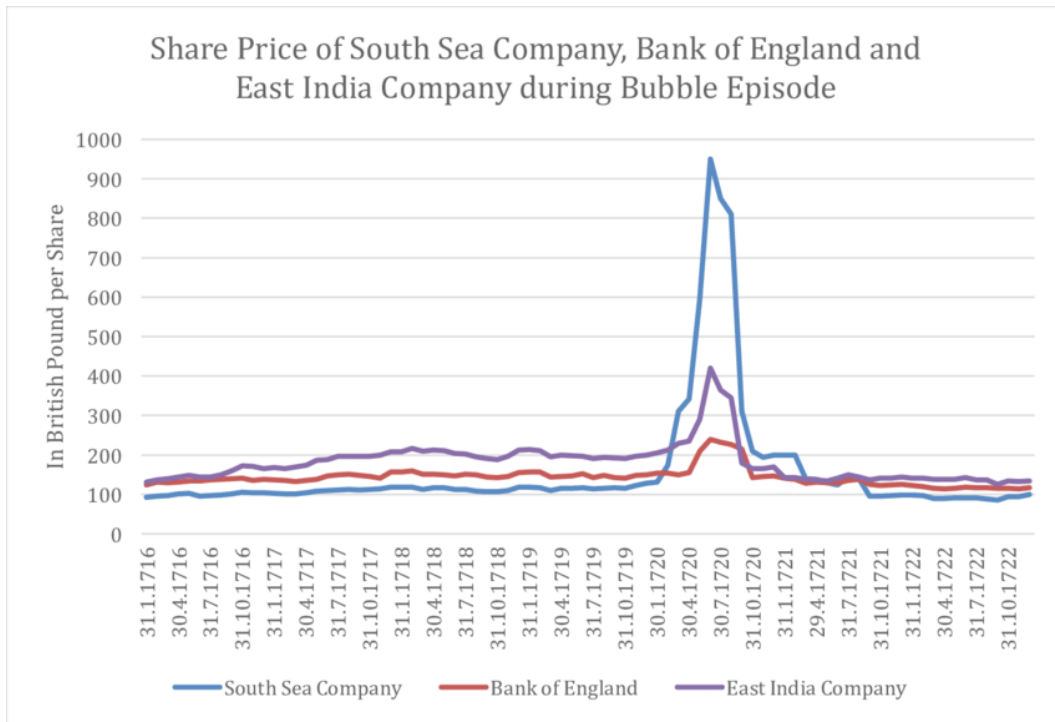
What the South Sea directors had failed to foresee was that the collapse of fringe enterprises would have devastating knock-on effects on core Exchange Alley stocks, including in particular shares of the South Sea Company.

Figure 5 shows the formation of the bubble and its burst. The increase in the price for the South Sea Company's share is incredible since the beginning of the year. The price of South Sea stock, which was £128 at 1 January, rose to over £900 by mid-summer (Dale, 2004: 115). As of mid-september the end of the South Sea experience was clearly visible. Attempts to stabilise the stock price was unsuccessful. Two serious problems were arising: great inconvenience of latecomers and liquidity problem. The cost of the sudden collapse of the stock price was considerably higher for the latecomers who had subscribed at prices up to £1000 (Table 1) (Dale, 2004: 148). Some investors have seen that the shares are overpriced, and despite the warnings, the naive and optimistic investors have pushed prices up⁹. The behaviors of the rational individuals seeking new profit opportunities led to a "speculative euphoria". Increasing optimism and prosperity pushes people and financial institutions to take on the risks that they would not normally undertake. Each new investment expanded the credit, the credit stimulated new investments....¹⁰(Kindleberger; Aliber, 2005: 37; Paul, 2011: 113-114).

9 This shows us that we should not explain all of the bubbles on the financial history with a passion for gambling. Different types of investors enter the market at different times for different reasons (Paul, 2011: 116).

10 Hutcheson's writings were of critical importance. He provided important evidence that absolute valuations of the South Sea Company deviated extremely from the valuation criteria of the period (Dale, 2004: 187).

Figure 5: Share price of South Sea Company, Bank of England and East India Company during the Bubble Episode



Source: Leister (2017:22)

The losses could not be prevented, government intervention needed to solve the crisis. Government and Parliament to orchestrate a bail-out operation. In this process The Bank of England was used, and the Bank reluctantly involved in the South Sea Company’s problems. The company had to transfer a significant portion of its government bonds to the Bank of England (Dale, 2004: 149-150).¹¹ This was a punishment for the South Sea Company.¹² Eventually The South Sea Company had lost the struggle against the Bank of England after the burst of the bubble.

11 It is interesting to note that the title of a book written by Armour (1721) on those days were “Proposals for Restoring Credit: for Making the Bank of England More Useful and Profitable, for Relieving the Sufferers of the South-Sea Company, for the Benefit of that of the East-India, and for Raising the Value of the Land-interest of Great Britain : Humbly Offered to the Consideration of both Houses of Parliament”.

12 In the days of the South Sea crisis remitting the company has thought but not realized (Melville, 1921).

Table 1 Shareholder Losses and Gains (£)

| | Cost per share | Net assets per share | Gain/loss per share |
|----------------------------------|----------------|----------------------|---------------------|
| Original shareholders at 100 | 90,9 | 557,1 | 466,2 |
| First money subscription at 300 | 272,7 | 557,1 | 284,4 |
| Second money subscription at 400 | 363,6 | 557,1 | 193,5 |
| First conversion offer at 375 | 340,9 | 557,1 | 216,2 |
| Third money subscription at 1000 | 909,1 | 557,1 | -351,9 |
| Projected subscription at 1000 | 1000 | 557,1 | -442,9 |

Source: Dale, 2004: 122.

It is well-known that the South Sea Bubble is a frequently referred event in the world financial history. However, the emphasis made by economic historians does not originate from the extent of the economic devastation. The main reason is to analyze the financial crises that have emerged since then and to trace the investor behavior. When we look at the economic-social effects of the South Sea bubble, there is no evidence of a shock in the economy, particularly in agriculture. There may be a short term fluctuation in foreign trade. Contrary to the expectations the social impact of the South Sea Bubble has not reached significant levels due to the lack of a general bankruptcy wave (Hoppit, 2002: 152-153; Paul, 2011: 103-105). Dale cautiously argues that the increase in the number of suicides in London can be attributed to the burst of the bubble. There are booms that took place during periods when there was no real paradigm shift that would affect productivity gains and company profitability, as well as traditional valuation methods abandoned during this process (Dale, 2004:185- 186).

With the South Sea, a small change in the sentiment of investors, who fascinated by the success of money subscriptions and trusted the company, has led to the bubble's bursting. Similarly, the investor's overconfidence on bullish investment advisors and optimistic profit forecasts at the height of the 1990s dot.com boom led to a retreat from stocks. In this process, corporate malpractices and financial scams became visible (Dale, 2004: 188).

Beyond similarities, there is useful information about investor behavior in the 1720 Mississippi and South Sea events, and we can combine this information with the experiences of the Japanese stock market bubble of the 1980s, dot.com and the global financial crisis of 2008. If the message of the extraordinary developments of 1720 understood by business circles, economic policymakers can take protective actions (Dale et al., 2005: 264).

5. Conclusion

Finally, the expansion dynamics of such speculative investment field limited by the expansion dynamics of the economy. A growth based on capital accumulation and profit cannot be infinite or unlimited. It is not possible to increase profit continuously and uninterruptedly and to maintain capital accumulation forever.

The example of the South Sea bubble is crucial in depicting the inherent problems in the capitalist system and to establish common grounds in the crisis of capitalism.

When capital accumulates sufficiently in the capitalist mode of production, there will be profitable investment areas, but this increases the risk and the bubble swells. Financial bubbles appear in different social conditions at different times, not a repetition of each other. However, due to the nature and functioning of the capitalist system, it is a fact that common characteristics emerge.

The capitalist system is increasingly relying on financialization to overcome its bottlenecks. Mississippi and South Sea are early examples of these quests. The only important element in these important experiences of financial history is not irrational investor behaviors that pursue high returns. We find the early examples of CEOs and high-level financial experts known for their responsibilities in the Mississippi and South Sea bubbles. Despite previous experiences and warnings, investors still ignored the information and recognized valuation methods that were readily available to them. Better explanations to the economic damages caused by irrational investor behavior will facilitate the work of the financial circles and policymakers to take the measures unless they are part of the unethical behavior.

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5

THE IMPACTS OF ENTREPRENEURSHIP ON THE ECONOMY FROM PAST TO PRESENT

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Introduction

The most important phenomenon in the last quarter of the twentieth century, no doubt, is globalization. The international competitive environment caused by economic globalization has affected the firm behaviors and the national economies in both micro and macro levels. As a result, increasing global competition has led all economic actors to search for alternative sources in terms of the continuity of the firms and the sustainability of the growth and development of national economies. In this context, the effects of entrepreneurship and innovation activities on the economy have begun to focus on both academic and economic policy interest.

Undoubtedly, the effects of entrepreneurship and innovation activities on the economy cannot be considered as a specific phenomenon contemporary. The history of entrepreneurship dates back to Richard Cantillon, who regarded the entrepreneurship as an economic actor. According to him, entrepreneurs are the ones who should be considered together with the landowners and the labor factor and benefit from profit opportunities created by the differences in supply and demand in the market (Wennekers and Thurik, 1999). Say, a prominent classical economist, is the first person to recognize entrepreneurs as an important factor of production in addition to labor, capital, and natural resources (Say, 1803). Another pioneer is J. Schumpeter, who identifies the entrepreneur as an innovative person. He integrates the concept of technology and enterprise that he defines. Thus, the entrepreneur, as in the traditional definitions³, is considered not only as a risk-taker or capital owner but also as an innovator and leader (Schumpeter, 1934; Praag, 1999).

However, Wennekers and Thurik (1999: 46-47) state that this way of addressing entrepreneurship is insufficient to examine the impacts of entrepreneurship on the economy. Because, according to them, the definition of entrepreneurship should take into account the competitive dynamics that make it possible to create and gain new profit opportunities. In addition, according to them, entrepreneurship does not qualify as a person or company but refers to the behavioral characteristics of individuals. Moreover, entrepreneurship should take into consideration both the firm and the industrial scale, as well as at the national level. In this framework, the entrepreneur must show the willingness and ability to create and gain new economic opportunities, such as introducing new products, new production methods, new institutional schemes, and new product-market combinations. In other words, analyzing the effects of entrepreneurship on the economy depends on a multidimensional evaluation of the concept (Wong, et al. 2005: 337-339).

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3 For more information, see the following: Herbert and Link (1989), Wennekers and Thurik (1999).

In this conceptual and historical development process, different aspects of entrepreneurship have discussed, and their effects on the economy have examined in various dimensions. While the theoretical literature emphasizes the relations between entrepreneurship and economic growth/development, cyclical fluctuations, unemployment, financial development, and similar issues, it is noteworthy that the empirical literature focuses on the relationship between entrepreneurship and business cycles and unemployment. In this study, the survey of the theoretical and empirical literature on the subject is conducted to determine new research areas. Thus, it is aimed to contribute to the richness and depth of the related literature with a holistic perspective on the effects of entrepreneurship on the economy.

Theoretical and Empirical Literature

Entrepreneurship plays a vital role in the development/growth of a country economy, as this is the key contributor to innovativeness, product improvement, reduction of unemployment, and poverty. In addition to this, as Schumpeter pointed out, entrepreneurship can be among the causes of cyclical fluctuations along with innovation activities. In this section, the relationship of entrepreneurship with economic growth/development, business cycle and unemployment is discussed.

First of all, the idea that there is a positive and close relationship between entrepreneurship and economic growth goes back to the early studies of Schumpeter. The main idea is that the increase in the number of entrepreneurs will increase economic growth. The main effect here is the increase in the entrepreneurial skills or, more accurately, the innovative entrepreneurial tendencies. However, according to Schumpeter, there is no economic growth without innovation, no innovation without entrepreneurs, and no entrepreneurs without credits. In short, the three factors that determine growth are innovation, entrepreneurship and credit (Schumpeter, 1934 and 1939).

Schumpeter described this innovative activity, “the carrying out of new combinations”, by distinguishing five cases. The introduction of a new good, the introduction of a new method of production, the opening of a new market, the conquest of a new source of supply of raw materials or half-manufactured goods and the carrying out of the new organization of an industry (Schumpeter, 1934: 66). In this definition, three aspects of the role played by the entrepreneur in the economy stand out. The first is the role of innovator. Matter of fact, Schumpeter was the economist who has most prominently drawn attention to the ‘innovating entrepreneur’. The second role is the perceiving profit opportunities. This role is expressed as Kirznerian (or neo-Austria) entrepreneurship. And finally, the third role that can treat as the Knightian entrepreneurship is the role of assuming the risk associated with uncertainty. In this way, when any individual produces a new product or establishes a new firm, it can be interpreted as an entrepreneurial act involving all three roles. Because the individual is innovating, he/she has (or supposed that he/she) perceived a hitherto unnoticed profit opportunity and he/she takes the risk of the failure (Carree and Thurik, 2003).

The literature suggests that when appropriate conditions (personal, cultural, institutional) for entrepreneurship are provided, it contributes to economic growth by introducing innovation, creating change and competition, and enhancing rivalry. Because, entrepreneurs create new firms and new firms create jobs. In short, the contributions of entrepreneurship to economic development, growth and sustainability can be listed as the employment generation, innovation, productivity and growth, and increasing individuals’ welfare. In other words, entrepreneurship can contribute positively to long-term growth by increasing employment and productivity (Acs, 2006; Praag and Versloot, 2007).

The existence of the relationship between entrepreneurship and economic growth points to another economic impact of self-entrepreneurship. This is the relationship between entrepreneurship and unemployment. If entrepreneurship affects economic growth by increasing employment, then entrepreneurship has a reducing effect on unemployment. However, there are several approaches and different findings about this relationship. The ambiguities found in the studies⁴ on the subject reflect two conflicting mainstream movements. On one hand, entrepreneurship may lead to a decrease in unemployment; on the other hand, unemployment may lead to an increase in entrepreneurship. While the first effect has been defined as Schumpeter entrepreneurial effect, the second effect has been referred to as refugee or desperation effect. The Schumpeter effect suggests a negative relation between unemployment and entrepreneurship, and that higher levels of entrepreneurship lead to lower levels of unemployment (Audretsch and Fritsch, 1994; Audretsch, et al., 2005; Garofoloi, 1994). In other words, higher levels of start-up activities result in employment increase. Contrary to the Schumpeter effect, the refugee effect claims a positive link between entrepreneurship and unemployment, and thus an increase in unemployment rate leads to higher levels of start-up activities (Blau, 1987; Evans and Leighton, 1990; Evans and Jovanovic, 1989; Blanchflower and Meyer, 1994).

An important aspect of the impact of entrepreneurship on the economy is its effect on the business cycles that Schumpeter first introduced in the analysis of growth. In his opinion, the capitalist form of production has an evolutionary character, and what gives it this characteristic is the innovations that entrepreneurs have carried out. And these innovations constantly destroying the old ones and replacing with new ones, thus creating an unstable structure of economic growth. This Creative Destruction Process is a fundamental fact of capitalism, and in such a system, “equilibrium” is rarely seen in historical time. The system passes through the conjectural phases which are called the neighborhoods of equilibrium (Schumpeter, 1935: 4; 1939: 63-64, 82-85, 140-141; 1943: 82-86). The reasons for the economy to pass through cyclical stages are that the innovations created internally in the economic process and their applications are non-continuity or clustered and focused in certain periods. The cyclical fluctuations arise as a result of innovation and disproportionate or recurring fluctuations in their intensity (Kuznets, 1940: 259; Schumpeter, 1935: 6; 1939: 82-84, 98-100).

In summary, the theoretical literature on the effects of entrepreneurship on the economy has been the subjects of entrepreneurship and economic growth/development, business cycles and unemployment in general. Hence, the empirical literature was largely focused on these subjects and it was observed that different results were obtained in various studies. Moreover, some studies have been conducted by classifications such as ‘corporate entrepreneurship’, ‘social entrepreneurship’, ‘opportunity entrepreneurship’ and ‘necessity entrepreneurship’, and the effects of entrepreneurship have been analyzed (Wong, et al. 2005; Gedeon, 2010).

For example, in some studies have found a positive relationship between entrepreneurship and growth, while other studies have argued that unless certain conditions (including tax regimes, human capital, the level of development and the other institutional factors) prevail in the economy, the impact of entrepreneurship on the economic growth would be uncertain. It was found that the impact of entrepreneurship on the economic growth depends on the stage of development. At the early stage of development, business owners, in emerging markets, invest heavily in traditional industries to benefit from economies of scale. Such industries do not boost effective entrepreneurial activities. In addition, as the economy starts enjoying higher levels of income and consequently higher wages,

4 Some of the first group studies include Audretsch (2007), Vázquez-Rozas, et al. (2010), Salman and Badr (2011) and the second group studies can be listed as Audretsch and Fritsch (2002), Van Stel, et al. (2005), Wennekers, et al. (2005), Urbano and Aparicio (2015).

the opportunity cost of switching from employee to business owners (as a proxy for entrepreneurship) increases. Accordingly, studies have revealed that the effect of entrepreneurial activity on the economic growth depends on the per capita income level where a positive relationship exists between the two variables for high income countries and a negative relationship exists for low income ones (van Stel, et al., 2005; Stam, et al. 2011).

On the other hand, the results obtained from these studies depend on how entrepreneurship is defined and simultaneously the stage of economic development (Klapper and Love, 2016). As entrepreneurship can either be defined as 'necessity entrepreneurship' which is having to become an entrepreneur because you have no other better job opportunities (the refugee effect), or as 'opportunity entrepreneurship' which is an active deliberate choice to start a new enterprise based on the awareness that a business opportunity is left either unexploited or underexploited. Studies found that necessity entrepreneurship has no or even negative effect on economic development (Acs, 2006; Acs, et al., 2005; Shane, 2000). In addition, opportunity entrepreneurship has a positive and significant effect (Acs, et al. 2008, Valliere and Peterson, 2009). Acs (2006) claimed that by creating new businesses, entrepreneurs will thus provide new jobs, strengthen competition, and surge productivity through technological change. Consequently, high level of entrepreneurship will mean high economic growth rates, especially as developed economies have shifted away from traditional industries towards electronics, software, biotechnology and ICT sectors, where productive entrepreneurs play a great role in boosting growth. Also, a high level of economic development entails a higher level of income which widens the scope of market. Furthermore, Acs (2006) argued that entrepreneurship may include informal self-employment which means either the existence of considerable bureaucratic obstacles to formally creating a new business, or merely that the economy provides too few reasonable wage-earning job opportunities which is meant to be necessity entrepreneurship.

Looking at the literature on the subject, the relations between economic growth and entrepreneurship have been examined by considering the development levels of countries. For example, according to the research by Zaki and Rashid (2016) on seven emerging countries (Egypt, Hungary, India, Mexico, Indonesia, Turkey and Romania) over the period 2004-2014 and other previous studies on entrepreneurship, necessity entrepreneurship is indicated to have no adverse effect on economic development as the marginal productivity is zero or even negative. Necessity entrepreneurship means having to become an entrepreneur because there are no other better job opportunities. Apparently, most emerging countries have more necessity entrepreneurs who are forced to be self-employed and fewer opportunity entrepreneurs because of the high youth unemployment rate, low income level and uneasy entrepreneurial environment. Opportunity entrepreneurs are entrepreneurs who make a deliberate choice to start a new enterprise, they demonstrate innovative capabilities and exploit unidentified opportunities (Acs, 2006: 97). However, the research concluded that there is a significant negative relationship between entrepreneurship and economic growth, while both labour productivity and level of economic development shows a positive relationship with economic growth. This statement implies that entrepreneurship has excellent benefits for the economy of the nation if the government can encourage business start-ups, improve the business environment, provide necessary infrastructure as well as create a fair taxing system and business regulation (Zaki and Rashid, 2016). According to Yusuf and Albanawi (2016), in developing countries, the entrepreneurial activities of the population are a determinant of economic growth. The well-planned and well-coordinated activities of entrepreneurs in a nation can bring about a high economic growth rate.

Van Stel, Carree and Thurik (2005), who stated that entrepreneurial activities have a positive effect on economic performance, believe that these activities in developed countries are related to the level of economic development.

These means that the entrepreneurial activities in such countries can contribute to the economic growth of such country which affirms the notion that the difference in economic growth rates of countries is due primarily to the quality of their entrepreneurs. Entrepreneurs in developed countries are mostly opportunity entrepreneurs who are highly creative and innovative. They employ all factors of production (land, labor and capital) for productive ventures and in most cases, their government provide an enabling environment for business to thrive as such most start-ups in no time become a more substantial corporation and enjoy economies of scale. China's explosive economic development over the past twenty-five years is as a result of the removal of bureaucracy, government encouragement, and support for the entrepreneurial activity of the people. In the United States, the world's biggest economy, seventy-five percent of the sixteen million businesses operate as a sole proprietorship with enormous support from the government and in turn, show how these 17 entrepreneurial activities have helped create jobs and moved the country out recession to growth. Also, at the heart of other rapidly growing economies such as India and Brazil are numerous SMEs manufacturing, retail, IT, technical, and financial firms who are providing jobs, creating products and services and bringing about competition, innovation and growth (Osolor, 2016).

Although there are a large number of cyclical fluctuation theories in the literature, there are few theoretical and empirical studies explicitly including entrepreneurship. For example, in the real conjuncture model theoretically considered by Rampini (2004) focusing on the relationship between entrepreneurs' share of total labor and business cycles. It is assumed that economic actors preferred to risk-averse and chooses between employment and entrepreneurship in which model entrepreneurship activities changed with cycles in the same direction.

Wong, et al. (2005) examined the effects of entrepreneurship and innovation on economic growth separately. In the study, it is carried out in the context of the neoclassical growth model using the cross-sectional data of 37 countries in 2002 and concluded that innovation is an important and significant determinant of economic growth. The rate of entrepreneurship is defined in four different ways such as general or total entrepreneurship, an opportunity of entrepreneurship, a necessity of entrepreneurship and potential entrepreneurship and it is stated that only potential entrepreneurship has a positive and significant effect on economic growth.

The literature review of Parker (2009) discussed whether new companies in the United States will be in the same direction with the cycle and it was indicated that reducing wages had encouraged opening new firms and entrepreneurship during the recession period.

Koellinger and Thurik (2012) had examined the relationship among entrepreneurship, unemployment and GDP cycles in a panel data analysis of for 22 OECD countries during the period of 1972-2007. For the 22 countries, the entrepreneurship was Granger causality of the business cycle even though it was not on the national level. In other words, entrepreneurship had increased in all countries when the conjuncture had entered the expansion period, but such a relationship had not seen at the country levels. Moreover, entrepreneurship at the national level was a reaction to unemployment fluctuations unlikely to cause unemployment.

Congregado, et al. (2012), it is questioned whether the entrepreneurship in Spain and the United States shows a hysteresis effect or not and the causality between business cycles and entrepreneurial ratios is investigated. According to the study, the entrepreneurship caused hysteresis effect in Spain, but not seen in the United States. In addition, it has been concluded that changes in business cycles in both countries have significant effects on future entrepreneurship rates. In other words, the existence of reverse causality between business cycles and entrepreneurship has been determined.

Fritsch, et al. (2013) examines the relationship among entrepreneurship, unemployment and business cycles in Germany. It is found that there was a positive relationship between unemployment and new firm start-up activities in the study and that establishment of the new firm was more during recession periods, in other words, the entrepreneurship was counter-cyclical. The authors also analyzed the periods of high and low unemployment and indicated that unemployment had a significant effect on entrepreneurship when entrepreneurship was below the trend value of unemployment.

Scholman, et al. (2014) analyzes the relationship among entrepreneurial activities in an open economy, business cycles and unemployment. In the study, using both quarterly and annual data for 1998-2007 of 19 OECD countries, if the business cycle in the country follows behind the world conjuncture, then in the short run the entrepreneurship in that country increases.

However, if the country's business cycle leads the world conjuncture, the entrepreneurial activity in that country has increased in the mid-term (a year or two years later). According to authors, the position of a business cycle in a country with regard to the cycles in the world creates different types of entrepreneurial opportunities depending on the time horizon. When this is interpreted for an open economy, the entrepreneurial opportunities relate to the conjectural performance of the outward-country.

The study of Faria (2015) asserts empirical results based on the theoretical model in which Koellinger and Thurik (2012) claimed that entrepreneurship was Granger causality of the cycles in the world economy and entrepreneurial cycles were positively affected by national unemployment rates. The study investigated the relation among entrepreneurship, unemployment and GDP based on Ramsey model, in that unemployed persons tend to be an entrepreneur and to enter the market by developing a technological innovation during periods of high unemployment. If unemployment declines during the expanding of the economy, the number of new entrepreneurs will decrease, and this reduction in entrepreneurial numbers will lead to decrease technological innovations and capital stock (Llopis, vd., 2015: 246).

On the other hand, in the related literature, it is expected that entrepreneurship improves economic performance by creating innovations and increasing competition (van Stel, Carree and Thurik, 2005). However, as the empirical studies have shown, the effects of entrepreneurship on economic growth and conjuncture can vary from country to country and the length or shortness of the period considered because of that there is an interesting relationship between the period of the conjuncture and entrepreneurship. This case emerges especially during the recession period of the conjuncture. The recession periods, on the one hand, the entrepreneurship may be reduced because the potential income and wealth of firms are decreasing, and on the other hand, the entrepreneurship can necessarily be increased due to the lack of employment opportunities or the lack of potential job opportunities. Moreover, as the unemployment increases and the labor is cheaper, the opportunity of entrepreneurship can also increase. The characteristic features of the recession period make the net effect on entrepreneurship uncertain (Farlie, 2011; Wong, et al., 2005).

When we look at the studies examining the effects of entrepreneurship on unemployment, while some studies have found that entrepreneurship reduces unemployment, some studies have concluded that the increase in unemployment reduces entrepreneurship. According to these studies, Unemployed people do not have the adequate knowledge and capital to build a business and therefore do not seek entrepreneurship (Johansson, 2000; Hurst and Lusardi, 2004). This phenomenon is explained by unstable economic growth in some studies (Audretsch,

1995; Audretsch, vd. 2005; Thurik, vd., 2008). Finally, there are studies suggesting that there is no relationship between entrepreneurship and unemployment and even that the interaction is bi-directional (Carree, 2002).⁵

These trends in the world literature on the relationship between entrepreneurship and unemployment are also observed in a small number of empirical studies for Turkey. While there is a negative relationship between unemployment and entrepreneurship in the study conducted by Kum and Karacaoğlu (2012), the causality is from unemployment to entrepreneurship. In the study carried out by Halicioğlu and Yolaç (2015), which takes into account different countries, the increase in unemployment in some countries increases entrepreneurship, while in some countries it decreases entrepreneurship. On the other hand, there was no long-term relationship between the two variables in some countries, including Turkey. Finally, Apaydın (2018a) found that the Schumpeter effect was valid while the refugee effect was invalid. In other words, when the rate of entrepreneurship increases. Unemployment decreases and causality is from entrepreneurship to unemployment. The only study in Turkey that examined the impact of entrepreneurship on Business Cycles was carried out by Apaydın (2018b) and it was found that the entrepreneurship activities were counter-cyclical. In other words, it has indicated that these activities increase in the recession periods and decreasing in the expansion period of the cycles.

Concluding Remarks

In this chapter, the effects of entrepreneurship on the economy have been historically studied and the issues that have been considered in the theoretical and empirical literature have been tried to be determined. In this context, it is determined that the effects of entrepreneurship on business cycles, unemployment and growth are examined both theoretically and empirically. In the studies, it is generally accepted that entrepreneurship will affect economic growth positively, reduce unemployment and increase economic prosperity. However, empirical studies have shown that the economic effects of entrepreneurship may vary according to country-to-country, applied method and the length or shortness of the period considered. For example, while in some countries there is a negative of positive relationship between entrepreneurship and unemployment, in some countries there is no relations between variables. A similar situation exists for the relations between entrepreneurship, business cycles and growth. Undoubtedly, factors such as the specific characteristics of the countries, the different analysis methods and how the variables used in the analysis can be defined can play a role in the emergence of different results.

Despite the fact that the relationships between the variables mentioned in entrepreneurship are examined in detail and the effects of entrepreneurship on economic development are emphasized, it is observed that the studies are considered as growth-oriented rather than development. In other words, the relationship between entrepreneurship and development has been neglected. Considering that entrepreneurship reflects the individual's behavioral characteristics, this aspect of the issue is particularly important. Therefore, while examining the effects of entrepreneurship on the economy, taking into account other development indicators (energy consumption, health expenditures, education expenditures, etc.) other than the growth rate will make the analyzes to be more meaningful and significant. In addition, when examining the effects of entrepreneurship, the analysis of entrepreneurship and innovation activities together will help to discuss the issue with a richer content.

5 Some of the studies covering different countries / regions and different methods are as follows: Evans ve Leighton (1990), Audretsch ve Fritsch (1994), Garafoloi (1994), Audretsch ve Thurik (2000), Audretsch, et al. (2002), Audretsch, et al. (2005), Caree, et al. (2007), Faria, et al. (2009), Faria, et al. (2010).

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6

NON-PROFESSIONAL SCHOOL OF ECONOMISTS: MERCANTILISM

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Mercantilism as a Concept

The concept “mercantilism” that first appeared in print in Marguis de Mirabeau’s *Philosophie Rurale* in 1763 as *systeme mercantile* designates a system of economic policy as well as an epoch in the history of economics in the sixteenth and seventeenth centuries and in most of the eighteenth century before the publication of Adam Smith’s path breaking *The Wealth of Nations* (Magnusson: 1994: 25; Magnusson, 2009). However, a school of thought that defines itself as mercantilist has never existed. Adam Smith had made such a categorization. According to Adam Smith, the dominant political and commercial system in Europe in the sixteenth, seventeenth and most of the eighteenth century was mercantilism (Screpanti and Zamagni, 2010: 32). Seemingly, Adam Smith had apparently read *Philosophie Rurale* (Magnusson: 1994: 25). A common theoretical essence of the works of mercantilist writers did exist, not only permitting debates and dialogues but also giving a certain homogeneity to the various national economic policies. It is difficult to make a “system” definition within the framework of their thoughts. Depending on their national characteristics, it would be at least appropriate to admit that they show some important differences and a minimum of historical evolution (Screpanti and Zamagni, 2010: 32).

The Basic Characteristics of Mercantilism

According to the mercantilists, the aim of economic activities was national power. National power was proportional to the amount of wealth that was owned. The only way to increase wealth was through the foreign trade to the country the precious metals input .

Mercantilists claimed that countries’ exports must be greater than their imports which resulted a net-inflow of bullion. This was the main point of “positive balance of trade theory”. This theory was certainly not new in 1622 when it was written by E. Misselden (Magnusson: 1994: 7; Magnusson, 2009). The positive balance of trade theory of the mercantilists is ambiguous. However, it can be said that today’s terminology means foreign trade balance .

Behind this theory there was the idea that the precious metals stock was fixed in the World . So, as Screpanti and Zamagni (2010: 39) too said, the struggle among the European countries to obtain precious metals almost became a “zero sum” game. In other words, residual was surplus which could only be obtained from foreign trade. That means one country won and another country lose. Therefore mercantilists advocated a policy of protection in foreign trade (Kazgan, 2000: 44). As seen, idea of mercantilist about money was generally Bullionist.

Up to the end of the sixteenth century, Bullionism had dominated the opinions circulating in the European courts, for example, these views had been valid in England during the fifteenth and sixteenth centuries (Magnusson: 1994:

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9; Screpanti and Zamagni, 2010: 32). This was characterized by the conviction that money, or gold, was the wealth. Moreover, there was a widespread opinion that treasury was the only type of wealth accumulating – an opinion which had been valid for the state, in an era in which wars won with gold. This idea also accorded well with the merchant's point of view, for whom money was capital and, actually, the only type of capital capable of increasing in value. In this period, it was clear to almost every economist that the money was a way of increasing wealth and power (Screpanti and Zamagni, 2010: 32). The Bullionists considered that a wide circulation of money within the national borders guaranteed an extensive tax base; hence the precious metal output had to be prevented. The simplest way to do this was to prohibit the export of gold and silver (Screpanti and Zamagni, 2010: 33).

Beginning with Misselden and Mun, economic problems such as a presumed negative balance of payments began to be regarded as a consequence of “real economic factors” (the balance of export to import) rather than of evil speculation and usury in the seventeenth century. As a result, the interest in how to regulate the economy had increased. In this context, the wealth of a country became dependent on the wise policies of statesmen. More than anything else, however, it counted on the statesman's ability to rule according to the laws dictated by the mechanical forces of an independent economy (Magnusson: 1994: 10). In order to prevent foreign trade deficit and thus the release of precious metals, the state should encourage exports and discourage imports. Gold stretching and output depends on the balance of trade and the state should pay direct attention to this. If the national manufacturing goods were reflected in the increase in production, a trade deficit with some countries might be tolerated in the context of importation of necessary raw materials (Screpanti and Zamagni, 2010: 34).

As can be seen, the economic views of mercantilists were primitive on the basis of foreign trade surplus. Although material life and mentality were developing during this period, they were not at a level to reveal economics as science. Nevertheless, mercantilists lived in a period which experienced rise of secularization and a new empiricist world-view and methodology . Namely; mercantilists had followed a rational scientific program and made it a condition the arguments should be based on facts .

From the point of view of the birth of political economy, the definition of the interests of one particular social class, i.e. the merchant class, was extremely important (Screpanti and Zamagni, 2010: 34-5). The whole country was considered as a large trading company. It means its net gold entry corresponded to its foreign sales exceeding its foreign purchases. The nation, as with the merchant, would also have to avoid keeping its stock of money idle. In this context, it had to reinvest it in the form of stock, in order to buy the imported goods necessary to produce new goods, thus, it would be able to increase exports and profits. Although production played an important role in this way of thinking, sales over purchases was still only seen as the source of profits (Screpanti and Zamagni, 2010: 35).

The theory of economic policy that sprang from this doctrine was simple. Trade policy had to be protectionist. These principles had found application. In this context, it was seen that these principles were applied in France with the tariffs that Colbert had institutionalized in 1644, while England went towards this direction towards the end of the seventeenth century (Screpanti and Zamagni, 2010: 35).

In the context of mercantilist trade policy, national shipping was promoted, measures were taken to strengthen the merchant navy (for example, in 1651, the British Shipping Act prohibited the import of goods of non-British vessels), the demand for the mother country's products and for the supply of low-cost raw materials were expected

to come from the cloonies, and the major national trade companies were granted privilege and monopoly rights (Screpanti and Zamagni, 2010: 35; Vaggi and Groenewegen, 2014).

The ideas of mercantilist bullionism had changed over time. This change was the result of the price revolution caused by the gold and silver flowing into Europe after the discovery of the American continent. It is worth mentioning that this situation was the dilemma of commercial capitalism in mercantilist thought.

The mercantilists made the first formulations of the quantity theory of money. The price revolution could not pass unnoticed. However, from the middle of the seventeenth century there was an important theoretical change. The quantity theory was still widely accepted by the mercantilists; yet it was no longer interpreted an explanation of price levels, but rather as theory of the level of transactions. This belief became so common that the few economists who did not accept it and remained faithful to the old quantity theory were considered almost as revolutionaries. This change in point of view was probably connected to the end, between 1620 and 1640, of the century-long inflationary process that had begun with the discovery of America. The trend of increasing prices, which had started at the beginning of the sixteenth century, levelled out in the seventeenth and remained so until after the middle of the eighteenth. The second half of the seventeenth and the first half of the eighteenth century also represented a period of depression. The flow of gold and silver from the Americas was drastically reduced, and the struggle among the European countries to obtain precious metals almost became a “zero-sum” game. Economists and merchants were no longer worried about inflation but about the lack of the availability of money to finance trade. A widespread idea was that “money stimulates trade”. The increase in the inflow of precious metals caused by a surplus in the balance of trade, in a period in which it was only possible to increase internal monetary circulation by a reduction in external spending, was seen above all as the necessary condition for an increase in production and, therefore, in wealth-to the extent that protectionist policies were often linked to the advice, specifically directed to the sovereign, not to hoard money: To increase the state treasury would do nothing but take money out of circulation (Screpanti and Zamagni, 2010: 38-9).

The Collapse of Mercantilism

Mercantilist views began to change slowly from the second half of the seventeenth century such that from this date these views reflected the stage of transition from commercial capitalism to industrial capitalism. The idea that administrative restrictions on economic activity created more disadvantages than advantages for the collectivity began to spread among the economists. Indeed, many situations revealed the dilemma of the mercantilists. In this context, both British and French thinkers in the second half of the seventeenth century and in the first half of the eighteenth century exhibited both mercantilist and liberal features (Kazgan, 2000: 51; Screpanti and Zamagni, 2010: 44). It is necessary to accept this change as a reflection of material life.

Starting from the first half of the seventeenth century, the conditions that prepared the birth of industrial capitalism began to emerge. Firstly, the price increases that continued throughout the eighteenth century changed the distribution of income in favor of the capitalist class. At the same time, the savings power of this class greatly increased. Secondly, technical inventions had prepared the substitution of manpower for machinery and the transition from cottage industry to factory industry. Thirdly, a broad market had emerged to ensure the profitability of investments both within the country and overseas countries. In this context, depending on the collapse of feudalism, subsistence agricultural production became market dependent and thus the domestic market expanded. At the same time, the overseas market had expanded with commercial export companies in overseas and with the colony companies

replacing them later. Fourth, the input market had started to form and production factors had been freely available from the market. As a result of the collapse of the feudal system and the commercialization of agriculture, land, labor and inputs had become freely available on the market. In this process, colonies provided raw materials to the developing industry. In the process of reformation, the removal of the land of the church had similar effects. As the labor force as a production factor could be hired freely in the market, the case was developed slowly: The collapse of feudalism, the enclosure movement in England, and the dismissal of farmers and workers, and the substitution of labor with machinery to transform semi-independent craftsmen in the home industry into wage-workers had prepared the emergence of the waged working class (Kazgan, 2000: 52). It is worth mentioning that the state had played a supporting role in this development process.

At this stage, while industrial capitalism was producing goods under competitive conditions, the guilds and the concessional trade companies were monopolistic organizations. The industry, which was in production under competition conditions, was against monopolies in this respect. In this process, the parliament in England enacted laws prohibiting unification against the reorganization of the labor force, which was freed from guild records and land-based status and the controls that saved the industry were removed. However, these developments were followed by delayed liberalization of foreign trade. From the eighteenth century onwards, industrial capital was strengthened and as a result, protective and restrictive trade agreements were resolved and free trade began to develop (Kazgan, 2000: 52). As we have seen, by the eighteenth century changes in material life had led to changes in economic mentality in general.

The economic mentality was able to adapt to the change in material life slowly, with a delay of up to a hundred years. Thus, interest was focused on industrial production from trade and on capital and workforce from merchants and financiers. In short, the basis of economic activity had been industrial production . In this context, the idea that wealth or profit was obtained by the exchange was no longer valid. In particular the idea that the origin of profit was to be found in the production sphere began to spread. However, another factor reducing the validity of mercantilist thought was the dilemma of commercial capitalism: As a result of the increase in the prices of the domestic market because of the foreign trade, the idea of giving a continuous export surplus brought with it inflationist effects that would destroy itself. Besides all these, the new philosophy of individualism, together with developments in the Protestant ethic, contributed to solving the problem by liberating egoistical and acquisitive behavior from religious condemnation and created the premises for a new type of legitimation for economic activity (Kazgan, 2000: 52-3; Screpanti and Zamagni, 2010:44).

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7

THE “SUPREME MIND” OF TURKISH CAPITALISM: THE COORDINATION COUNCIL FOR THE IMPROVEMENT OF INVESTMENT ENVIRONMENT (YOIKK)

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It is always the direct relationship of owners of the conditions of production to direct producers – a relation always naturally corresponding to a definite stage in the development of methods of labour and thereby its social productivity – which reveals the innermost secret, the hidden basis of the entire social structure, and with it the political form of the relation of sovereignty and dependence, in short, the corresponding specific form of state (Marx, 1967, III:791, as cited in Liodakis 2010: 55).

Introduction

The first wave of neoliberal transformation, which determines the structure of economy, social life and state in Turkey, started with the economic stability measures taken on January 24, 1980 and the September 12, 1980 coup. In the first wave of the transformation, trade unions were weakened, real wages were reduced, foreign trade and capital movements were liberated. The second wave of neoliberal transformation followed the crisis and turbulence in the period following the great economic crisis in February 2001. In this ongoing process, public enterprises were privatized and the basic public services were commodified, the corporate tax rate was reduced and the tax burden was shifted from direct taxes to indirect taxes (consumption). In addition, monetary policy was carried out by the independent central bank, which aimed inflation targeting. Finally, in this second wave, the public administration has been restructured to sustain this whole process. The state’s main economic objective in order to compete in foreign markets and increase the rate of growth was to attract foreign investors to the country and keep local investors in the country .

In this process, the Coordination Council for the Improvement of Investment Environment (YOIKK) was established in December 2001 with the decision of the Council of Ministers principle after the February 2001 crisis for these purposes. Since then, this board has formed the basic framework and applications of the economic programs and activities of the Turkish State.

In this article, the structure, function and effects of (YOIKK) in the Turkish case will be discussed by referring to some theoretical views on the characteristics of state structure in the neoliberal period.

State in Neoliberal Era

In the late 1960s and early 1970s, the class struggles intensified in the capitalist system, the accelerated radicalization in the third world, the fall in profit rates in the capitalist centers, the collapse of the Bretton Woods system, and

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the stagflation led the capitalist world elites to a total offensive strategy against Labor all over the world. This attack spread from capitalist centers such as the United States, Britain, Federal Germany and Japan in the early 1980s. In 1991, with the disintegration of the socialist system, a significant distance was drawn, the class struggles were suppressed, the privatization of Public Enterprises, known as the Washington Consensus, the liberalization of foreign trade and capital movements, and the suppression of labour rights. At the same time, the integration of world capitalism in terms of finance, production and trade has increased. Of course, this integration was unequal and hierarchical. Competition has also intensified on the global level. Although the decline in profit rates after the 1980s was partially compensated, the recession continued despite some temporary revival in the growth, unlike in the Golden Age between 1945 and 1970.

Despite some protectionist and interventionist initiatives, the attack against Labor continued after the crisis of 2008, and the burden of the crisis was paid by the labourers. Some commentators described the partial or complete abandonment of welfare state regulations and the emergence of the market as the main economic regulator of the whole social space as a “second great transformation” inspired by Karl Polanyi. In response to the fall of profit rates, the states that seeking capital inflows and capital that pursuing profitable investment in the global market have formed the supply and demand front of international investment.

In this process, the structure and function of the states have undergone an important transformation. In the neoliberal globalization era, in addition to controlling the stability of labour and money, states have transformed to observe the profitability and competitiveness of their own capital in the integrated world economy. Bob Jessop called it the Schumpeterian Competition State or the Workfare State, and defined this new type of state with the following characteristics:

Changing regulatory frameworks to facilitate labour market flexibility and mobility within national economic space. Liberalization and deregulation of foreign exchange movements and redesign of international financial architecture with the effect of internationalizing and accelerating capital flows.

Modifying institutional frameworks for international trade and foreign direct investment.

Planning and subsidizing spatial fixes that support the activities of financial, industrial and commercial capital within and across borders.

Promoting their own national or regional capitalism and appropriate conditions for their global spread.

Engaging in complementary forms of *Standortpolitik* and other forms of place-based competition in an attempt to fix mobile capital within the state’s own economic spaces and to enhance the interurban, interregional or international competitiveness of its own place-bound capitals.

Seeking to manage the tension between (a) the interests of potentially mobile capital in reducing its place-dependency and/or freeing itself from temporal constraints and (b) the state’s own interest in fixing (allegedly beneficial) capital in its territory and rendering capital’s temporal horizons and rhythms compatible with its own political routines, temporalities and crisis-tendencies.

Promoting new temporal horizons of action and new forms of temporal flexibility.

Socializing long-term conditions of production as short-term calculation becomes more dominant in marketized economic activities.

Articulating the interlinked processes of de- and reterritorialization and de- and retemporalization associated with new forms of time-space distantiating and time-space compression in the hope of creating a new spatio-temporal fix for managing the structural contradictions inherent in capital relation. (Jessop, 2002:138-139)

The most important functions mentioned above are summarised in one sentence: the capitalist states essentially have the function of attracting foreign capital/investment into the country and/or ensuring that local capital/investment

stays in the country. In other words, they wanted to provide capital inflow and prevent capital outflow. This need has created “race to the bottom”, resulting in a fall in wages, taxes, public standards and regulations. This is also what Cerny called the “competence state,” and it turns into what Cerny calls “commodification of the state,” and this state is called at making economic activities located within the national territory, or which otherwise contribute to national wealth, more competitive in international development terms (Cerny, as cited in Muck 2005:63). Cox had previously recognized the concept of “nébuleuse state”, in which the distinction between the internal and external states became ambiguous: “the notion of government without government” (Cox, 1992). To this end, the main motive was to take measures against the so-called investment strike or capital flight.

Capital flight refers to the movement of investment away from a country or region. This can take place suddenly, in response to a crisis, or more gradually, as labor markets, regulatory environments, and tax structures come to be regarded as less attractive to investors relative to those elsewhere (Orr, 2012). For divestment: debt crises, anticipation of devaluation of a nation’s currency, risk of capital control and tax on capital, political instability, implementation of nationalist, populist or socialist reforms (Orr, 2012). According to Epstein (2005), capital flight is an inherently political phenomenon replete with issues related to the state, class and conflict and also capital flight can be powerful political weapon against government policies that threaten the wealth or prerogatives of the rich. In this role, capital flight has sometimes been called “capital strike” evoking the idea that capital as a class goes on strike against undesired taxation or regulatory policies (Epstein, 2005).

In the past, the situation of the Mitterrand government in France in the early 1980s, the 1997 Asian Crisis and what happened in Venezuela today were examples of this phenomenon. In the same vein, the Trump administration also continued to increase interest rates to attract financial capital and loosened the Dodd-Frank financial regulation law after the 2008 crisis and reduced the corporate tax rate from 35% to 21%.

In order to avoid such phenomena as capital evasion or capital/investment strike, states are implementing a comprehensive structural programming. In order to attract capital/investment and keep capital/investment within the country, states increasingly felt the pressure to act together with investors in determining the economic strategy, to maintain political and social stability. The risk of capital/investment strike has disciplined the state and labor.

In the literature, there is a double separation to express the resources of the power of capital against the state: Structural power of capital and behavioral power of capital. Here “an investment strike is a case of structural power uniquely available to business. This power works primarily through the market mechanism in capitalist economies.” (Gill, 1989:481). In contrast, the behavioral power of capital which is concern with international patents of elite interaction – between business, state offices, bureaus, and members of international organizations and networks they generate – have not been strictly researched (Gill, 1989:483).

YOIKK is both the result of the structural power of capital and the institutionalization of behavioural power. We see a unity here: the behavioral institutionalization of structural power.

The Coordination Council for The Improvement of Investment Environment²

In December 2001, the Council of Ministers adopted the decision in principle, with the program created within the framework of coordination council for the improvement of investment environment, investments with the

² I am indebted to (Cin and Dođru:2016) for this section.

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duties and responsibilities of ministers (the Deputy Prime Minister, Minister of Environment and Urban Planning, Energy and Natural Resources Minister, Minister of Development, Minister of Finance, Minister of Forestry and Water Affairs, Minister of Health, Minister of Transport and Maritime Affairs and Communications), the Union of Chambers and Commodity Exchanges of Turkey (TOBB), Turkish Exporters Assembly (TİM), Turkish Industrialists’ and Businessmen’s Association (TUSIAD) International Investors Association (YASED), Independent Industrialists’ and Businessmen Association (MUSIAD) and the Foreign Economic Relations Board (DEIK) are composed of the heads. The objectives of the Council, consisting of the presidents of the government’s ministers related to the economy and the main business organizations, are as follows: to rationalize the regulations regarding investments in Turkey, to produce solutions to the administrative problems faced by national and international investors, to create employment by strengthening private sector operations and to create opportunities for export oriented production. In order to improve the investment climate in Turkey, ten technical committees are set up to institutionalize cooperation between the bureaucracy and the business world:

- Company operations and corporate governance,
- Employment,
- Input procurement strategy (gites) and sectoral licenses,
- Investment place, environment and development plans,
- Tax and incentives,
- Foreign trade and Customs,
- Intellectual property rights and R & D,
- Investment environment legislation and legal processes,
- Access to finance,
- Infrastructures.

YOIKK, which deals with the needs of national and international investors in a wide variety and wide range of fields at the highest level, has been established under the name of Investment Advisory Council, and constitutes the action plan according to the recommendations of World Bank officials, international business leaders and representatives of national business leaders. The Investment Advisory Council has been meeting annually since 2004, and after the meeting, it expresses the issues that need to be prioritised. As the YOIKK website states, “the YOIKK recommendations contained in these statements are among the factors that provide input to YOIKK’s work and contribute to the creation of the agenda.”

YOIKK, taking decisions in line with Investment Advisory Council’s recommendations, carries out technical studies on administrative, institutional and legal changes in accordance with the decisions taken through the Steering Committee and the technical committees and the issue is brought before the ministry and/or the public institutions or the parliament.

YOIKK is a platform outside the well-known public finance system and is controversial on its legal basis. YOIKK, a platform that has an impact on many issues, from the issuance of laws, regulations and other sub-legislations to the formation of the corporate structure of the state, considers it as a problematic structure in the field of legislative activity and its control by the public. YOIKK, on the other hand, is in a structure which does not contribute to other segments of society in relation to legal, administrative or institutional changes that have a role

in its formation. Since almost all economic relations, events and institutions are related to investments, YOIKK is emerging as a “supreme mind” of economic management as a state-national capital-international capital platform.

In a globalized world where public planning, investment and management are retread and degraded, YOIKK and its logic are the ultimate development effort to keep capital in Turkey and/or to draw it into Turkey.

On the other hand, there is no legal arrangement in Turkish Constitution and laws as “*council of Ministers principle decision*”. The foundation of YOIKK is not based on any constitutional or legal grounds. It is strictly against the fundamental principles of the Turkish Constitution by determining the legislative and executive functions of the state from above. According to the Constitution in article 6 “Sovereignty belongs to the nation without any restriction or condition. The Turkish nation shall exercise its sovereignty through the authorized bodies, as established by the principles set forth in the Constitution. The exerciser of sovereignty shall not be delegated by any means to any individual, group or class. No person or organ shall exercise any state authority that does not belong from the Constitution”. Also in the Turkish Constitution article no.10 “no privilege shall be granted to any individual, family, group or class”.³

Conclusion

The relative autonomy of the state had been debated a lot. Autonomy meant the state’s ability to determine and implement its own strategy. It is worth pointing out here that, any relative economy of state is bound to be conditioned by the prevention socioeconomic conditions, the prevention class balances and the intensity of class struggle, and the partial position or character of the state (Lioudakis, 2010:61). More significantly, however, it should be stressed that, depending on most recent evidence, this relative autonomy of the state is being increasingly restricted, most importantly, this trend tend to reflect, not only the character of the capital state in general, but also the deep and rotating crisis of capitalism, and the need for a deep restructuring of capital serving the long-term interests of capital (Lioudakis, 2010:61).

Once upon a time, Cox (1981) mentioned the State/Society Complex. We can talk about the State/Capital Complex in the stage of the weakness of today’s working class and progressive movements. The relative autonomy of the state has gradually narrowed, and the influence of national and international capital on the state has increased considerably both structurally and behaviorally. YOIKK case is an explicit example for Turkey.

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³ I am intebted to (Özdek:2011) for this point.

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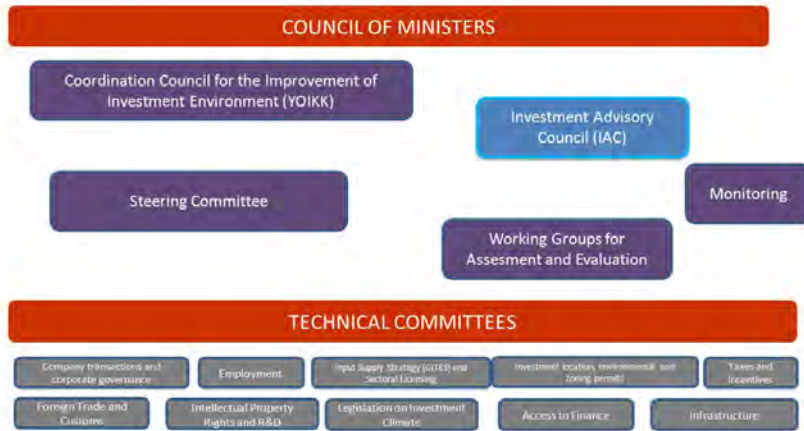
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| THE NINTH MEETING OF THE INVESTMENT ADVISORY COUNCIL FOR TURKEY OCTOBER 27, 2016, İstanbul – TURKEY (List of Participants) | | | | |
|--|--|---|--------------------|----------------------------|
| Multinational Companies / Organizations (in alphabetical order) | Participant | Title | Country | Sector |
| 1 World Bank | Mr. Cyril MULLER | Vice President/Europe and Central Asia | | International Organization |
| 2 Alstom | Mr. Henri Poupart-LAFARGE | Chairman and CEO | France | Transport |
| 3 Alzaid Group Holding | Mr. Abdulrahman Issam ALZAHD | Executive Board Member & Group CEO | Saudi Arabia | Holding Company |
| 4 Bank of China | Mr. Qiang LIU | Executive Vice-President | China | Finance |
| 5 Bombardier | Mr. Laurent TROGER | President/Bombardier Transport | Canada | Logistic |
| 6 BP | Mr. Tufan ERGİNBUĞİÇ | CEO/Pipelines | UK | Energy |
| 7 Burgan Bank | Mr. Eduardo EGUREN | CEO | Kuwait | Finance |
| 8 Gemalto | Mr. Tommi NORDBERG | Senior Vice President | The Netherlands | IT |
| 9 Khazanah Nasional Berhad | Mr. Dato' Noorazman ABD AZIZ | Executive Director | Malaysia | Investment Fund |
| 10 Microsoft | Mr. Ali FARAMAWY | Corporate Vice President & Chairman/MEA | USA | IT |
| 11 Mitsui & Co. Europe | Mr. Atsushi KUME | Managing Director | Japan | Holding Company |
| 12 Muntalakat | Mr. Mahmood Hashim AL KOHEJI | CEO | Bahrain | Holding Company |
| 13 Nesma | Mr. Saleh Ali AL-TURKI | Founder and Chairman | Saudi Arabia | Holding Company |
| 14 Qatar First Bank | Mr. Ziad MALKAWI | CEO | Qatar | Finance |
| 15 Renault | Mr. Denis LE VOT | Vice President & Chairman/Eurasia | France | Automotive |
| 16 Sberbank | Mr. Herman GREF | CEO | Russian Federation | Finance |
| 17 Sojitz | Mr. Shigeya KUSANO | Managing Director | Japan | Holding Company |
| 18 United Technologies Corporation | Mr. David P. HESS | Executive Vice President & Chief Customer Officer, Aerospace | USA | Aerospace |
| 19 Vodafone | Ms. Serpil TIMURAY | CCO and Strategy Officer/Vodafone Group & Chairperson/Vodafone Turkey | UK | Telecommunications |
| 20 ZTE Corporation | Mr. Zhang RENJUN | CEO/ International Operation | China | IT |
| Turkish Business Unions / Associations | | | | |
| | Name | Title | | |
| 1 | The Union of Chambers and Commodity Exchanges of Turkey (TOBB) | Mr. Rifat HİSARCIKIOĞLU | | President |
| 2 | Turkish Exporters Assembly (TİM) | Mr. Mehmet BÜYÜKÇİ | | President |
| 3 | Turkish Industrialists' and Businessmen's Association (TUSİAD) | Ms. Cansel BAÇARAN SYMES | | President |
| 4 | International Investors Association (YASED) | Mr. Ahmet ERDEM | | President |
| 5 | Independent Industrialists' and Businessmen's Association (MÜSİAD) | Mr. Nail OUPAK | | President |
| 6 | Foreign Economic Relations Board (DEİK) | Mr. Ömer Cihad YARDAN | | President |

8

DOES CONTEMPORARY VICTIMHOOD CLAIMS OFFER A WAY FORWARD TO IMPROVE DEMOCRACY?

Bahadır NUROL¹

Introduction

Recently, a considerable literature has grown up around the themes of victim and victimhood. The signs in question are primarily pointing at “the study of victims, their typology and social status, as well as the asymmetrical relationships and differential power relations between victims and victimizers” (Naqvi, 2007: 6). Indeed, “To recognize someone as a victim is to recognize that person as morally entitled to concern” (Bayley, 1991: 54). However, the vast majority of the recent works have reduced the suffering bodies to the status of “hapless” victims (Jensen and Ronsbo, 2014: 1; Wanzo, 2009: 3; Fassin and Rechtman, 2009: xi). This interpretation differs from that of the traditional “heroic” victimhood approach. In traditional approach, the notion of victimhood depends on the martyrs and heroes who sacrificed themselves for a sacred goal, independence or freedom (Jensen and Ronsbo, 2014: 4). While the traditional approach manifest a strong tendency to become an active agency, the contemporary one “represents the innocent and unintended victim as a subject in need of international intervention” (Weiss, 2014: 162). A major pillar of this transition is the rise of identity politics requested preferential treatment to certain sufferers over others. To put it another way, “The word victim still retains its old meaning, and victims still inspire ordinary sympathy from kindly people. But today to be classified as a victim is to be given a special political status, which has no necessary connection with real hardship or actual oppression” (Green, 2006: 1).

Studies over the past two decades have provided important information on the changing nature of the victimhood rhetoric. While some wrote about the new faces of victimhood (Letschert and van Dijk, 2011), some others indicated to the rise of victim-oriented politics (Jensen and Ronsbo, 2014). What is emerging might be called as a “victimhood culture” (Campbell and Manning, 2018) or, at a more fundamental level, as “victim society” (Naqvi, 2007). What is common in these studies is that they all stressed that the contemporary victimhood blurred the distinction between real sufferings and fictional sufferings. However, much uncertainty still exists about the relationship between the current notion of victimhood and the decline of Enlightenment ideals. In another words, “The high modern or postmodern turn de-centred the universalist Enlightenment subject and introduced the multiplicity of identity” (Pieterse, 2005: 170). This turn has indeed blurred the criteria for who is entitled to be treated as a victim.

In this paper, I assert that the emergence of this new victimhood approach coincides with the rise of identity politics. Identity politics have much in common with this notion of the victimhood as far as they are defined as “political attitudes or positions that focus on the concerns of sub-groups in the society” and are indicated to “the activism or status-seeking that is based around categories like gender, class, ethnicity, tribe, clan, sexuality, cultural orientation, race, caste (as in India), or political identification” (Wiarda, 2014: 148). Following this framework, I will argue that contemporary victimhood play a functional role to access prestigious social networks, material well-being and to achieve political goals. Accordingly, the aim of this paper is to constitute a historical framework

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to analyze functional use of human sufferings. This paper has been divided into three parts. The first part presents a brief overview of the historical background of the notion of victimhood. The second part tries to represent main components of the contemporary victimhood claims. The last part analyses social costs and consequences of the transformation process.

1. The Notion of Victimhood: A Brief Historical Background

In her recent work on the histories of victimhood, Nerina Weiss (2014: 161-162) reminds us the category of victimhood has changed over time and in different contexts: “The transnational liberationist discourse of the 1960s and 1970s focused on heroic (self-) sacrifice, and, thus, aimed at inciting resistance and international support for an armed guerrilla movement. On the other hand, the humanitarian discourse of later decades represents the innocent and unintended victim as a subject in need of international intervention”. Similarly, Rebecca Wanzo (2009:3) notes that “the logic that determines who counts as proper victims has historically been shaped by sentimental politics—the practice of telling stories about suffering bodies as a means for inciting political change. Sentimental political storytelling describes the narrativization of sympathy for purposes of political mobilization”. Anyway, a research on this topic needs to distinguish between victims and victimhood. “Whereas the presence of victims implies experiential suffering, victimhood is a political construction. It acquires materiality through contestation and technologies of self and population” (Jensen and Ronsbo, 2014: 1-2). In other words, the presence of suffering alone is not sufficient condition to shape the victimhood narrative but it needs political mobilization from the beginning.

As was pointed out by Marcus G. Raskin (2004: 16), “Nineteenth-century struggles for workers, Indians, the enslaved, and women’s rights” were structured around the theme of victimhood. The roots of victimhood rhetoric, however, were much more prolonged in the religious discourse. The image of Christ and the inflicting of suffering was a model of heroic victimhood for Christians. As Philip F. Esler (2003: 17) stressed, “The first generations of Christians were hauled before kings and governors, whipped in synagogues and in Roman gaols, crucified and burned as human torches”. These sufferings have been utilized in subsequent political struggles for ages. Purposeful suffering in Islam has its definite roots in the Qur’an and continued to play an important role in later Islamic piety, especially in Sufism. The suffering and martyrdom of Imam Husayn, grandson of the Prophet, “has been seen by Shi’is as necessary to the fulfillment of his role as imam; without it he could not have become the paradigm of selfless sacrifice, the measure of truth and falsehood, nor the intercessor on the Day of Judgment for his followers” (Ayoub, 1978: 15).

Centuries later, the suffering of Christ was found again in the discourses of national liberation movements in Latin America. “The traditional suffering Christ came to be seen, not just as a symbol of suffering to be identified with, but also and especially as a symbol of protest against that suffering and, above all, as a symbol of liberation” (Sobrinho, 1993: 12). Before long, the notion of victimhood would become the central guide behind nation-building process throughout the world. “The telling of heroic narratives of martyrdom is not solely the forte of radical nationalist movements. Blood-sacrifice for the nation is embedded in the patriotic rhetoric of all nations, including European and American countries...” (Khalili, 2007: 23). Particularly focused on national context, Laleh Khalili (2007: 38) has also argued that “In more recent decades... it is no longer the heroic warriors for the nation who secure its legitimacy but the abject victims who can garner pity and sympathy, and whose suffering

legitimizes the larger collective's claims to nationhood". It was clear, however, that the debate was not limited to the national and religious contexts.

As for the suffragette movement of the early twentieth century, women were the real victims. But the suffragettes insisted that the women's liberation would be their own work. Even in 1908, Christabel Pankhurst concluded that "...we say it is a very good thing that we are teaching men to respect us. We cannot blame them... Therefore, it is not with any feelings of rancour that we speak of these rulers of ours; they are the victims of the circumstances in which they have been brought up, and it would be well if they would understand that we are seeking to work the most beneficent revolution in human affairs that the world has yet seen" (Pankhurst, 2001: 42).

The anti-colonialist struggles of the century have also been marked by a resistance to the conditions that created victimhood. In the words of Frantz Fanon, victimhood was a direct result of colonialism and imperialism: "We continue to fight because we are tired of being perpetual victims of state sponsored poverty and human degradation visited on us by years of autocratic rule and militarism" (quoted by Acemoglu and Robinson, 2012: 374).

Social conditions that created victimhood have inspired a fresh interest in the revolutionary movements of the age. The ultimate expression of this kind was found in the words of Che Guevara: "Of course, all the people's efforts cannot be summed up in a simple formula, because this struggle has cost blood and suffering, and the world's empires are trying to make it cost more blood and suffering. That's why we must firmly unite around those rifles, around the only voice that guides the entire people toward their final goals" (Waters, 2005: 59).

As a leading figure of critical pedagogy, Paulo Freire claimed in 1968 that "The oppressed, having internalized the image of the oppressor and adopted his guidelines are fearful of freedom. Freedom would require them to eject this image and replace it with autonomy and responsibility. Freedom is acquired by conquest, not by gift. It must be pursued constantly and responsibly" (Freire, 2000: 47). Being a victim, according to Freire, was not a passive category but it requires active behavior. Victimhood was not a humiliation or a praiseworthy situation in itself. On the contrary, it was a situation that should be saved through political mobilization.

The evidence presented above suggests that the discourse of victimhood was deployed within the religious, nationalist and socialist frameworks to advance political causes. But victims were still regarded as active agents both collectively and individually. Subsequent modification of the victimhood occurred during the late twentieth century. As Steffen Jensen and Henrik Ronsbo (2014: 4) pointed out that the category of "hapless" victim was "produced as a host of different agents, such as donors of international aid, clinicians, and social movements and NGOs...". It might therefore be said that "Through the work of these and other such agents, victims come to our worlds as recognizable forms of life, upon whom we are asked to act, toward whom we are enticed to relate with feelings of support and solidarity, and with whom we enter into dialogues and transactions" (Jensen and Ronsbo, 2014: 4).

Rianne Letschert and Jan van Dijk (2011) identified the "unjust sides of globalization" as the major cause of growing concern to the "hapless" victims. "Processes of globalization," they said, "impact on the situation of victims in conflicting ways. On the one hand, globalization makes people vulnerable to new forms of crime and creates new victims. At the same time, globalization challenges existing arrangements for victim participation and victim support. Without new initiatives to assist victims of global crimes, their needs will largely remain unmet" (Letschert and van Dijk, 2011: 7). This humanitarian notion of victimhood, however, signaled the impasse of the heroic narratives of victimhood: "If, because of zeal to render aid, we view certain sufferers as victims, we risk

paternalistic devaluation of them from self-managing people to dependent, hapless people. We risk causing them to be victims by viewing them as victims (Bayley, 1991: 62). Hereafter, martyrdom and heroism have little to say about that lies behind this new victimhood notion. Contemporary victims were the vulnerable people due to the rise in crime, terrorism, borderless diseases, war, discrimination, etc. They were now identified as the people who needed the help of others to meet their basic needs.

In the above-mentioned context, the following result was particularly impressive for the functional use of the concept: victimhood would no longer be used to justify grand narratives of religions, nations or oppressed people, but to bring local or individual interests to the forefront. Indeed, the appeal of identity politics of the late 1970s and early 1980s brought demise to universalistic interpretations of victimhood. The signs in question were primarily pointing at the sufferings of silenced identities. But identity politics were, at the same time, political arguments “emanating from the self-interested perspectives of self-identified societal interest groups (in the US, women, blacks, gays, etc.) in ways that people’s politics are shaped by these narrower (non-national) aspects of their identity” (Wiarda, 2014: 148).

Indeed, it was almost impossible to find a social identity that has never suffered in history. It was also clear that “the mediated experience that the ‘generation after’ bears to the personal, collective, and cultural trauma of those who came before” (Maguire, 2017: 3). Identity politics, however, have directed people’s attention towards the settling of past grievances and thus claimed immunity to criticism. Furthermore, through the deployment of real or sometimes imagined sufferings, rival political actors casted themselves as the representatives of victims. As Howard J. Wiarda (2014: 148-149) has recently demonstrated that:

“Politicians now routinely try to play upon or manipulate identity politics to their own advantage. At the same time, if you are a politician or a political leader and you seek to ignore identity politics, you do so at great peril. For example, and using only the United States for the moment, Republican candidates must appeal to such identity groups as the middle class, businessmen, Tea Party voters, WASPS, the country-club crowd, conservatives, religious elements, and those who are upwardly mobile. In contrast, Democrat politicians must appeal to African-Americans and other racial minorities, the working class, single women, unions, gays, and lesbians, the Hollywood and other cultural elite, teachers, and young people. Politics in America (and in other countries...) now consists in large part of getting out these ‘base’ voters and putting together a coalition of enough of these identity groups to win the next election”.

Torben Bech Dyrberg (2016: 3), on the other hand, drew attention to the fact that repressive Third World regimes, redressing their past grievances, were able to be portrayed as immune to criticism. “Multicultural trends have legitimised indifference towards massive repression in Third World regimes and civil societies; they have often refused to condemn Islamist terrorism by looking for the ‘root causes’ in the West; they have turned the blind eye to sexism and racism in minority cultures...”. This is where the victim was regarded as the main owner of an identity that the modern world has crumbled away.

Thus far, I argued that the meaning of victimhood transformed from a practice bound by self-sacrifice, martyrdom, and responsibility to an attempt to justify individual or small group concerns and satisfactions. In short, I claimed that once institutionalized, the notion of victimhood gained a new meaning that went beyond the conditions that created it. In the next section, I will present the current trends more detailed and try to show main components of contemporary victimhood claims.

2. Current Trends

As mentioned in the previous section, the notion of victimhood has gained a new meaning during the past few decades. Some researchers like Letschert and van Dijk (2011) have believed that the current waves of globalization created millions of vulnerable people victimized by human trafficking, terrorist attacks, borderless diseases, war, poverty, etc. Indeed, there are a number of reasons that could account for this relationship. As van Dijk (2011: 99) insisted that globalization has allowed criminals “to operate on the global markets in illicit products such as drugs, cheap labor or firearms. E-commerce has opened unprecedented opportunities for committing sophisticated fraud across borders or selling child pornography. In addition, electronic banking allows criminals to stash away illegal assets in financial havens out of reach for governments where predicate offenses have been committed”. Antony Pemberton (2011: 236) drew attention to the “mental health implications of terrorist attacks, like the subsequent extent of Post Traumatic Stress Disorder (PTSD) in the general population”. George Ritzer (2010: 370-372) indicated to the emergence of borderless diseases due to globalization: “Severe Acute Respiratory Syndrome (SARS), Bovine Spongiform Encephalopathy (BSE) (or Mad Cow Disease), Creutzfeldt - Jakob disease, swine and avian flu, Ebola virus, and HIV/AIDS”. He also stressed that “The pathogens that cause these diseases flow, or have the potential to flow, readily throughout the globe and it is very difficult, if not impossible, to erect barriers to many, if not any, of them”. As again mentioned in the introduction, the ever increasing number of NGOs addressed them as hapless victims. It is quite striking here that such organizations seems victims as a homogenous group.

Focused specifically on the victims of human trafficking, Conny Rijken and Renée Römkens (2011: 82), however, revealed that a considerable number of these people decline the help that is offered to them. “A complex set of reasons is given, underlining that victims of trafficking are a heterogeneous group. Victims’ decisions to accept or decline assistance are the outcome of a complex set of considerations depending on the availability of psychological, social and financial resources”. While some women refused to be known as victims to protect their honor, some other party wished to feel themselves as successful migrants and preferred to earn their money without the help of others. “Others do not feel victims because at least they did receive some money for the work they did. For some women, being considered a victim is a stigma they want to avoid out of fear of social exclusion...” (Rijken and Römkens, 2011: 82).

Similarly, Pemberton (2011: 236) acknowledged that the NGOs take the subject the way they want to see and focus on the vicarious victims of, for example, terrorism. This approach, however, distorts reality in a number of ways. “Firstly, the definition of victimization in therapeutic terms obscures the fact that also sub-clinical, ‘normal’ emotional reactions to vicarious victimization are relevant. Secondly, the emotional reactions surveyed suffer from a victimological stereotype. This stereotype entails defining victims in terms of their level of anxiety”. However, as recent researches revealed, “more victims said they were angry than frightened due to their victimization” (Pemberton, 2011: 246). At a more fundamental level, Didier Fassin and Richard Rechtman (2009: 279) stressed that “There is no way we can know whether victims necessarily consider themselves as victims. Survivors of the accident in Toulouse may equally view themselves as residents relegated to a disadvantaged housing project; young Palestinians may see themselves as heroes of their people’s cause; asylum seekers may consider themselves political activists”.

Jensen and Ronsbo (2014: 3-4) gave us one of the most influential accounts of the above mentioned dilemma: “We inhabit worlds in which everyday forms of distinction are shaped by the notion of the victim and in which politics and collective action are animated by it. Yet, for many in the social and human sciences, to engage the human subject through the prism of the victim seems to constitute a disavowal of critical theory’s efforts to understand

subjects as agentive, sensuous, and intentional”. The question remains, however, why so many people today want to be classified as victims? Indeed, as David G. Green (2006: 6) points out that in Britain today members of victimhood groups, has reached the 73 per cent of the total population. The most frequently mentioned categories are as follows: gender, ethnicity, disability, religion, and age. Interestingly, occupation, class, and political view were not on the list. Thus, to answer mentioned question, one has to look at the ways on which the moral economy of contemporary victimhood arises.

In contrast to the above introduced examples, the victim status brings considerable social advantages to the concerned groups or individuals in some cases. This is what I call the moral economy of contemporary victimhood. Diane Enns (2012: 4) has identified five discursive strategies used by the concerned people: “...we don't need to accept responsibility for our actions because there is always someone else to blame; we actively compete for victimhood status; we experience ‘compassion fatigue’ and learn to ignore the appeals of ‘real’ victims whose voices are drowned out by the ever growing list of ‘certifiable’ victims; we become hypersensitive to actions deemed discriminatory and use resentment as a weapon of social advantage”. The crucial point to note is that the prevalence of such attitudes is directly related with the rise of identity politics.

As noted by Wiarda (2014: 150), “Identity politics aimed to raise the self-awareness of [*oppressed people*] and also provide them with political power as a force to be reckoned with in the political arena. It was only in the 1990s and thereafter that the term was used to apply to a broader array of interest groups and that it entered mainstream political discourse”. It is hence not surprising that an identity-based oppression model is the underlying characteristic of the moral economy of contemporary victimhood. This is what Wiarda (2013: 150) presumably means when he writes:

“Identity Politics from the beginning was linked to the underlying idea that some groups in society—women, blacks, gays, Indians, etc.—are uniquely oppressed. That one's identity as a woman, a minority, an environmentalist, a homosexual, a young person, or any marginalized person made one particularly susceptible to violence, ostracism, and oppression. And that such marginalization of these groups was not just national but cut across the boundaries of nation-states. Hence, the emphasis in identity politics, not so much on the nation and on national loyalties, but on sub-national solidarities of particularly oppressed groups which may cross national frontiers”. However, the consequent stress on identity produces a huge variety of certifiable victims: “...some victims are, from the point of view of the speaker, more legitimate than others” (Fassin and Rechtman, 2009: 278).

A well-known example of these claims for “legitimate victimhood” became apparent in the debate that broke out after the election victory of Donald Trump in 2016. Campbell and Manning (2018: xiii- xviii) summarized the debate in the following way:

“A number of people seemed convinced that Americans had knowingly elected a white supremacist ideologue who ran on a campaign of hatred toward Hispanics, blacks, women, Jews, gays, and transgender persons. His campaign did not merely benefit from the kind of cognitive biases that might lead many citizens to fear terrorism more than heart disease, or to focus on losing jobs to foreign workers over losing them to automation. Rather, his 62 million voters were primarily fueled by outright hatred of all kinds of American minorities. America had elected another Adolf Hitler, and his victory meant persecution for everyone who was not a straight white male... Remarkably, there were many who advanced a narrative in which Trump's supporters, rather than being violent oppressors, were actually the oppressed underdogs. Rather than an act of dominance over women and minorities,

Trump's election represented an act of rebellion against political and cultural elite. The elites, these commentators claimed, were not only indifferent to working-class and rural communities, but openly hostile to them".

It should be obvious by now that this competition for the victimhood has little to do with the people's true historical sufferings and their struggles to maintain dignity. Rather, the clashing parties have constantly tried to present themselves as the representative of the oppressed people. Dyrberg (2016: 24) offers the term "victimization" to describe power relations that feed the current victimhood claims: "Victimization implies to speak on behalf of those who cannot themselves speak up, because they are repressed and stigmatized. Whereas right-wing populists speak for the silent majority, radical leftists want to represent those who are weak".

Speaking on behalf of those who cannot themselves speak up, at first glance, evokes a heroic attitude. Such an attitude is often assumed to require a renunciation of social dignity and material well-being for the sake of oppressed, excluded and stigmatized people. The victim, here, is regarded as the main owner of an identity that the modern world has crumbled away. However, as Campbell and Manning (2018: 106) warn us that "Manufacturing a case of victimhood allows the aggrieved to elicit sympathy or even to mobilize third parties such as legal authorities against their enemies. Since a victimhood culture is one where this status is most valuable, we should expect it to be especially prone to false claims of victimization". It might therefore be said that some people who speak on behalf of the victims have often gained public recognition and reputation through this advocacy mission. As a result, many of the victimhood claims that come to the fore today are political and social privilege requests that ignores the other's victimhood.

Indeed, "In the network of obligations and priorities that communities and societies have in regard to sufferers, status as victim occupies a special place. It gives priority of concern to certain sufferers over others" (Bayley, 1991: 62). However, what is crucial for the moral economy of contemporary victimhood is not the degree of sufferings, but the ability to turn them into a social capital. Once you qualify for the victim status, you can advance in politics thanks to the privileged quotas to be granted to the victims. At the workplace, you can increase to some prestigious positions and keep them in your hands for a long time, regardless of your competence level. The share you receive from social assistance can be increased according to your degree of "victimization".

Given this broad background, the parallels between the spread of the victimhood culture and the impact of "pity" as a social category (not as the natural sentiment of human empathy) on politics are striking to the outside observer. Analyzing the role of the media in shaping an ethical sensibility that extends beyond our own "neighbourhood", Lilie Chouliaraki (2006: 19) concludes that "Pity is a product of the manner in which television signifies the relationship between spectators and distant sufferers. Pity, therefore, draws attention to the meaning-making operations by means of which sufferers are strategically, though not necessarily consciously, constituted so as to engage spectators in multiple forms of emotion and dispositions to action". In that sense, the sufferings addressed will be selective based on what media –television in particular– are showing us. Hence the popular discontent with the victimhood directs its attention to secondary preventive measures such as microaggression campaigns.

Campbell and Manning (2018: 25) explain the specific role of these campaigns as to develop "a specialized vocabulary defining offenses in a way that prevents speaking of members of dominant groups as victims. They might define racism so that blacks by definition cannot ever be racists or whites victims of racism, sexism so that women cannot be sexist or men victims of sexism, and even censorship so that 'the oppressed by definition cannot censor their oppressor'". To see clearly, it is worth mentioning some of the problems dealt with in the campaigns:

- Telling an Asian American that he or she speaks English well.
- Clutching one’s purse when an African American walks onto an elevator.
- Staring at lesbians or gays expressing affection in public.

Avoiding these above-mentioned attitudes is of course being regarded as a general ethical sensibility. But the ideals of dignity as expressed in 1960’s by Freire are no longer settled morality according to Campbell and Manning. “The microaggression program rejects one of dignity culture’s main injunctions—to ignore insults and slights—and instead encourages at least some people to take notice of them and take action against them” (2018: 15). Here, victimizers appear to be the main targets of the action. However, as for Bayley (1991: 55), “An agent is a victimizer only when possessed of malevolent intent toward the victim or willful disregard of her or him”. It is hence not surprising to expect that campaigners might turn against all whose interests’ conflict with their own. Under these circumstances, it is not difficult to come to the conclusion that the moral economy of contemporary victimhood has created a strong rationale for avoiding personal responsibilities. As long as the victimhood status is depicted pure and innocent, it is possible that they (or someone else who claiming to be the defender of victim’s rights) may refer to historical injustices, to a fictitious or a real victimizer to justify their possible irresponsibility.

Conclusion

People are victims “...only if (1) they have suffered a loss or some significant decrease in well-being unfairly or undeservedly and in such a manner that they were helpless to prevent the loss; (2) the loss has an identifiable cause; and (3) the legal or moral context of the loss entitles the sufferers of the loss to social concern” (Bayley, 1991: 53). However, the current victimhood culture seems indifferent to concrete losses. It seems also that the circumstances that once provoked anger are now seen as an opportunity. And people who were once struggling to eliminate adverse conditions have been devalued in the last thirty years. To this extent it is similar to an ascribed status that one’s position or role is assigned by others or by cultural norms.

As noted above, the emergence of this new victimhood approach coincides with the rise of identity politics. A key point to emphasize in this context is that the birth of the culture in question can be explained in particular by the defeat of the left and liberalism in general. On the one hand, Dyrberg (2016) draws attention to the epochal breakdown of the left. He argues that, even in the 1970s, the distinctive features of the left politics could be described as secularism, rationality, progress and emancipation, socialism and universalism. However, today, “Hostility to ‘Western values’, notably modernity and democracy, has become a trademark of Third World authenticity, anti-racism and anti-imperialism”. He identifies six factors that enable current transformation:

“(1) The critique of capitalism has been supplemented by a critique of modernity, which is seen as fragmenting communities and eroding social cohesion thereby producing rootlessness and misery. (2) The critique of imperialism has mutated into a critique of not only Western hegemony but also of Western values, which includes the former ideational luggage of the Left. (3) There are deep-seated differences between human beings as they are framed by their culture. Hence the emphasis on community as opposed to the individual and even social class. (4) Cultural relativism implies defending hierarchy and domination inasmuch as they are genuine expressions of culture and tradition, which implies redefining equality. (5) Conservative sub-cultural elites in the West are praised as the real representatives of their groups thereby enforcing an image of cultural homogeneity. (6) Non-Western autocratic

regimes and Islamist terror are not condemned as long as they are against the West in general and the United States in particular” (Dyrberg, 2016: 2-3).

On the other hand, Green correlates victimhood culture with the withdrawal of liberal values in the West. He (2006 1-4) lists the main features of the process as follows:

“(1) The rise of victimhood as a strategy for gaining political power... is incompatible with Britain’s heritage of liberalism. Why? Because it treats group identity based on birth, especially racial identity, as more important than individual characteristics. (2) The quest for preferential status has had a harmful effect on our democratic process and the political culture that nurtures it. Modern victim groups create entrenched social divisions by defining opponents as oppressors who not only must be defeated by the state, but silenced by the state. (3) Legal equality has also been undermined, in two senses. The creation of ‘hate crimes’ has weakened police and judicial impartiality. Some crimes are punished more severely when they are racially or religiously aggravated, thus treating the same crime as more serious when committed against a member of an ethnic minority than when it is committed against a white person. Second, anti-discrimination laws have been gradually transformed so that they are no longer confined to *prohibiting* discrimination against individuals because of their group membership; on the contrary, they facilitate and even call for, preferential treatment of people defined by their group identity”.

Although at first glance it may seem that the new victimhood culture pays attention to the silenced people more than ever in history, it has nothing to do with respect for autonomy of these people since the object is no longer a person but a member of an identity group. It appears to be unable to ask such a question: Under which circumstances does an ascribed identity deserve sympathy and public concern by itself? A critical approach that focuses upon the contemporary victimhood culture does not offer apathy to the sufferings but to the self-interested perspectives of some identity groups. A culture that constantly produces enemies will have no effect on the participatory democracy. Rather this culture erodes the foundations of it.

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9

THE PREVENTIVE MEASURES OF PROFITEERING IN THE CAPITAL CITY ON THE BASIS OF NARH BOOKS IN TANZIMAT PERIOD IN DATED HIJRI 1264 (GC:1848)

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1. Introduction

Dersaadet (the capital), which means the gate of felicity, videlicet, Istanbul (Devellioğlu, 2005, p. 177) was both the military and administrative centre of Ottoman Empire for centuries, and an important consumption centre of the empire in terms of population. The capital city of Ottomans, which witnessed an important population growth between 1453 and 1600, maintained its active character in every terms.

Several municipal and new application areas were established in Istanbul of Mahmud II period. The declaration of Tanzimat and its first application were started in Istanbul. The city witnessed a Western type physical structuring since the second half of 19th century (Emecen, 2001, p. 219) and important setbacks occurred in the municipal services. The provision of food became an important problem of the city especially. A Western-type municipal organization, named as “Şehremaneti” had been established in Istanbul in 1855 with the influence of Crimean War and the ministry of Ihtisab (Ottoman office for public regularity) was annulled. (Şam, 2016, p. 35).

Profiteering was the main economic problem which emerged with the population growth in the city. Although several precautions were taken in the capital against profiteering, which means “The purchase of essential nutrients required by public for stowage in order to make them more expensive” (Kallek, 2000, p. 560), it continued to be an important problem in the empire.

In this study, the precautions against profiteering in capital have been examined on the basis of narh books dated hijri 1264. In the second topic, profiteering has been analyzed as an economic problem generally and its place in the first resources have been scrutinized. In the third topic, the issue of profiteering in Ottoman Empire has been mentioned and the penal sanctions against racketeers have been emphasized. In the fourth and last topic, the narh book which was prepared to prevent profiteering has been examined.

2. The General Overview of Profiteering as an Economic Problem

Ihtikâr (profiteering) means “disdain, contempt, defraud, abuse, scarce, putting out circulation, stowing, to monopolize” in the dictionary (Devellioğlu, 2005, p. 419), and it also means “delaying the supply of commodities into the market with the purpose to make them more expensive”. Muhtekir (racketeer) is the one who profiteers.

Several views have been argued in the basic resources about profiteering. Some of them are: “To keep waiting essential nutrients by buying them in the city or immediate surroundings of counties and to damage local community”, or

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“to buy essential nutrients from city market or the areas which feeds the city and to stock them until they become more expensive” (Kallek, 2000, p. 560).

Shortly, profiteering can be summarized as “the act of storage the things, which people require and suffer in state of its loss, with the purpose of escalating the prices” (Erturhan, 2010, p. 238).

The word of “ihtikar” was not directly mentioned in Quran. However, there are verses which forbids to acquire things in an illegal way². While racketeers were criticized with both barrels in the hadiths as a sinner, perverted and wicked subject, profiteering was examined in religious literature very differently. The factors like type of product, purchase, purpose, engrossing, social requirements, the shortage of goods, public loss, time and place played a role for the emergence of these differences.

Merchant and racketeer should be separated in here. While merchant serves the benefit of society by bringing supply of provisions to consumers, racketeer causes people to suffer in poverty by stocking supply of provisions and social crisis by waiting in underground for products to become more expensive. Therefore, his holiness, Mohammad praised merchants and vilified racketeers and prevented profiteering to harm people by taking precautions against it (Kallek, 2000, pp. 560-563).

Moral and legal values like not doing monopolism, profiteering and black-market operations create awareness to value the benefit of society rather than personal benefits and develops the idea of generosity (Tabakoğlu, 2010, p. 19). On the contrary, self-interest and greed is the work of covetousness and shows itself as more profiteering. Profiteering is one of the trading operations that greed can be seen very clearly. For this reason, profiteering or trafficking, which is not only damage society but also hinder the natural process of economic organization, is forbidden in all other system just like Islam (Uyanık, 2010, p. 433).

3. Profiteering, Racketeers and Penal Sanctions in the Ottoman Period

Ottoman Empire was regulated market in order to provide plentiful, cheap and qualified goods in the market and was developed an economic policy which provides and sustains price stability (Öztel, 2013a, p. 304). Profiteering or black-market was one of the overemphasized issues in Ottoman Empire because it deranged price stability and market organization. There are a lot of documents about this issue in the Ottoman Archive most probably because of its overemphasize³.

It is clearly understood from these documents that these attemptations to profiteer were mostly between different occupational groups like civil servants, taxmans, ship owners and drovers. While taxmans were characterized as racketeers when they did not sell provisions and stocking them in order to sell in a high price; ship owners became racketeers with the thought of selling provisions arrived to pier in a high prices by buying them in a low price. In case of drovers, they were trying to escalate meat prices by combining their forces for hindering the entrance of cattle in due time to city (Öztel, 2013a, p. 308).

Profiteering emerged especially in the issues about provisions which is a basic need. Although precautions were taken about this issue, some problems occurred even if they were just a pinch. Some projected precautions were

2 Bakara, 188; Nisâ , 161; A'raf, 85

3 For giving an idea about the topic, the numbers of recorded documents are wondered about “ihtikâr(profiteering)” and “karaborsa (black-market) in Ottoman archive and 407 records have been found in the word of “ihtikâr” and 67 records have been found in the word of “karaborsa” from the search engine of archive.

about provisions, charcoal, wood, dairy products and wheat. In the precautions, which were related to racketeers, it was requested that woods would not be cut in the neighborhoods of charcoal producers and coals would not be burned in the neighborhoods woods were delivered in order to restrain these profiteering activities (BOA, C.BLD., 4/154, 1223 Z.12, p. 1). A decree was enacted to kadi of Istanbul in order to prevent the profiteering of Istanbul dairymen (BOA, AE. SOSM. III, 6/352, 1171 Z.12, p. 1). Investigation was made by evaluating complaints about wheat originated in Palu was sold in high prices which was bought by some racketeers earlier (BOA, DH.MKT., 7/50, 1310 R.14, p. 2). In some cases, the provisions, which were kept in the storehouses of rich men for profiteering, were bought and thereby received by officials⁴.

Although there were many complaints about profiteering, it was encountered that some of them were not reflecting the truth even if they were just a pinch⁵. However, all the complaints made to administration were evaluated, necessary investigations were made about them, and they were concluded as well.

It was known that ta'zir (an Islamic criminal law) punishment was given to the perpetrators of profiteering although it could be changed to the repetition of offence, the pattern of the commission of offence and the gravity of offence (Kallek, 2000,563). The greengrocers who profiteered were penalized with nefiy (banishment)⁶. State acted responsibly about preventing profiteering on the basic needs of people in Istanbul, and tried not to give changes to racketeers as well. It was confirmed that provisions which should be delivered to Istanbul was kept in a storehouse in the outskirts of the city, therefore officials were assigned to bring those provisions back to Istanbul (BOA, C.BLD., 35/1707,1208 Ş.29, p.1). The same situation happened about the case of charcoals as well and an order was sent to the relevant units for the delivery of charcoals (BOA, C.BLD., 27/1307, 1211 C 27,s.1).

4. The Preventive Measures of Profiteering on the Basis of Narh Books in Dated Hijri 1264 in the Capital City

As it is known, the mentality of modernization and centralization became dominant with the Tanzimat period. Istanbul became the first execution area of anticipated radical changes with the Tanzimat and this situation also formed basis for provinces. Şehremaneti (A Western Type Municipal Organization) was established in Istanbul in 1854 in order to execute order like to construct, to perform the road and cleaning affairs, and to check shopkeepers and merchants in 19th century (Tekeli, 1985, p. 883). Crimean War happened in 1854 was very effective for the foundation of Şehremaneti of Istanbul. State desired to harmonize the dynamism, which was generated with the war, with the foundation of Şehremaneti. Şehremini (the head of Şehremaneti) was in charge of Şehremaneti and he was appointed by central government. Şehremini was the mayor and he was responsible for the administration of the city (Ortaylı, 1992, p. 398-400).

On the other hand, the foundation of the department of Şehremaneti, the foundation of the commission of the order of the city in 1855, and the applications of the regulations of sixth municipal department which came

4 A decree was sent to the captain of Danube, Ali Pasha, for delivering the provisions to official Selim agha by purchasing the provisions in the storehouses of rich men in Danube coastline at their costs. (BOA, İE.DH., 9/898, H-22-07-1103, p. 1).

5 The investigation was made for the complaint of Sabatino Graziani who was an Italian leather merchant in Mercan bazaar and claimed that the police exacted his money and his leathers was taken by the prevention of profiteering commission and it was understood with the investigation that there was no such condition thanks to the statements of witnesses (BOA, DH.EUM.AYŞ., 9/70, 1337 Ş.08, p. 1).

6 The four greengrocers who profiteered were exiled to Bozcaada (BOA, C.BLD., 14/675, 1205 Z.11, p. 1); "...Baker Zeynel sold the breads to people by making dark in Kasımpaşa and this was seen by the tebdil çuhadarı (an Ottoman official, disguised lackey) ... he exiled to Seddülbahir (district in modern Canakkale) and confined in a castle ..." is seen (BOA, C.BLD., 32/1555, 1234 Ca 29).

into force in 1858 were not so successful to resolve municipal problems of Istanbul. In spite of this, “The Law of Provinces and Municipalities” in 1877 can be qualified as the most important initiative about this issue (Aktüre, 1985, p. 894). Despite all the initiatives, municipal administrations had failed in the beginning, but they became effective in the cities and towns since 1880s. (Ortaylı, 1992, p. 401). Since municipalities were under the ministry of internal affairs (dâhiliye nezareti) within state organization, the broadest potential of documents are possible to obtain from the classification of “Dâhiliye Nezareti” within the Ottoman Archives (Oktay, 2005, p. 259).

The application of narh can be thought as a regulation form of market in order to prevent profiteering because providing price stability in the market organization was important for the state. Narh expresses “the peak in the prices of goods and services which is determined by the state” Narh (Kütükoğlu, 2006, p. 390) and state aimed with the narh to deliver goods and services from producer to consumer directly without deranging supply and demand equilibrium (Tabakoğlu, 2005, p. 25).

One of the most overemphasized issues in the capital was profiteering. Profiteering emerged in fuel class like woods and charcoals mostly except provisions (Öznel, 2013b, p.499). A decree was sent to the minister of ihtisab about the prevention of profiteering for the supply of charcoals which had been needed by the people of capital, the price-fixing of them, and the prevention of these activities regarding this matter (BOA, DH.MKT., 7/50, 1310 R.14). Likewise, profiteering activities were prevented by taking required precautions for not escalating the prices of charcoals in the capital as well (BOA, BEO., 338/25301 1311 CA 26).

When the winter was close, the amount of woods and charcoals was inspected and the prices were checked. If there was a reduction in the supply of them, the delivery of them would be increased (BOA, DH.MKT., 2421/91, 1318). If decrease in wood market happened in comparison with previous year in the control conducted and inspections, the situation would be reported by the mayor. As a matter of fact, a decrease in the wood amount was detected in an inspection in 1907, and the increase in the amount of snake recently, perished animals in the wood transportation and the attempts of merchants to profiteering were revealed in the report by the capital as reasons for this case (BOA, Y.MTV., 299/99, 1325 Ca 13). Two commissions were established for conducting inspections about the perpetrators of profiteering in dated hijri 17.08.1337 (BOA, BEO., 4574/343031 1337 Ş.17).

Another field of profiteering was the provision. Being cheap and plenty of provisions in amounts was a necessity of the provisionist policy of Ottoman economic structure (Genç, 2000, pp. 80-81). However, the problem of profiteering was at the helm of one of the issues which disrupted the market mechanism and obstructed the administration for the supply of basic needs of people. The provision business of Istanbul was performed by the aghalık (landlordship) of Istanbul and ministry of Ihtisab until the mid-19th century. Since this date, the authorization of control and supervision was given to Şehremaneti with its foundation (Öznel, 2013b, 502).

Several precautions were taken in the inspection period of capital in order to prevent the sales of fruits and vegetables in excessive prices. The regulation of vegetables which would come from the gardens was at the helm of these precautions. Hence, the arrival of vegetables to Eminönü was ensured firstly and then, it was agreed that they would be sold to shopkeepers in fixed price. It was thought that the profiteering could be prevented only in this way, and a narh book was prepared in this respect. This narh book⁷ constitutes the basis of our work as well. The abovementioned narh book is tabularized by us in order to ease the tracking of the conditions of prices (Table 1).

7 The date on the narh book is registered as dated hijri fi Cemâziye'l- evvel (the fifth month of hijri calendar)of Tuesday[12]63. The date of document that the book was took part is H-4-01-1264.

Table 1: The Prepared Narh Book for Preventing Profiteering in Capital in dated Hijri 4-01-1264

| Item No. | The Name of Vegetable | Unity | Quantity | Unit Price (Sort of Money) | Given Narh (Sort of Money) | Increase Rate of Narh (%) | Sale Price After Narh (Sort of Money) |
|----------|-----------------------|-------|----------|----------------------------|----------------------------|---------------------------|---------------------------------------|
| 1 | Bosporus Eggplant | Item | 1 | 5 | 2 | 40 | 7 |
| 2 | Summer Squash | Oka | 1 | 30 | 6 | 20 | 36 |
| 3 | Squash | Oka | 1 | 24 | 6 | 25 | 30 |
| 4 | Runner Beans | Oka | 1 | 60 | 6 | 10 | 66 |
| 5 | Common Beans | Oka | 1 | 30 | 6 | 20 | 36 |
| 6 | Red Beans | Oka | 1 | 12 | 4 | 33 | 16 |
| 7 | Green Tomato | Oka | 1 | 8 | 4 | 50 | 12 |
| 8 | Terşici Losru | Oka | 1 | 40 | 4 | 10 | 44 |
| 9 | Green Pepper | Oka | 1 | 40 | 4 | 10 | 44 |
| 10 | Pumpkin | Oka | 1 | 10 | 4 | 40 | 14 |
| 11 | Cabbage | Oka | 1 | 10 | 3 | 30 | 13 |
| 12 | Leek | Oka | 1 | 6 | 4 | 67 | 10 |
| 13 | Celery | Oka | 1 | 10 | 4 | 40 | 14 |
| 14 | Chicory | Oka | 1 | 14 | 4 | 29 | 18 |
| 15 | Cypress | Oka | 1 | 25 | 5 | 20 | 30 |
| 16 | Jerusalem Artichoke | Oka | 1 | 10 | 4 | 40 | 14 |
| 17 | Carrot | Oka | 1 | 14 | 4 | 29 | 18 |
| 18 | Rutabaga | Oka | 1 | 20 | 4 | 20 | 24 |
| 19 | Beet | Oka | 1 | 10 | 4 | 40 | 14 |
| 20 | Bay Leaf | Bunch | 100 | 30 | 20 | 67 | 50 |
| 21 | Parsley | Bunch | 100 | 20 | 13 | 65 | 33 |
| 22 | Mallow | Bunch | 100 | 30 | 20 | 67 | 50 |
| 23 | Elderberry | Bunch | 100 | 15 | 10 | 67 | 25 |
| 24 | Spinach | Bunch | 100 | 40 | 15 | 38 | 55 |
| 25 | Bitter Tomato | Bunch | 100 | 70 | 20 | 29 | 90 |
| 26 | Red Pepper | Piece | 100 | 50 | 20 | 40 | 70 |
| 27 | Lettuce | Bunch | 100 | 150 | 50 | 33 | 200 |
| 28 | Turnip | Piece | 1 | 5 | 1 | 20 | 6 |
| 29 | Common Turnip | Piece | 100 | 60 | 20 | 33 | 80 |
| 30 | Kayseri Pear | Oka | 1 | 120 | 20 | 17 | 140 |
| 31 | Antep Pear | Oka | 1 | 50 | 10 | 20 | 60 |
| 32 | Black Pear | Oka | 1 | 40 | 10 | 25 | 50 |
| 33 | Common Black Pear | Oka | 1 | 30 | 10 | 33 | 40 |
| 34 | Domestic Quince | Oka | 1 | 100 | 10 | 10 | 110 |
| 35 | Rural Quince | Oka | 1 | 70 | 10 | 14 | 80 |

THE PREVENTIVE MEASURES OF PROFITEERING IN THE CAPITAL CITY ON THE BASIS OF NARH BOOKS IN TANZIMAT PERIOD IN DATED HIJRI 1264 (GC:1848)

Ramazan ARSLAN

| | | | | | | | |
|----|-------------------------------|-----|---|----|----|----|-----|
| 36 | Adana Quince | Oka | 1 | 55 | 10 | 18 | 65 |
| 37 | Izmir Pomegranate | Oka | 1 | 40 | 10 | 25 | 50 |
| 38 | Persimmon | Oka | 1 | 90 | 10 | 11 | 100 |
| 39 | Sinop Apple | Oka | 1 | 50 | 10 | 20 | 60 |
| 40 | Muhammed Apple | Oka | 1 | 45 | 10 | 22 | 55 |
| 41 | Apple | Oka | 1 | 35 | 10 | 29 | 45 |
| 42 | Castanea Sativa | Oka | 1 | 70 | 10 | 14 | 80 |
| 43 | Horse Chestnut | Oka | 1 | 60 | 10 | 17 | 70 |
| 44 | Arnica | Oka | 1 | 50 | 10 | 20 | 60 |
| 45 | Common Chestnut | Oka | 1 | 40 | 10 | 25 | 50 |
| 46 | Blackcurrant | Oka | 1 | 50 | 12 | 24 | 62 |
| 47 | The Grape of Müşmüle | Oka | 1 | 38 | 12 | 32 | 50 |
| 48 | Village Grape | Oka | 1 | 36 | 12 | 33 | 48 |
| 49 | The Grape of Oda | Oka | 1 | 34 | 12 | 35 | 46 |
| 50 | The Redgrapes of Değirmendere | Oka | 1 | 34 | 12 | 35 | 46 |
| 51 | The Grape of Yapıncak | Oka | 1 | 32 | 12 | 38 | 44 |
| 52 | The Grape of Yaralı | Oka | 1 | 35 | 12 | 34 | 47 |
| 53 | The Grape of Sipahi | Oka | 1 | 32 | 12 | 38 | 44 |
| 54 | Medlar | Oka | 1 | 28 | 10 | 36 | 38 |

(BOA, MVL., 55/51, 1264, s.1)

5. Evaluation

Administration had to take precautions on some important issues in every period of Ottoman Empire and one of these issues was profiteering. Profiteering can be identified as acquiring on any products illegally in market. It was treated badly from every segment of society.

The issue of profiteering on the sales of fruits and vegetables was examined in the analysis. A precaution had been taken for the regulation of vegetables which would come from gardens in order to prevent the sales of them in excessive prices in the capital. The arrival of vegetables was ensured for bringing them to Eminönü firstly, and then it was agreed that they would be sold to shopkeepers in fixed prices. The aforementioned narh book, which was prepared for the prevention of profiteering in the capital, was evaluated in this regard.

6. Conclusion

Ottoman Empire established a direct and effective narh system for providing prosperity of people through the price stability. A set of problems, which damages the narh system, occurred in the period. One of these problems, maybe the most important one, was the problem of profiteering. Profiteering was examined within the scope of trafficking, stowage and monopolism in the archival documents and precautions had been taken accordingly. The

issue of profiteering was observed particularly in provisions, which is a basic need, and it was followed by goods like woods, charcoals, meat and wheat. Racketeers (muhtekir) was penalized with the punishment of ta'zir or banishment in accordance with the gravity of offence, the repetition of offence and the pattern of the commission of offence.

Profiteering was mostly examined in the analysis with its pattern in the sales of fruit and vegetables. Since the application of narh was a sanction against profiteering in a sense, the administration prevented these vegetables coming from gardens to fall into the hands of racketeers by preparing narh books. The quoting was made in total of fifty-four items in the prepared narh book. The price fixing was made in these items and while green beans, green tomato and green pepper were the lowest in prices, leek, bay leaf and mallow were the highest prices. When it is evaluated generally, the narh prices were determined by increasing vegetable prices in varying rates between %10 and %67.

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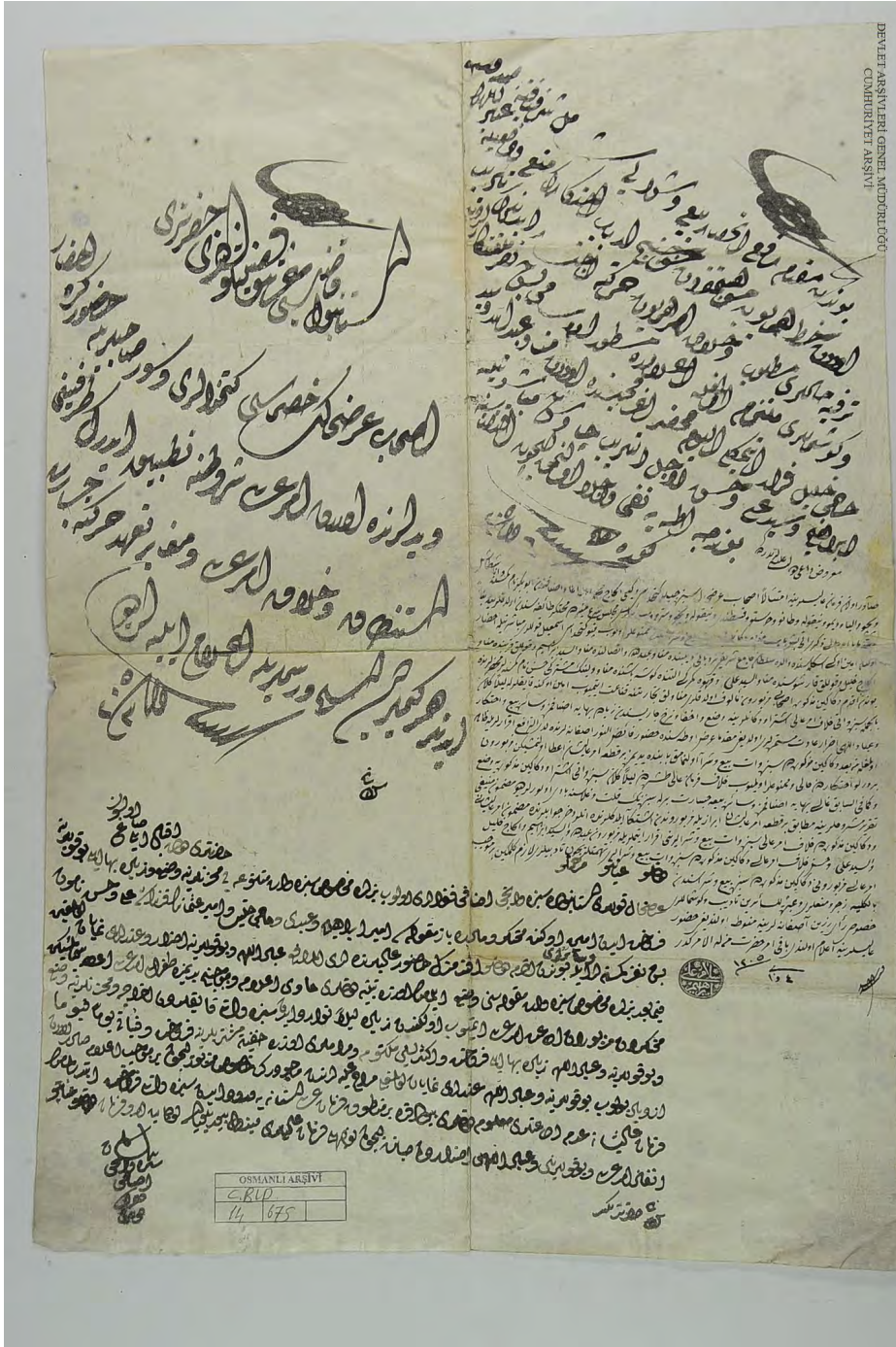
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Appx-1: The banishment of four greengrocers who profiteered to Bozcaada.

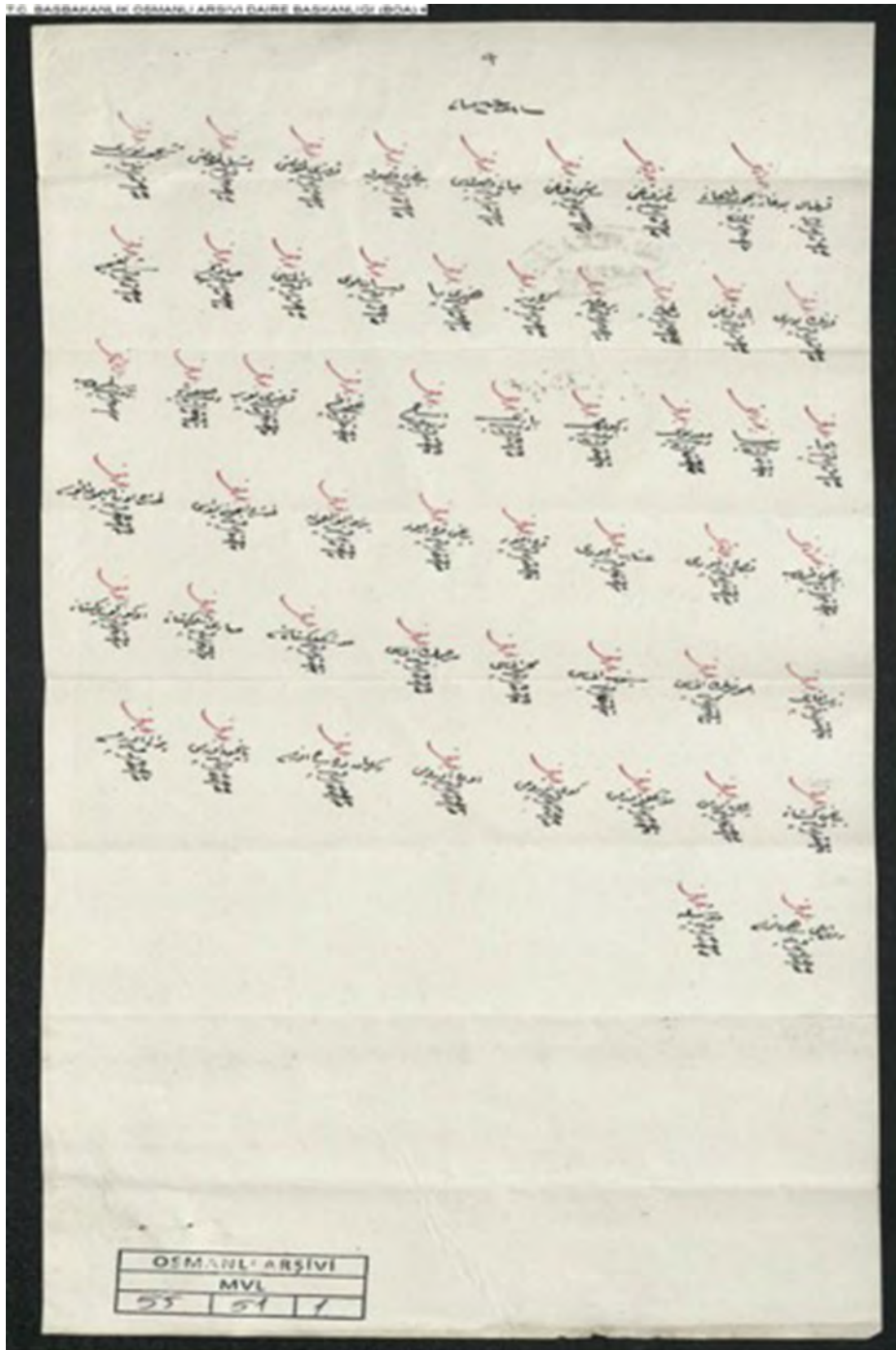


(BOA, C.BLD., 14/675, 1205 Z.11)

THE PREVENTIVE MEASURES OF PROFITEERING IN THE CAPITAL CITY ON THE BASIS OF NARH BOOKS IN TANZIMAT PERIOD IN DATED HIJRI 1264 (GC:1848)

Ramazan ARSLAN

Appx-2: The prepared narh book in the capital for the prevention of profiteering



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SECTION 2.

MACROECONOMY and EMPIRICAL MACROECONOMICS

10

AN EVALUATION UPON THE RELATIONSHIP OF POLITICAL STABILITY AND ECONOMIC GROWTH

Zehra DOĞAN ÇALIŞKAN¹

1. Introduction

Stability is defined as the constant regularity of order and continuity. The economic stability can be expressed as the maintenance of the continuity of economic order. Researchers have defined the economic stability with several macroeconomic and socioeconomic variables. The macroeconomic indicators like the general level of prices, employment rate, production level and balance of payments, and the socioeconomic indicators like the continuance of political order, the military power, corruption, political accountability, transparency in politics and just distribution of income, effect economic stability totally.

One of the important factors to effect economic stability is the political stability. In literature, researchers have preferred to explain political instability firstly in order to interpret political stability. While Lipset (1960) have defined the political instability as constant political stability and no sign of existence of democracy and opposition groups, Marrison ve Stevenson (1972) have stated that political instability has no such global and certain definition but it can be explained as the deterioration of national political system in one specific country.

Ake (1975) have mentioned political behavior and political structure in his definition of political instability. According to this approach, political instability is used to express the periods that certain rules and behaviors cannot be constituted in politics and legislations and acts cannot maintain the order. In his study, which defined the political stability and its sub-factors, Ake (1975) have discoursed the view that stability have effected all economic and social life through institutional channels and organizations.

Mbaku (1988) have defined political instability as the deficiency of universal behaviors and similar policies used in different countries. He has expressed that development and growth processes cannot be actualized in politically unstable Sub-Saharan African countries for this reason in his study. Fosu (1992) have characterized political instability as unstable government, administration, regime and a destabilized whole nation as well. According to Alesina ve Perotti (1993), political instability is a two-dimensional reality and these dimensions are social unrest and political violence.

Alesina (1996) have defined political instability not to have an ability to change in both institutional fields and non-institutional fields. From these definitions, this study is comprised of twelve elements which are political stability factor, governmental stability, socioeconomic circumstances, investment opportunities, internal threats, external threats, corruption, military policies, regional policies, superiority of law and ethnical tension. How much these elements are in a good or bad shape will effect economic growth.

According to Berthelemy et al. (2002), political instability can be defined with some risk indicators. These are; the non-existence of a proper political opposition, disregarding civil media and social views, excluding some groups

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economically and politically, youth unemployment, impoverishment, dependency and growth of inequality, violation of human rights, increase of political insecurity and migration waves.

Political instability, coup d'états and revolutions, the longevity of government, military power, political risk, corruption, accountability and transparency, rent-seeking, assassinations, civil wars, socio-political instabilities, ideological and ethnical divisions are used as variables in the studies which research the relationship between political stability / instability and growth in literature. The general verdict in the studies indicates that political instability (whatever its resource is) has a negative effect on growth.

2. The Relationship of Political Stability and Economic Growth

The second question to seek an answer after the definition of political stability is what the relationship of political stability and economic growth is. To answer this question, whether political stability strengthens growth or the opposite, or whether political stability and growth support each other mutually or not should be determined firstly. The negative-oriented relationship between instability and growth is treated with different explanatories in the empirical and theoretical studies in literature. Political stability and growth support each other mutually. While deceleration in economic growth causes political instability and deepen the crisis, political instability slows economic growth down.

Alesina et al. (1996) choose least squares estimator and panel data method in their studies to examine the relationship of political instability and economic growth in 113 countries between the years of 1950-1982. Political instability reduces economic growth in the result of the analysis.

Asteriou and Price (2001) have used generalized autoregressive conditional heteroscedasticity model (GARCH-M) in their studies which they examined the effects of political instability on economic growth in United Kingdom between the years of 1961-1997. According to the result of this practice, political instability effects growth negatively and they have discovered the presence of a strong relationship between these two elements.

Koirala, Gyanwaly and Shrestha (2005) have examined the relationship between the political instability and economic growth in Nepal in 1975-2003 with time-series regression. In the result of analysis, it is concluded that political instability has a negative effect towards factor productivity, the rate of increase of investments, the rate of increase of savings, the growth of capital and foreign trade which was taken as growth indicator in the analysis.

By using factor analysis, Jong A Pin (2008) has researched the relationship between economic growth and political instability in 93 countries for the years of 1974-2003 in his study. According to the result of this study, it is concluded that these two elements have a significant relationship and the instability of this relationship effects growth negatively.

In their studies, which they have tested the relationship between political instability and economic growth, Aisen and Veiga (2010) prefer to use panel data analysis for selected 169 countries for the years of 1960-2004. As a result of their study, they have found low domestic income growth in the high level of political instability.

Şanlısoy and Kök (2010) would prefer to use panel data analysis in their studies that they have researched the relationship between political instability and economic growth in the extent of Kuznets curve approach. Study have been implemented on 101 countries for the period of 1985-2004 and growth per capita, inflation and foreign

debts/GDP data have correlated with political instability. As a result of the analysis, it is concluded when political instability outgrew a certain level, growth decreases proportionally.

In their studies, which have examined the effects of financial crises and political instability on economic growth for Estonia, Slovakia, Slovenia, Latvia, Poland, Lithuania, Czech Republic and Hungary, Kouba and Grochova (2011) have tried to estimate the regression by using simultaneous equations model. In the study, a long-term cointegration relationship is discovered by correlating capital growth, growth of exports and government reshuffles with the data of political instability. However, it is also discovered that political instability is not a crucial hindrance for economic development statistically in the relevant countries of the study.

In his study, Arslan (2011) have researched the relationship of political instability and economic performance between the years of 1987-2007 by using Johansen cointegration and error correction models. In the study, International Country Risk Guide (ICRG) is used as a political instability variable together with the variable of Gross Domestic Product (GDP). In the study, it is concluded that there is a long-termed balance relationship between political instability and economic growth and the direction of this relationship is from GDP to political instability.

In their studies, Roe and Siegel (2011) have argued that political instability will slow economic growth down by referring the hindrances of political instability upon financial development. According to this approach, financial development is seen as a necessary and beneficial way for countries to start their economic growth and sustain it as well. In this sense, political risks and uncertainties, which restrain financial developments, should be avoided.

Gür and Akbulut (2012) have tested the relationship between political stability and growth with panel data analysis method for 19 developing countries in the years of 1986-2003. It is concluded that political stability have effected macroeconomic performance positively throughout these countries. Yet, a negative relationship has been found from some relevant countries of Latin America which are Argentina, Brazil, Colombia, Ecuador, El Salvador, Jamaica, Panama, Uruguay and Venezuela. It is revealed that this reason is triggered from a lower level of general social discipline of these countries.

Gurgul and Lach (2013) have established a relationship between political instability, government reshuffle frequency and economic growth for the period of 1990-2009 in post-communist countries (CEE countries). In the study, frequent government reshuffles are treated as political instability. According to this, as long as political instability have increased, economic growth have effected from this condition negatively.

Karahan and Karagöl (2014) have studied the relationship between political stability and economic growth theoretically in their study. In this study, they have considered political instability as the arch villain of economic performance and after they have examined how the instability effects economy, they have investigated the relationship of economic performance and stability in Turkey through data. In the study, it is concluded that political instability impedes economic success.

Kalay and Çetin (2016) have used Granger causality test and panel data in their study which they have studied the relationship between political instability, economic growth, income inequality and the data of military expenditures and the direction of this relationship in 52 African countries. It is discovered that a one-way causality relationship has been found from economic growth to political instability in 2000-2011 for valid countries. Moreover, while political instability effects income inequality and military expenditures directly, it is concluded that it effects growth through military expenditures.

Tabassam, Hashmi and Rehman (2016) have researched the connection between economic growth and political instability for Pakistani economy in the period of 1994-2006 in their study. As a result of this analysis, it has been found that regime shift and the longevity of election process have a negative effect on economic growth. The second result of this study is that governments should take measures to provide political stability.

Uddin, Ali and Masih (2017) have investigated the effect of political stability on economic growth for developing 120 countries between the years of 1996-2014. In the study, it is discovered that political instability or political risk effect economic growth negatively through the channels of the blockage of both human capital and investment.

3. Conclusion

Economy is embedded in the all social relations of societies have ever existed throughout history and it is also embedded in these relationships inseparably. In this context, economy is established by humanity and it is a process to regulate mankind's social and natural environment. In this regard, human behaviors and the thing which determines these behaviors are the all institutions which forms the society itself. Human behaviors can only serve a function in the continuation of economic activities when they are involved with a specific institutional structure (Polanyi 2000: 112).

As it is seen from Polanyi's statement, institutional structure and human behaviors should be assessed as the processes which alter and effect each other with the bottom-up causal relations. In other words, social behaviors and decisions reshape institutions by influencing them and likewise, institutions effect human behaviors with taken decisions and policy implementations. In this regard, institutional structure and society are the results of interwoven processes. In this context, it is right to say that both political stability and economic growth effect each other interrelatedly. Economic growth and political stability are interdependent two concepts. Political uncertainties and risks slow economic growth down by corrupting investment climate. On the other hand, the deficiency of economic performance causes the political climate to be shaken.

One of the important reasons for underdeveloped or developing countries to be unsuccessful in their initiation of growth and development is that political stability cannot be provided. It should not be misunderstood that political stability is the continuity of political system in a certain order rather than a single party or a one politician. It can be expressed that the indicators of political stability are freedom of press politically, political rights, the existence of an institutionalized democracy, separation of powers, accountability, corruption level, the quality of bureaucracy, political conflict (internal conflict), the size of military power in politics and political violence. It is possible to say that if these indicators amended in countries, then, the economic growth would be effected positively.

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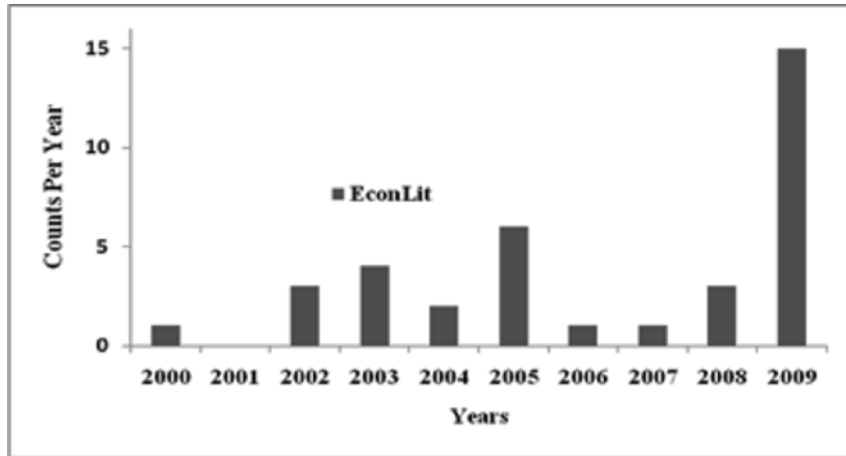
A LITERATURE REVIEW OF MACROPRUDENTIAL POLICIES

Fatma Pınar EŞSİZ¹

Macprudential Policies: Historical Perspective

The term of “macroprudential” was firstly used in the BIS meeting, 1978. In this meeting, it was used in a text that contains advices for macroeconomic and financial stability in developing countries. In 1986, this time macroprudential policy was seen as “*the safety and soundness of the financial system as a whole and the payment mechanisms*” in an official BIS report (Chiriciascu, 2013, p.82). However, the main development of macroprudential policy was in 2000s, especially after the 2008 global crisis. This trend is clearly seen by the graph below.

Graph 1. *The term of “macroprudential” in academic publication*



Source: Galati and Mossner, 2011, p.5.

Even there is no consensus on the meaning of “macroprudential”, it is generally defined as an orientation contains regulatory and supervisory policy arrangements. It refers that arrangements to be implemented should affect the whole system rather than aiming of a single institution. This perspective takes into account that the risks do not occur per se, their source depends on the collective actions of financial institutions (Borio, 2011, pp.1-2).

It is necessary to clarify exactly what are microprudential and macroprudential perspectives for understanding macroprudential policy. The macroprudential perspective is to prevent the risks arising from collective behaviors that cause a decrease in the national product while the micro-prudential perspective is aimed at limiting the risks arising from individual behaviors that may affect the consumers negatively. In other words, while the micro-prudential perspective aims to prevent the failures of financial institutions, the macro prudential perspective seeks

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to preserve the financial system as a whole and accept the importance of general equilibrium effects (Hanson et al., 2011, pp.3-5).

Although macroprudential and microprudential policies are different, they should not be considered completely independent and irrelevant of each other. Because a stable display of all parts of a system does not mean that the whole system is stable. Externalities that created by economic units which have no problem in their financial structures can cause fragilities for the whole system. Therefore, macroprudential policies that aim to prevent the safety of the financial system as a whole, are needed as a complement of microprudential policies implemented for the robustness of the singular elements of the system constitutively (TCMB, 2010, p.43).

When the literature on macroprudential policies are analyzed, it is seen that there is no consensus on its aim as on its definition. Before defining the aims of macroprudential policies, a few points should be mentioned. The first point is the political gap that emerged in the 2008-2009 crisis. In the process of the crisis many countries were too busy with price stability (price stability of good and services) and firm level regulation and supervision (microprudential policy). They also gave less importance to the “systemwide financial developments”. All these events led to turn the attentions to macroprudential policy. The aim of macroprudential policies is precisely this deficiency. If the crisis can not be eliminated, the macroprudential policies aim to mitigate damages caused by the crisis. The second issue that should be mentioned about the aim of macro prudential policies is related with “systemwide financial developments”. Systemwide financial developments are divided into two parts; conjunctural risks and resilience of financial system. Conjunctural risks are the risks that are major parts of an economy like credit and debt. Resilience is a concept about the ability of the system to withstand against this risks. After mentioned this issues about macroprudential policies Clark and Large (2011) state that macroprudential policies should be focused on resilience objective (Clark and Large, 2011, p.11).

On the other hand Galati and Mossner (2011) looked in a broader perspective to macroprudential policies and stated that macroprudential policies aimed at financial stability. But there is no common definition of financial stability too. The different views on financial stability can be categorized into two groups. The first view defines financial stability as the robustness of the financial system against external shocks. The other one sees the financial system as a source of shocks (Borio ve Drehman, 2009, p.4). Although there are different opinions on the aim of macroprudential policies, the common point is to limit systemic risks and mitigate the costs of systemic crisis.

According to the Central Bank of Turkey (TCMB) macroprudential policies target the systemic risks in the financial system. In accordance with this purpose they have three objectives for limiting systemic risks in the financial system:

To reduce the impact of shocks by creating a buffer against systemic shocks, to protect the financial system from systemic shocks and to provide the continuance of credit flow to the economy,

Reducing the impact of economic fluctuations,

To control the fragilities that may arise from interdependence in the financial system and to determine systematically important financial institution.

Macroprudential policies focus on two dimensions of systemic risk; cross sectional dimension and time dimension. The time dimension reflects the collective mechanism of interaction between the financial system and the real economy. The cross-sectional dimension indicates the risk distribution in the financial system at a specific time.

This dimension expresses the mutual risks between financial institutions. These institutions may cause negative externalities for other parts of the system. Because they cannot predict the potential effects of the risks that caused by their activities on financial networks (Frait and Komarkova, 2012, pp.11-12).

Authorities should follow systemic risks and determine the risks in a short time for implementing the right macroprudential policies. After 2008 financial crisis the efforts for measuring systemic risk have increased. The paper that was published by IMF, BIS and FSB (2011) is one of these studies. In this paper indicators that help monitoring systemic risk are divided into five main categories (IMF, BIS and FSB, 2011, p.5):

Basic imbalance indicators: These indicators represent the risks accumulated in the financial system by using balance sheet indicators (bank loans, liquidity, maturity mismatch, exchange rate risk, sectoral or external imbalances) or macroeconomic data. The indicators like credit growth in economy, leverage ratios in the financial, household and corporate sectors or the gap between the credit-to-GDP ratio are seen as the most important indicators of systemic risk in an economy.

Indicators of market conditions: These factors focus on developments in the financial system that may cause difficulties in the economy. Risk appetite (risk premium, spreads) and market liquidity conditions are used extensively.

Risk concentration criterias: These criterias are relevant to the cross-sectional dimension of systemic risk and focus on possibility of contagion and expansion of risk. Beyond basic measures of concentration, they try to catch the intertwining between financial institutions (including non-bank financial institutions), sectors (public-private), markets and countries, and determine the common risks involved by economies.

Macro stress tests: These are tests applied by national authorities or international organizations, which take over the financial system as a whole and observe market dynamics against risk scenarios, and measure the interaction between problems in the financial system and real economy.

Integrated Monitoring Systems: While measurements and approaches described above are useful in monitoring systemic risk, the measurement approach obtained by combining these methods is called “Integrated Monitoring Systems” (dashboards, heat maps, etc). This method gives a coherent picture of financial system and various institutions are in the process of developing this frameworks. For example, IMF aims to prepare systemic risk dashboards.

Monitoring the systemic risks is very essential for implementing the right macroprudential policy. Nevertheless, the difficulties of this work and the fact that it takes a lot of time should not be ignored. Especially fault lines of financial system, lack of knowledge about systemic risk and significant limitations in analytical toolkit, such as gaps in financial data, make measuring systemic risk difficult (IMF, BIS and FSB, 2011, p.5).

Macroprudential Policy Instruments

Many countries have given increasing importance to the prevention of systemic risk and they started to take precautions against systemic risk after 2008 financial crisis. With these precautions, eliminating the negative impact of financial crisis periods is aimed. Based on one of the basic studies on macro prudential policies belongs to, Lim et al. (2011, p.8), the macro prudential policy instruments are as follows:

Implementations on credits: caps on the debt-to-income (DTI) ratio, caps on the loan-to-value (LTV) ratio, ceilings on credit or credit growth and caps on foreign currency lending,

Implementations on liquidity: reserve requirements, limits on maturity mismatch and limits on net open currency positions/currency mismatch (NOP),

Implementations on capital: timevarying/dynamic provisioning, countercyclical/time-varying capital requirements and restrictions on profit distribution.

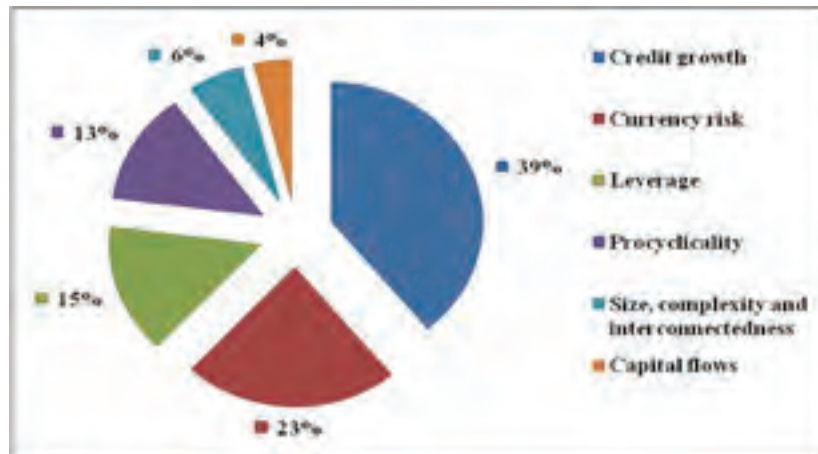
Macroprudential policies, that are used against financial crisis as an effective tool by politicians, are separated into two categories by TCMB (2014, p.3); identification and monitoring tools and operational tools. The identification and monitoring tools are aim to monitor, identify and prioritize systemic risks. It is targeted to reveal the time and cross-sectional dimensions of the systemic risk and to help implementing right policies with these instruments. Basic imbalance indicators, indicators of market conditions, risk concentration criterias, macro stress tests and integrated monitoring systems are among these instruments. The second group instruments aim to prevent systemic risks. The most common macroprudential policy tools in this category are; countercyclical capital requirement, caps on the LTV, caps on the DTI, caps on foreign currency lending, reserve requirements.

Vinals (2011) divides macroprudential policy instruments into two categories too. The instruments, in the first category, are specifically designed to mitigate the time and cross-sectional dimension of systemic risk. The second category is the instruments that have not been developed for systemic risk but become a part of macroprudential policy set targeting systemic risk. The instruments like countercyclical capital buffers, levy on non-core liabilities, time-varying systemic liquidity surcharges aim time dimension of systemic risk; instruments like capital surcharges, liquidity surcharges aim cross-sectional dimensions of systemic risk. These instruments are developed to mitigate systemic risk. Most commonly used intruments like LTV ratio, DTI ratio, caps and limits on credit or credit growth, dynamic provisioning are targeted time dimension of systemic risk; capital charge on derivative payables, deposit insurance that targeted cross sectional dimension of systemic risk are in the second category. Recalibrated instruments are in this category (Vinals, 2011, p.23).

Cerutti et al. (2015) categorized macro prudential policy instruments into two groups in his study too, which is a very overall analysis included 119 country. This distinction was made according to the sphere of influence of the applied instruments. The first group instruments aim to affect the financial position of borrowers. The second one consist of the instruments that aim to affect the assets and liabilities of financial institutions. LTV and DTI ratios are aimed at borrowers, dynamic provisions, cyclical capital buffers, leverage rates for banks, reserve requirements are aimed at financial institutions.

According to the IMF survey (2011), applied in 49 countries, macroprudential instruments are generally implemented for six main risks; risks related to size, complexity and interconnectedness, risks related to cyclicality, risks related to leverage, risks related to credit growth and asset prices, risks related to capital flows and risks related to foreign currency risk. The most targeted objective by central bankers are credit growth and asset price inflation (Figure 1).

Figure 1. Use of Instruments According to the Objectives



Source: IMF Financial Stability and Macprudential Policy Survey, 2010.

Besides, there are some overlaps between objectives of macroprudential policies. For instance, some countries use “caps on foreign currency lending” to address foreign currency risk. At the same time some countries use this instrument for limiting credit growth. Similarly, LTV ratio instrument can be used for either to limit credit growth or to address leverage by central bankers (IMF Survey, 2010).

Effectiveness of Macroprudential Policy Instruments

The **pre-crisis** prevailing perspective on monetary policy for central bankers could be summarized into four propositions. The first proposition was that; “*price stability is sufficient for macroeconomic stability*”. According to this proposition, it was expected that if price stability be provided in short term, for example 2 years, and absent exogenous shock, economy would be stable. The second one was; “*there is a separation between price stability and financial stability functions*”. Price stability was controlled by monetary policy while regulation and supervision were controlled by financial stability. The third proposition was: “*short term interest rate is sufficient to observe the effect of monetary policy on the economy*”. It was believed that all other interest rates and expectations on interest rates were controlled by short term interest rate (often overnight). The fourth; “*if central bank looks after its own economy, the global monetary stance will also be appropriate*”. It was thought that global economic stability to be ensured when every central bank solved its problems. However crisis has shaken the basis of monetary policy that implemented by central bankers (Borio, 2011, pp. 2-3).

Post crisis, authorities saw that low and stable inflation ratios do not guarantee the macroeconomic stability. They also realized that short term interest rates were insufficient in the implementation of monetary policy. So, it wouldn't be wrong to say that the fundamentals of central banking, which there was a consensus on them before the crisis, were seriously shaken off after the global crisis. This process canalized central banks to implement non-traditional policies, like macroprudential policies. The number of countries applying macroprudential policy instruments in a more formal macrofinancial framework has increased after 2008 global crisis.

A large and growing body of literature has been investigated about effectiveness of macroprudential policies after the crisis. However, having a large number of macroprudential instrument variations makes achieving this objective difficult (Borio, 2014, p.33). Nevertheless, there are studies trying to measure effectiveness of macroeconomic policies despite this difficulty. Examples of these papers belong to; Lim et al. (2011), Dell’Ariccia et al. (2012), Kuttner and Shim (2013), Claessens et al. (2014), Tavman (2015), Cerutti et al.(2015), Akinci and Olmstead (2015).

According to these studies, it has been observed that emerging market economies use macroprudential policy instruments more frequently². Because in the post crisis period, despite the rapid recovery in domestic demand, external demand has not recovered at the same time. In addition, expansionary policies implemented in developed countries against crisis increased capital flows to emerging economies. So, emerging market economies have implemented new policies, including macroprudential policy instruments against hedging capital flows, which constitute major risks for them. One of the common results of these studies is that some macroprudential policy instruments are more effective than the others. For instance, LTV and DTI ratios are more effective instruments³. Claessens et al. (2014) says that besides LTV and DTI ratios, limits on credit growth and limits on foreign lending instruments are effective against financial risks too. Tavman (2015) notes that reserve requirements are the most effective instruments in her study.

It should not be understood that macro prudential policies replace monetary and fiscal policies from these statements. On the contrary, macro prudential policies do not replace monetary and fiscal policies. They usually use for to support other economic policies. On this basis, macroprudential policies aim to ensure stability in the financial system as a whole and when financial stability is provided, it is expected that monetary and fiscal policies are more effective (Oktar et al., 2012, p.160). In this respect, studies and experiences show that a successful macroprudential policy application depends on some key factors; policy management, identification of market failures, selection of instruments against these failures and interaction of these instruments between other economic policies, especially monetary, fiscal and microprudential policies. It is also mentioned that factors, such as economic structure, economic management or characteristics of the shock and the risks are important for macroprudential policy (TCMB, 2014, p. 3).

As well as, there are some policy challenges and important areas for research about macroprudential policies, too. The calibration of instruments is one of the most important application problem of macroprudential policies. For instance, what should be the optimal LTV and DTI ratio or how should be high capital surcharges? (Favara and Ratnavski, 2014, p.141). Another controversial issue about macroprudential policies is either monetary policy and macroprudential policy gather under a single roof or they are harmonized by a committee to be formed by separate institutions. Besides, another problem related to the effectiveness of macroprudential policies is the development of the shadow banking sector (Portes, 2014, p.48).

Conclusion

Before the crisis, many central banks agreed on the monetary policy that was composed of a single target (price stability) and one instrument (short term interest rates). It was believed that when price stability was achieved, macroeconomic stability was automatically provided. For this reason, financial stability has been overshadowed

² Lim et al. (2011), Cerutti et al. (2015), Akinci and Olmstead-Rumsey (2015).

³ Lim et al. (2011), Claessens et al. (2013) and Kuttner and Shim (2013).

by price stability for a long time in central banking. However, with the crisis in 2008, the policies implemented by the central banks, the instruments available for central bankers and the processes of their implementation have become seriously controversial.

Macroprudential policies are seen as a factor that draws attention in the post crisis process. Macroprudential policies aim to evaluate the financial markets from a macro perspective and reduce the systemic risks in the market. Emerging market economies have implemented macroprudential policies more frequently than developed countries. Emerging market economies have implemented macroprudential policies especially for credit growth while developed countries applied macro prudential policies for housing market.

In view of all that has been mentioned so far, one may suppose that macro-prudential policies can be implemented to support monetary policy against risks threaten the financial stability. However, the interaction between other economic policies and macroprudential policies should not be ignored. In addition, it should be noted that new approaches are needed that bring solutions to overcome the deficiencies of traditional economic views and propositions.

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THE EFFECTS OF TURKEY'S ECONOMIC CRISIS ON EMPLOYMENT

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1. Introduction

Crisis refers to a sudden and unexpected phenomenon which causes various changes in the field of occurrence. There are a vast variety of definitions associated with the economic crises that unexpectedly occur in economic life involving troubles in the functioning of the economy. Many studies, comments, and debates on economic crises are still being conducted. The emerging economic crises create both threats and opportunities at national and international scale. Each government imposed new policies or measures during the post-crisis period and tried to find a solution to the crisis problem. The aim of the imposed policies and measures is to eliminate the crisis problem and foster the economy.

The labor factor, one of the production factors in the macroeconomic context, is the most affected factor during the crisis period. Full employment in the economy is desired, but this situation is very difficult to attain. Governments aim to maintain the welfare of the economy during the crisis and also try to solve the employment problem. Therefore, employment in developing countries and developed countries has been a common problem.

In this study, the concepts of crisis and economic crisis are first explained. Then, the economic crises experienced in Turkey are analyzed. At the end of the study, the impacts of the crisis on employment in Turkey are analyzed.

2. Crisis and the Concept of Economic Crisis

The term “crisis” has Ancient Greek origin, meaning “decision-making”. In the economic field, the term “crisis” is defined as ‘collapse’. As the crises in the economy damage both the economic and social structure of the country, the word ‘collapse’ used to explain the crisis is very crucial. In general, it is not possible for social scientists to explain the phenomenon of crisis. Expressing the encountered events as a crisis differ from individual to individual in terms of the faced situation. In order to describe the concept of crisis, it is beneficial to be familiar with the basic elements and characteristics of the crisis (Turgut, 2007: 35). Crises in the economic field can be defined as severe price or quantity fluctuations of any product, service, production factor or foreign exchange market beyond an acceptable range of variability (Kibritçioğlu, 2001: 174). According to another definition, the crisis can be expressed as an outbreak of an unstable situation when the economy is in an equilibrium state (Altaşlı and Işık, 2017: 568-569).

3. The Emergence of Economic Crises

Economic crises may emerge as reductions in investments of enterprises and consumer demand, high level of unemployment and consequently a decrease in the standard of living (Eğilmez, 2009: 48). The causes of economic crisis are usually expressed as follows (Fener, 2012):

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- The economic crisis can be caused by excess supply or demand shrinkage in the real and financial sectors. There are different reasons for both the supply and demand crisis. Economic crises may not always stem from economic reasons. Natural disasters such as earthquakes, floods can also be the causes of the crisis.
- Rapid changes in political, economic, technological and ecological fields are effective in the formation of an economic crisis.
- Developments in information and communication technologies, as well as technological inventions may cause crises in some organizations.
- The sudden cyclical fluctuation in production, employment and the general price level may cause a variety of crises such as depression, hyperinflation and unemployment.
- The crises have not only limited to monetary markets, but they also expanded to the general economy through various channels, by spreading their influence rapidly in the real sector (Baran, 2009).

4. Evaluation of the Crises Experienced in Turkey

The economic crises encountered in Turkey have begun in financial markets with a sudden rise in foreign exchange rates, interest rates and inflation rates following the rapid outflow of the foreign short-term funds and they have inflicted detrimental impacts on the real sector by a decrease in production and investment levels within a short period. Also, the economic crises can affect the countries which have close relations with each other in trade and industry. The defense mechanisms such as policies developed by these countries, against these impacts have also been effective in increasing the existing negativities using an export contraction and increased anxiety in the international financial markets of the country in which the crisis first started. The impacts of the crisis are then increasingly spread to labor markets, the quantity, and composition of budget expenditures, and increasingly indicators of poverty and income distribution, through cuts in health, education and social aids (Koyuncu and Şenses, 2004: 3).

It would be beneficial to separate the analysis of Turkey's economy into two different periods. Turkey has adopted trade openness along with free market economy at the beginning of 1980, even though it has been pursuing a closed economic policy until 1980.

Turkey's economy has remained under the influence of the events in the world throughout the 1970s, and the economic collapse has been experienced in the country at significant levels. As a result, the inflation rate rose above 100% due to the impacts of the economic crisis within the country, the economic growth rate decreased to zero, and the price of imported goods increased significantly since the first oil crisis increased the cost of production in the world. Therefore, along with the increase in the price of imported goods, the foreign exchange outflow has increased, the country's economy has encountered the foreign currency bottleneck and stagnation (Altaşlı and Işık, 2017: 569-570). On the other hand, the political developments within the country have resulted in losses to the economy. Thus, income inequality has increased, and the economic and social welfare of the majority in society has decreased (Kepenek and Yentürk, 2000: 182-191).

As a consequence of the oil crisis that emerged in 1973, oil prices increased, and the countries of the capitalist system experienced an economic crisis. In this case, however, Turkey was not affected too much. The military embargo imposed by the United States along with the embargo imposed by the European countries, within the scope of the Cyprus Peace Operation that took place in 1974, have worsened Turkey's economy. Extreme increase

in oil prices between 1978-1981 has led to an excessive rise in interest rates, and developing countries such as Turkey have been unable to pay their debts due to rising costs (Kaykusuz, 2014: 259-263).

Upon considering the economic indicators as of 1980, it is seen that the country's economy was in a difficult situation (Şahin, 2002: 192). With the stabilization program published on 24 January, 1980 by the Administration of Süleyman Demirel who came to power at the beginning of the November 1979, industrial policies associated with the exports were prioritized within the process of integration with the world economies (Tuncer, 2002: 31).

January 24, 1980 Decisions, through which Turkey's economy was opened up to the free market mechanism, resulted in the liberalization of interest rates in the banking system. Given the fact that some banks offered low deposit interest rates below the inflation rate, the absence of financial instruments led to the emergence of private bankers. Due to the lack of required regulation and supervision on these bankers, financial liberalization turned into a bankers' crisis (Çoşkun, 2002: 66-67).

Turkey's pursuit of financial liberalization policies in the 1990s, following the basic economic transformation of the country in the 1980s, has been both an opportunity and a threat for Turkey's economy.

The financial crises encountered in Turkey's economy after 1990 can be attributed to public finance deficits and current account deficits regarding the economic development process (Oktar and Dalyancı, 2010: 12).

Following the 1994 financial crisis, Turkey's economy is improved by the end of 1998 with economic measures and decisions taken (Yelda, 1994: 3).

Turkey's economy was highly affected by the Asian and European crises of 1998. Foreign indebtedness has increased in 1999 as a consequence of the domestic demand contraction, the slow-down of growth and the decline in exports (Özbilen, 2002: 174).

The general appearance of Turkey's economic indicators since the end of 1999 is hardly encouraging. Turkey has become smaller in economic terms, the rate of inflation has increased, stability has not been maintained, the budget deficit has risen, there was an increase in unemployment due to the contraction in production. Foreign currency continued to appreciate until the crisis. The 16th Stand-By Agreement was signed with the IMF due to those drawbacks (Eroğlu, 2008: 352-354). Towards November 2000, Turkish Lira gained appreciation in real value, domestic demand increased, exports decreased as imports increased, so the current account deficit increased. It is understood by economic circles that it would not be possible to forge ahead only with the monetary policy depending on the currency peg. Foreign direct investments made toward Turkey and fund inflows have declined rapidly. Therefore, there has been a decrease in liquidity. In October 2000, foreign exchange reserves of the CBRT began to reduce, and it went on rapidly in November (Alp, 2001: 680). Before the outbreak of the February 2001 crisis, an increase in the foreign exchange reserves was attained in Turkey's economy. The foreign exchange crisis broke out triggered by the political tension between the Prime Minister and the President on February 19, 2001 (Güloğlu and Altunoğlu, 2002: 130).

The crisis inflicted its influences also in Turkey, which ranks 17th out of 186 countries in terms of Gross Domestic Product (GDP) according to data of 2009, and there has been a drastic decline in macroeconomic variables such as employment rate and growth after the crisis of 2008 as experienced in other countries in 2009 (CIA World Factbook).

Yılmaz (2009) stated that the direct and indirect impacts of the financial crisis, which have severely affected the economic activities and caused suspicion on the decision-making and control mechanisms, were still being continued. The continuity of the problems in the credit market and the increase in the unemployment rate indicate that the elimination of the crisis would be in a slow and gradual pace.

Gurria (2008) stated that Turkey was not affected much from the crisis because of the reforms that Turkey carried out in the early 2000s, and made suggestions for the country to achieve sustainable growth performance. These include; maintenance of the efforts to increase efficiency and innovation capacities in all productive sectors for competing with the countries with low-cost and low-exchange rate, quality education, full formalization of semi-formal productive sectors to become financially transparent, and environmental protection as the key to economic growth.

Karaganov (2008) emphasized that a new system should have been introduced to the world following the crisis. The reasons for the rapid growth of the global economy within the last 20 years is the capitalist system and capital mobility that increased with the technological revolution.

Cecchetti (2007) argued that the US economy might have faced a new crisis permanently unless necessary precautions are taken. He emphasized that each investor and the government should undertake important tasks, and the importance of auditing as well as confidence in the market.

5. Evaluation of the Impacts of Crises Experienced in Turkey on Employment

One of the deterministic features of January 24, 1980 Decisions is that the basic production factors such as labor and capital determine the prices according to market conditions. The reasons for keeping the labor price lower within the context of 1980 decisions are as follows: increasing the rate of profit by stimulating the investment, increasing the competitiveness of the exported products by reducing the cost of domestic production, and increasing the competitiveness of products that cannot be purchased in the domestic market by reducing domestic demand (Ardıç, 2004: 87).

Following the 1980 decisions, the unemployment rates decreased in 1981 in comparison to the previous year. Employment and labor force accession rates tend to fall for years. Due to the fear of being dismissed in times of crisis and not finding a job for a long time, individuals cannot search for more options about wages and tend to settle for any job they are able to find (Altaşlı & Işık, 2017: 573-574).

Upon analyzing TSI data obtained between the years 2001-2006, it is seen that Turkey's economy has been creating additional employment opportunities for 806 thousand people. The low level of additional employment in the six-year period indicates a problem with growth and unemployment. After the 2000 and 2001 crises, the growth of the economy that could not be creating employment was constantly disputable. Growth has been found to be accompanied by productivity growth (Arslan, 2009: 33-34).

Following the economic crises experienced in November 2000 and February 2001 in Turkey, 33% of female labor force became unemployed, the unemployment rate increased from 6% to 10%, and banking, industry, service, and financial sectors are among the most affected sectors by the crisis. Crisis unemployment became the most important issue whenever the people who have been put out of their jobs during the crisis joined the already

unemployed population. According to the data of the Ministry of Labor and Social Security, in the first half of 2001, a total of 738 thousand 866 individuals were laid out (Turan, 2005: 7-8).

Even though there has been a decline in the total employment in the 2001 crisis, the decline in employment volume was not too high. Although the economy shrank by 10.3% in 2001, non-agricultural employment decreased by 2.7%. Manufacturing industry production index decreased from 102.1 in 2000 to 92.4 in 2001, while the manufacturing industry employment index decreased from 89.1 to 81.7. Nonetheless, the decline in the employment index was below the decline in the production index. Therefore, employment experienced a minor decline (Arslan, 2009: 34-35).

The policies implemented since the crisis of 1929 has brought forth the 1973 oil crisis and stagflation. However, in comparison to other crises, countries had challenged identical problems in the 2008 global economic crisis. The problem of unemployment which concerned the world was the typical characteristic the crisis of 2008. This problem has been a social issue that countries had to solve first (Genç, 2011: 3).

Upon examining the global crisis of 2008, it is observed that the crisis had a negative impact on employment worldwide. It appears that the crisis not only caused unemployment but also prolonged the employment process of the unemployed populations (Yaprak, 2009: 44).

The everlasting unemployment problem of Turkey's economy has become even a bigger problem with the crisis of 2008. While the capacity of Turkey's economy for employment creation was also previously low, the realization of economic growth could not induce a rise in employment. The main recipe for creating employment and reducing unemployment is to encourage investments in order to create new job sites (Bağdadioğlu, 2009: 109).

Conclusion

The economy entered the process of opening up to the goods market as of 1989 with the Decisions of 1980. As a part of the globalized world within this period, Turkey's economy was supported with hot money inflows which caused occasional crises in the country. Turkey's economic growth was sought for efforts with the help of investments made by external sources. Along with the fragility of the economy and political instability, the outbreaks of occasional economic crises have been inevitable.

The economic crises, which were experienced following the developments after 1980, have resulted in a cost to Turkey's economy. Rising inflation, rising interest rates, employment issues as the results of these crises are among the agenda items of Turkey.

As a result of the 1994 crisis, unemployment and interest rates increased, the growth rate decreased, and the crisis resulted in devaluation. By the outbreaks of the 2000-2001 crisis, new regulations were made in the banking sector.

The cost of these arrangements is greater when compared to policies implemented in other countries.

The whole World was instantly under the influence of the US Mortgage Crisis of 2008. Although the crisis was first felt in developing countries, developed countries were not as successful as much in eliminating it despite the measures taken. With this situation, growth rates have fallen, employment levels have decreased, and unemployment rates have increased all over the world. The impacts of the 2008 crisis are minimized by courtesy of measures taken in Turkey.

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13

DETERMINANTS OF THE EXTERNAL DEBT: THE CASE OF TURKEY

Ahmet KAMACI¹

1. Introduction

External borrowing is an important tool which allows a country to make investments and consumptions in beyond her national borders and enables a country to compensate her under savings. Foreign debts are not taken kindly in economic theory. However, Keynes emphasized that foreign debts will play a role for increasing exportation and creating investments for the contribution to national economy with transforming themselves into investments. For this to be realized, the yield of investments with foreign debts should be more than the cost of foreign debts. When the foreign debts have been used for unproductive investments and the importation of luxury goods or when the external debts have been appealed for debt discharge, national economies fall into the loop of external borrowing.

Due to the debt crisis on the developing countries in the 1980s, foreign debts have appeared as an important macroeconomic problem. Besides the amount of one country's foreign debt, what factors have caused the increase of foreign debts, and the share of foreign debts in national income are important topics for researchers. The factors like foreign trade deficits, foreign currency problem, external dependence, and necessary investments which have not been made due to the inadequacy of national savings increase foreign debts in developing countries. Also, budgetary deficit, current deficit, balance-of-payment deficit, inflation and interest rates increase external borrowing as well.

In this study, the determinants of foreign debts are tested for the period of 1975-2017 in Turkey. The impact of the variables of the determinants of foreign debts on foreign debts would be analyzed by including independent variables such as per capita income, inflation, budgetary deficit and interest rates into the analysis process. Within this context, theoretical information about the topic was given firstly and then, the literature survey of this topic was included in the search. Also, the share of foreign debts in GNI was examined by determining the general picture of foreign debts in Turkey. Within this scope, ADF, PP, Ng Perron and KPSS unit root tests were performed to determine the stability of the variables. After this, the direction of this relationship was determined by doing co-integration and causality tests. Heteroscedastic and autocorrelation tests were made in order to determine what estimator will be used; it was decided that FMOLS, CCR and DOLS estimators are appropriate. Thus, the coefficients of parameter were estimated by using these estimators.

2. Conceptual Framework and Literature Search

Due to the negations in the current accounts and financial indicators, a constant increase was observed in foreign debts especially after 1980s in developing countries. This continuous increase in foreign debts is one of the most important problems for several developing countries.

Since national savings are not adequate in developing countries, foreign debts are needed for making necessary investments. However, increasing savings in the developing countries is not an enough solution alone as well. Lower export incomes, current account deficits caused by foreign trade deficits and financial instabilities cause these

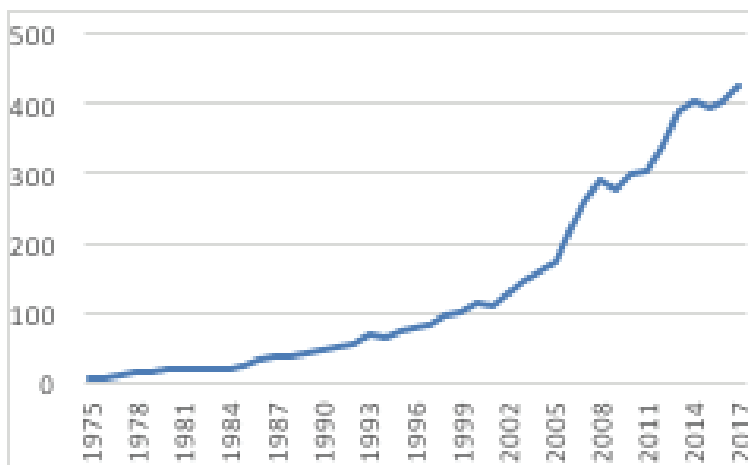
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countries to face with a foreign currency problem, so the necessity of foreign currency arises in these countries. The way to get rid of the negative impacts of foreign debts is the transfer of these taken debts into the fields which will provide high incomes. Since the obtained yield with reserving foreign debts into investment is more than the cost of foreign debt, an increase in the national income will be observed in the country with debts. Thus, the increases can be observed in the economic growth rate.

Different opinions can be found about foreign debts in economic theory. According to classical economists, there should not be any external borrowing because the indebtedness of country will affect markets negatively and state should not take part in the economic activities. In the neo-classical economic thought, the foreign debts are not considered positively, because they thought that foreign debts will cause high taxations in the future due to the Ricardian equivalence theorem. In the Keynesian thought, external borrowing will provide the increase of economic growth and the prosperity of country will increase as well because foreign debts cause an increase in the investments. By assessing external borrowing in the terms of monetary aspect, monetarists argue that foreign debts will create inflationist deficits and therefore, external borrowing will be dangerous. In short, only Keynes have considered foreign debts in a more positive manner.

The Republic of Turkey undertook remaining debts from Ottoman Empire and made her first external borrowing with this action. According to the agreement with creditor countries at Paris in 1933, the amount of debt was determined as 65 million liras. In order to finance budgetary deficits from 1934 to 1950 and investments, the domestic borrowings were appealed. After World War II, the serious deficits in Turkey's balance of payments started the process of external borrowing again and her foreign debts increased %800 for the period of 1948-1951. After 1960s, stand-by deals were made with IMF in every year, but it was not successful (Adiyaman, 2006:26; Yavuz, 2009:208-209 and Karagöl, 2010:5). Although there is a rapid increase in foreign debts after 1975s, the main acceleration will happen in 2000s. The rate of increase of foreign debts (billion dollar) in Turkey between the years of 1975-2017 have been demonstrated Graph 1.

Graph 1. The Outlook of Foreign Debts in Turkey (1975-2017, billion dollar)

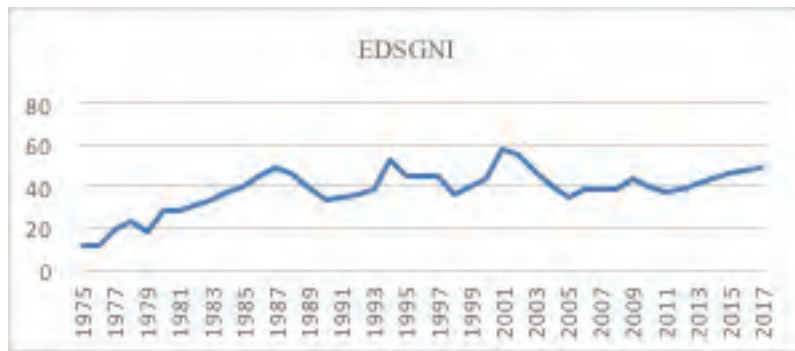


Source: *worldbank.data.org*

According to Graph 1, the foreign debts of Turkey were 19 billion dollars in 1980 and it increased constantly. In 2002, they mounted in 129 billion dollar and continued to increase. Although a decrease can be sighted in foreign debts in 2009 with the impact of mortgage crisis, foreign debts start to increase again in following years and they have reached the level of 424 billion dollars in 2017.

Although there is a rapid increase of foreign debts in Turkey, the share of foreign debts in GNI should be checked as well in order to make a comparison with other countries. In graph 2, the share of foreign debts in Turkey in GNI between the periods of 1975-2017 has been demonstrated.

Graph 2. The Share of Turkey's Foreign Debts in GNI (%)



Source: *worldbank.data.org*

According to Graph 2, the share of Turkey's foreign debts in GNI have displayed an up-and-down process. While this rate was the level of %11 in 1975s, it raised into %48,8 by 2017. The rate of foreign debts to GNI especially increased during a time of crisis. For example, it increased %13 compared to the previous year and became %51.99 in 1994 crisis and it increased %14 compared to the previous year and became %57 in 2001 crisis.

The determinants of foreign debts are one of the awe-inspiring subjects for economists in recent years and many studies have been made in academic literature, but the studies about Turkish economy are limited. In academic literature, the relationship between foreign debts, and economic growth and inflation are more widespread. The studies on basic factors, which determines foreign debts by increasing the number of variables, have been made for less-developed or developing countries mostly. The results of these studies are given in Table 1.

Table 1. The Literature Survey on the Determinants of Foreign Debts

| Writers | Countries | Method | Variables | Conclusion |
|---------------------------|---|--------------------------------|--|---|
| Lane (2004) | 87 developing countries (1970-1995) | Panel data analysis | Foreign debts, GDP, GDP deflator, openness and human capital | There is a positive relationship between commercial openness and foreign debts. Foreign debts are determined by commercial openness. |
| Tiruneh (2004) | 60 developing countries (1982-1998) | Fixed effect and random effect | Outstanding foreign debt, foreign debt service, export, import, terms of trade, economic growth, per capita income and capital flow | Foreign debt service, import, economic growth, per capita income and capital flows are the basic factors which effect external borrowing |
| Karagöz (2007) | Turkey (1980-2004) | Regression analysis | Outstanding foreign debt, balance-of-payment deficit, public expenditures, national savings and domestic borrowings | Balance-of-payment deficit and the amount of domestic borrowings are more effective on foreign debts and the basic variables which determine foreign debt. |
| Forslund et all. (2011) | 104 developing countries (1990-2007) | Fixed effect and random effect | Internal and external debt, GDP, inflation, current account deficit, openness, supply of money, budgetary equilibrium, exchange rate, interest rate | There is a negative relationship between inflation and domestic borrowing in the countries which have no capital control and there is a weak relationship between the previous periods of inflation and public debt. |
| Bittencourt (2013) | The New Democratic Countries of South America (1970-2013) | Dynamic panel time series | Foreign debt, economic growth, commercial openness, supply of money, rate of inflation, population, the share of public in GDP, income inequality and Gini coefficient | The impacts of inflation, income inequality and administrative restraints on foreign debts are not clear, but the basic determinant of foreign debts is economic growth and it decreases the level of foreign debt. |
| Peker and Bölükbaş (2013) | Turkey (1994-2010) | Causality test | Outstanding foreign debt, budgetary equilibrium, public expenditures and internal borrowings | For the period of 1994:Q2-2010:Q2 domestic borrowings; and as for the period of 2001:Q3-2010:Q2 public expenditures are the basic determinant of external borrowing |
| Imimole et all. (2014) | Nigeria (1986-2010) | Co-integration Test | GDP, openness, foreign debt service, budgetary deficit, direct foreign investments and exchange rate | There is a positive relationship between budgetary deficit and foreign debts; and there is a negative relationship between direct foreign investments and foreign debt, but the level of significance in this relationship is low. GDP, foreign debt service and exchange rate are the basic determinants of foreign debts. |
| Abdullahi et all. (2015) | Nigeria (1980-2013) | ARDL model | Foreign debt, exchange rate, interest rate, savings and budgetary deficit | Interest, exchange rate and budgetary deficits have negative effect on foreign debts in both short and long periods. |

| Writers | Countries | Method | Variables | Conclusion |
|--------------------------------|--------------------------------------|-----------------------------------|---|---|
| Awan et al. (2015) | Pakistan (1976-2010) | ARDL model | Foreign debt, budgetary deficit, commercial openness, trade volume, foreign aids and nominal exchange rate | There is a positive relationship between foreign aids and foreign debt; and there is a negative relationship between trade volume and foreign debt, but the level of significance in this relationship is low. Nominal exchange rate and commercial openness are the basic determinants of foreign debts. |
| Chiminya and Nicolaidou (2015) | 36 Sub-Saharan Countries (1975-2012) | Panel EKK | Foreign debt, GDP, commercial openness, economic growth, real interest rate, the share of the creation of gross capital in GDP, inflation, international reserves/foreign debt, political limitations, the competition of election and administrative system | Foreign debt burden decreases in the countries which have more economic activities and openness. Democratic countries can become indebted more easily from international markets. |
| Lau et al. (2015) | Malaysia (1970-2013) | Co-integration and causality test | Foreign debt, GDP, real interest rate, inflation, supply of money/international reserves | A causal relationship have been determined in long run from supply of money/international reserves and GDP to foreign debts. |
| Yamaçlı (2015) | Turkey (1991-2010) | VAR and RSA modeli | Outstanding foreign debt, current account deficit, the ratio of non-interest public borrowing requirement to the GDP, LIBOR interest rate, commercial openness, domestic interest rate, economic growth and the ratio of the sum of import and export volumes to the GDP. | The basic determinant of external borrowing is economic growth. In addition, budgetary deficits and current account deficits effect foreign debts significantly. |
| Al-Fawwaz (2016) | Jordan (1990-2014) | ARDL model | Foreign debt, budgetary deficit, commercial openness, foreign trade volume, exchange rate and GDP per capita | The foreign trade volume and commercial openness have positive impact on foreign debts; GDP per capita have negative impact on foreign debts. |
| Lau and Lee (2016) | Thailand and Philippines (1976-2013) | Co-integration and causality test | Foreign debt, GDP, real interest rate, inflation, supply of money/international reserves | A short term relationship has been determined from inflation and real interest rate to foreign debts in Thailand; and another short term relationship has been determined from GDP and supply of money to foreign debts in Philippines. |

| Writers | Countries | Method | Variables | Conclusion |
|----------------------|---|----------------------|--|--|
| Akduđan (2017) | Turkey (1970-2015) | ARDL model | Outstanding foreign debt, GDP per capita, inflation rate, public guaranteed debt service, budgetary equilibrium, national savings, international reserve/ supply of money, domestic credits, supply of money and commercial openness | Inflation rate, exchange rate and supply of money have negative impact on outstanding foreign debt; GDP per capita, debt service, budgetary balance, domestic credits, and openness have positive impact on outstanding foreign debts. GDP per capita and exchange rate are more effective. |
| Sa'ad et all. (2017) | Nigeria (1973-2013) | Co-integration test | Foreign debt, interest rate on foreign debt, inflation, GDP and supply of money | Interest rate on foreign debt and inflation have negative impact on foreign debts; GDP and supply of money have positive impact on foreign debts. |
| Waheed (2017) | Petroleum and natural gas exporter 12 countries and importer 12 countries (2004-2013) | Correlation Analysis | Foreign debt, growth, current account balance, foreign exchange reserves, public expenditures, public revenues, fixed capital investments, savings and direct foreign investments | The study indicates that increasing economic growth, foreign exchange reserves, public revenues, petroleum price and domestic investments are important factors for decreasing foreign debts in petroleum and natural gas exporter countries. Economic growth, public revenues and increase in savings are important factors for decreasing foreign debts in petroleum and natural gas importer countries. |

The result of 16 different studies is given in table 1. Three of the studies have examined Turkish economy. The other studies have usually examined developing or less-developed countries as well. Different results have achieved in the studies conducted. While the basic determinant factor of foreign debts is budgetary deficits, foreign trade deficit or balance of payments in some studies; public expenditures, inflation, interest and economic growth are the determinants of foreign debts in some other studies.

3. Empirical Approach and Data

3.1. Research Method

In this study, the determinants of foreign debts in Turkey have been examined by using the data belongs to between the periods of 1975-2017. In this direction, the relationship between foreign debts and the variables like economic growth, inflation, deposit interest rate, and budgetary deficit has been examined. Foreign debt data used in the study displays the value of total external debt in dollars in Turkey and takes part in the analysis as "lnedst". As for the economic growth data, it reflects the value of GDP per capita on dollar and is shown as "lngdpc" in the analysis. The inflation data shows GDP deflator and is expressed as "lninfdef"; deposit interest rates are expressed as "lndir" and budgetary deficit is expressed as "lnbude". Data used in this study have been provided from the online database of Central Bank of Turkey, "evds.tcmb.gov.tr" and the online database of World Bank, "data.worldbank.org".

In this study, below model is estimated.

$$\ln \text{edst}_t = \alpha + \beta_1 \ln \text{gdpc}_t + \beta_2 \ln \text{infdef}_t + \beta_3 \ln \text{dir}_t + \beta_4 \ln \text{bude}_t + \varepsilon_t \quad t=1, \dots, T \quad (1)$$

The dependent variable of model is foreign debts; the independent variables are economic growth, inflation, deposit interest rate and budgetary deficit.

3.2. Empirical Results

In the data of time series used in the studies, the data should be tested whether it is immobile or not because in the case that non-existent time series used, spurious regression problem arises and in this case, the obtained results with regression analysis do not reflect the real relationship (Granger and Newbold, 1974:111). In the study, the unit root tests belong to the series has been demonstrated in the Appx-1, Appx-2, and Appx-3.

In the study, ADF, PP, Ng Perron and KPSS unit root tests have been used. Ng Perron test have aimed to eliminate the constraints of ADF and PP unit root tests by developing 4 different test statistics and using generalized least squares method (Ertuğrul and Soytaş, 2013:55). In case of KPSS test, it expresses that series do not include unit roots unlike the ADP and PP unit root tests, but its alternative hypothesis expresses that series includes unit roots. Having no unit roots in the trend-free series indicates that the series is stable trend (Adıgüzel, 2014:43). KPSS test is the LM test which one random premise have zero variance (Çelik and Taş, 2017:16). Different from other tests, the series has been stabilized by cleansing deterministic trend in the KPSS test (Zortuk, 2008:186).

In the ADF, PP, Ng Perron and KPSS unit root tests, it is seen that the series is stable on first difference in the %5 level of significance. Foreign debt data is stationary at level only in the ADF unit root test. However, since all series are stationary on first difference in all unit root tests, this situation is overlooked. Therefore, ARDL model has not been used, and co-integration and causality results have been used.

Before looking the causality test between the series, proper lag length should be determined in the VAR model. Proper lag length belongs to VAR model has been determined in the Table 2.

Table 2. Proper Lag Length

| Lag | LogL | LR | FPE | AIC | SC | HQ |
|-----|-------|-------|-------|--------|--------|--------|
| 0 | 50.68 | - | 1.98* | -1.25* | -0.20* | -0.87* |
| 1 | 67.43 | 25.37 | 3.09 | -0.85 | 1.23 | -0.08 |

As it is seen in Table 2, proper lag length is determined as 0. After the finding of lag length, Johansen co-integration test has been made for the determination of long-term relationship. The results of Johansen co-integration test have been given in Table 3.

Table 3. Johansen Co-integration Test

| Trace Test | Eigenvalue | Trace Statistics | %5 Critical Value | Prob. |
|-------------------------|------------|----------------------|-------------------|--------|
| None | 0.6415 | 85.5604 | 69.8188 | 0.0017 |
| At Most1 | 0.3795 | 43.4942 | 47.8561 | 0.1210 |
| At Most2 | 0.2664 | 23.9235 | 29.7970 | 0.2037 |
| At Most3 | 0.1829 | 11.2165 | 15.4947 | 0.1985 |
| At Most4 | 0.0689 | 2.9309 | 3.8414 | 0.0869 |
| Maximum Eigenvalue Test | Eigenvalue | Max-Eigen İstatistik | %5 Critical Value | Prob. |
| None | 0.6415 | 42.0661 | 33.8768 | 0.0042 |
| At Most1 | 0.3795 | 19.5707 | 27.5843 | 0.3716 |
| At Most2 | 0.2664 | 12.7069 | 21.1316 | 0.4796 |
| At Most3 | 0.1829 | 8.2856 | 14.2646 | 0.3504 |
| At Most4 | 0.0689 | 2.9309 | 3.8414 | 0.0869 |

According to the Johansen co-integration test in Table 3, when variables are treated as a whole, there is a long-termed co-integrated relationship between foreign debts and independent variables. After the co-integration test, the results of causality analysis belongs to the variables have been given. VECM causality results have been demonstrated in Table 4.

Table 4. VEC Causality Test

$$d(\text{logedst}) = C(1) * (\text{logedst}(-1) - 0.1008 * \text{logbude}(-1) - 0.3553 * \text{logdir}(-1) - 1.0736 * \text{loggdpc}(-1) + 0.2681 * \text{loginfdef}(-1) - 15.7239) + C(2) * d(\text{logedst}(-1)) + C(3) * d(\text{logbude}(-1)) + C(4) * d(\text{logdir}(-1)) + C(5) * d(\text{loggdpc}(-1)) + C(6) * d(\text{loginfdef}(-1)) + C(7)$$

| | | | | |
|--------------|------------------|----------------|--------------|-------|
| Coef. | Std.Error | t-stat. | Prob. | |
| C(1) | -0.245 | 0.055 | -4.389 | 0.000 |

According to the causality results in Table 4, since the probability value is smaller than 0.05, there is a causal relationship from budgetary deficit, interest rate, economic growth and inflation to foreign debts. After the determination of causal relationship, it has been checked whether there are heteroscedastic in model and autocorrelation or not. Firstly, heteroscedasticity has been checked in Table 5.

Table 5. Heteroskedasticity Test

| | |
|----------------|----------------------|
| chi2(1) = 8.48 | Prob > chi2 = 0.0036 |
|----------------|----------------------|

According to Table 5, heteroscedasticity problem in model has been determined. Later, it has been checked whether there is an autocorrelation or not in Table 6 as well.

Table 6. Autocorrelation Test

| lags(p) | chi2 | df | Prob>chi2 |
|---------|--------|----|-----------|
| 1 | 13.101 | 1 | 0.0003 |

According to Table 6, since the probability value is smaller than 0.05, the autocorrelation problem has been determined in the model.

Since there is a heteroscedasticity and autocorrelation problem in the model, model will be estimated with FMOLS, DOLS and CCR estimators because these estimators are durable against heteroscedasticity and autocorrelation. Also, they have produced more consistent results for observations in units. The long-termed estimation results have been given in Table 7.

Table 7. The Estimation Results of Long-Termed Coefficients

| Variable | FMOLS | | CCR | | DOLS | |
|-----------|--------------------|-------|--------------------|-------|--------------------|-------|
| | Coef. | Prob. | Coef. | Prob. | Coef. | Prob. |
| logbude | 0.8629 (2.6121) | 0.012 | 0.9756 (3.0209) | 0.004 | 1.4512 (2.7253) | 0.011 |
| logdir | 0.2211 (0.8413) | 0.405 | 0.3729 (1.4812) | 0.146 | 0.0215 (0.0712) | 0.943 |
| loggdpc | 2.3928 (20.072) | 0.000 | 2.3446 (19.761) | 0.000 | 2.2611 (14.436) | 0.000 |
| loginfdef | 0.8250 (4.2572) | 0.000 | 0.7488 (3.9774) | 0.000 | 0.9685 (4.3684) | 0.000 |

Explanation: Values in parenthesis shows the values of t-statistics. Newey-West automated method has been used for lag length.

According to Table 7, the impact of treated variables against foreign debts has been estimated. According to this; %1 increase in budgetary deficit increases foreign debts by %0.862 unit and %1 increase in per capita income increases foreign debts by %2.392 unit. Also, %1 increase in inflation increases foreign debts by %0.825 unit. A statistically significant relationship between interest and foreign debts has not been determined.

4. Conclusion

Foreign debts are significant source of finance for developing countries like Turkey. The inadequacy of domestic savings, inflation, low export revenues, foreign exchange problem and unperformed necessary investments lead countries to foreign debts. If taken foreign debts transferred for productive and fertile investments, their contribution would be satisfying for economy. However, if foreign debts allocated into the import of luxury goods and their consumption, the foreign debt burden would continue by increasing. Governments can prevent the problem of foreign debts by taking measures for decreasing fiscal deficit into lowest level.

The basic determinant of foreign debts in economic theory is the factors arising from economic growth. The variables which effect economic growth determine foreign debts as well. The changes in macroeconomic politics too direct external borrowing, budgetary deficit, current account deficit, balance of payments deficit, savings

gap, the increase of domestic borrowings, economic growth, domestic credits, the rate of openness, inflation and exchange rate are basic elements which determine the outstanding foreign debts.

In this study, the determinants of foreign debts in Turkey for the period of 1975-2017 have been tested. Within this scope, the variables like budgetary deficit, inflation, economic growth and interest rate which determine foreign debts have been included in the analysis. The dependent variable of model is foreign debts (lnedst); the independent variables are GDP per capita (lngdpc), inflation (lninfdef), budgetary deficit (lnbude) and interest rate (lndir). Within this framework, ADF and PP unit root tests have been made in order to determine the stationarity of these variables. Ng Perron and KPSS unit root tests have been added as well for the credibility of results. Since the all series are stationary in the first difference, co-integration test which gives the long-termed relationship has been checked as well. After the determination of co-integration, causality analysis has been made and causality relationship from independent variables to foreign debts has been determined. Heteroscedasticity and autocorrelation tests have been made as well to determine what estimators will be used for choosing parameter coefficients in the model. Since there are heteroscedasticity and autocorrelation problems in the model, FMOLS, CCR and DOLS estimators resistant to these problems have been used.

According to the result of the study, the basic determinant of foreign debts is the increase of per capita income. %1 increase in per capita income increases foreign debts by %2.392 unit. Budgetary deficits and inflation are the other variables which determine foreign debts as well. While %1 increase in budgetary deficit increases foreign debt by %0.862 unit; %1 increase in inflation increases foreign debts by %0.825 unit. A directly significant relationship between interest rate and foreign debts have not been found.

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DETERMINANTS OF THE EXTERNAL DEBT: THE CASE OF TURKEY

Ahmet KAMACI

Appendix 1. The Results of ADP and PP Unit Root Tests

| Variables | ADF | Critical Values | | PP | Critical Values | |
|-------------------|--------|-----------------|--------|--------|-----------------|--------|
| | | (%1) | (%5) | | (%1) | (%5) |
| lnedst | -3.000 | -3.634 | -2.952 | -2.843 | -3.634 | -2.952 |
| lngdpc | -0.738 | -3.634 | -2.952 | -0.735 | -3.634 | -2.952 |
| lninfdef | -1.198 | -3.634 | -2.952 | -1.164 | -3.634 | -2.952 |
| lndir | -1.382 | -3.634 | -2.952 | -1.564 | -3.634 | -2.952 |
| lnbude | -2.266 | -3.634 | -2.952 | -2.463 | -3.634 | -2.952 |
| Δ lnedst | | | | -4.761 | -3.641 | -2.955 |
| Δ lngdpc | -6.921 | -3.641 | -2.955 | -6.905 | -3.641 | -2.955 |
| Δ lninfdef | -6.380 | -3.641 | -2.955 | -6.385 | -3.641 | -2.955 |
| Δ lndir | -5.163 | -3.641 | -2.955 | -5.171 | -3.641 | -2.955 |
| Δ lnbude | -6.010 | -3.641 | -2.955 | -6.002 | -3.641 | -2.955 |

Explanation: Δ demonstrates first value of difference. Logarithms have been determined in accordance with the optimal lag length of taken values and Akaike Information Criterion (AIC).

Appendix 2. The Results of Ng Perron Unit Root Test

| Test Statistics Critical Values | | | | | | | | | | | | |
|---------------------------------|--------|-------|------|-------|-------|-------|------|------|-------|-------|-------|------|
| | MZa | MZt | MSB | MPT | (%1) | | | | (%5) | | | |
| | | | | | MZa | MZt | MSB | MPT | MZa | MZt | MSB | MPT |
| | | | | | edst | 0.803 | 0.64 | 0.79 | 45.08 | -13.8 | -2.58 | 0.17 |
| gdpc | 0.655 | 0.53 | 0.81 | 45.20 | -13.8 | -2.58 | 0.17 | 1.78 | -8.1 | -1.98 | 0.23 | 3.17 |
| infdef | -3.17 | -1.20 | 0.37 | 7.63 | -13.8 | -2.58 | 0.17 | 1.78 | -8.1 | -1.98 | 0.23 | 3.17 |
| dir | -2.08 | -1.01 | 0.48 | 11.68 | -13.8 | -2.58 | 0.17 | 1.78 | -8.1 | -1.98 | 0.23 | 3.17 |
| bude | -7.58 | -1.94 | 0.25 | 3.23 | -13.8 | -2.58 | 0.17 | 1.78 | -8.1 | -1.98 | 0.23 | 3.17 |
| Δ edst | -18.85 | -3.05 | 0.16 | 1.36 | -13.8 | -2.58 | 0.17 | 1.78 | -8.1 | -1.98 | 0.23 | 3.17 |
| Δ gdpc | -20.30 | -3.16 | 0.15 | 1.26 | -13.8 | -2.58 | 0.17 | 1.78 | -8.1 | -1.98 | 0.23 | 3.17 |
| Δ infdef | -20.36 | -3.1 | 0.15 | 1.32 | -13.8 | -2.58 | 0.17 | 1.78 | -8.1 | -1.98 | 0.23 | 3.17 |
| Δ dir | -19.72 | -3.13 | 0.15 | 1.24 | -13.8 | -2.58 | 0.17 | 1.78 | -8.1 | -1.98 | 0.23 | 3.17 |
| Δ bude | -20.46 | -3.19 | 0.15 | 1.19 | -13.8 | -2.58 | 0.17 | 1.78 | -8.1 | -1.98 | 0.23 | 3.17 |

Appendix 3. The Results of KPSS Unit Root Test

| Variables | LM-st. | Critical Values (%5) |
|-------------------|--------|----------------------|
| lnedst | 0.350 | 0.146 |
| lngdpc | 0.359 | 0.146 |
| lninfdef | 0.715 | 0.146 |
| lndir | 0.903 | 0.146 |
| lnbude | 0.421 | 0.146 |
| Δ lnedst | 0.098 | 0.146 |
| Δ lngdpc | 0.0633 | 0.146 |
| Δ lninfdef | 0.0773 | 0.146 |
| Δ lndir | 0.0755 | 0.146 |
| Δ lnbude | 0.0435 | 0.146 |

THE IMPACT OF URBANIZATION ON ENERGY CONSUMPTION IN DEVELOPING ASIAN COUNTRIES

Faruk MİKE¹, Ali Eren ALPER²

1. Introduction

The World Urbanization and Population Prospects Reports (2015, 2017), prepared within the United Nations, asserting that the number of people who prefer urban life over rural life increases every year on the global scale. According to those reports, while the percentage of the world population living in the cities in 1950 was approximately 30%, this rate went up around 55% as of 2017. By the year 2050, the share of the world's urban population is estimated to reach around 68%. It is foreseen that 2.5 billion people would be included in the world's urban population especially over the period from 2014 to 2015 and approximately 90% of the growth would be realized in Asia and Africa. These estimates suggest that the urbanization process should be discussed in economic, social, environmental and cultural aspect.

The urbanization trend is basically in close interaction with the policies of sustainable development. Countries with proper planning and management can contribute to economic and social development by transforming urban population intensity into opportunities and, at the same time, have the opportunity to mitigate the negative impacts of production and consumption processes on the environment. Nonetheless, the countries experiencing rapid and unplanned urbanization process may encounter problems that would threaten their sustainable development in the medium- and the long-run. Emerging natural disasters due to the inability of cities to meet the increasing population burden and environmental policies that are not implemented effectively are among the main problems (United Nations, 2015: 1).

The urbanization trend differs by the level of development of countries on the global scale. The United Nations (2015) Report revealed that higher-income countries have completed their urbanization processes significantly over the last 15-20 years and that the upper-middle income countries have been exhibiting the best performance of urbanization throughout the recent years since 1950. On the other hand, it is stated that the urbanization rates of the low-income and the lower-middle-income countries are still quite slow.

The conducted research studies revealed that especially Asian and African countries would face an important urbanization process within the next 30 years. As of 2017, 50.8% of the Asian population and 57.9% of the African population dwell in rural areas (United Nations, 2017). These countries, which have the largest share of the world's population and are still in rural structure, have an important place especially in the progress of development policies.

The urbanization process of the Asian region countries and the accompanying development of energy consumption constitute the motivation of this study. In the study, it is planned to investigate the impacts of urbanization trend

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on energy consumption in 17 developing Asian countries over the period from 1975 to 2017. It is thought that the findings of the study, which is carried out by the panel data analysis, would guide the Asian countries that have not yet completed their urbanization process. The outline of the study is as follows:

Following the introduction part where general explanations are made, the second part introduces the main determinants of the urbanization trend. In the third part, the relationship between urbanization and energy consumption is explained. After the fourth part, which summarizes the empirical studies, the data set and methodology are introduced in the fifth part. In the sixth part, the empirical findings are discussed. Consequently, the study is finalized with the seventh part, which reports the conclusion and evaluation. Following the fourth part in which the topic-specific empirical studies are summarized, the empirical findings would be discussed by introducing the data set and methodology in the fifth chapter. Consequently, the study is completed with the sixth part which comprises the conclusion and the evaluation section.

2. Urbanization Process on the Global Scale

Urbanization, in general terms, refers to the migration movement from rural to urban areas due to the changes in population, land use, economic activities, and culture. There are generally three main determinants of the urbanization trend. The first determinant involves the increase in urban population due to natural population growth. The second determinant is the increase in population due to migration movements from rural to urban areas. The third one is the urbanization trend due to the expansion of the city borders or the formation of new urban centers (IOM, 2015: 19). Especially the first two approaches (natural population growth and internal migration movements) have an important place among these determinants. The detailed information regarding these determinants is provided respectively.

2.1. Development of the World's Population

Population growth is the main determinant of the countries' urbanization process. Increases in population density on the regional scale result in an increase in economic, social and cultural demands and, in turn, more intensive planning of infrastructure investments. Infrastructure investments are the most crucial physical indicators of the urbanization trend.

Population changes across the world over a 100-year period are presented in Table 1, in accordance with the global, regional and country distinctions. Accordingly, the world's population amounted to 7.5 billion as of 2017. 60% of the world's population live in Asia, 17 % in Africa, 10 % in Europe, and the remaining 13% in Latin America, the Caribbean, and Oceania.

Table 1. Annual Population of the Regions and the Selected Asian Countries, 1950-2050

| <i>Region</i> | Population (millions) | | | | |
|---------------------------------|------------------------------|-------------|-------------|-------------|-------------|
| | 1950 | 1980 | 2000 | 2017 | 2050 |
| World | 2 536 | 4 458 | 6 145 | 7 550 | 9 772 |
| Africa | 229 | 480 | 818 | 1 256 | 2 528 |
| Asia | 1 404 | 2 642 | 3 730 | 4 504 | 5 257 |
| Europe | 549 | 694 | 727 | 742 | 715 |
| Latin America and the Caribbean | 169 | 364 | 526 | 646 | 780 |
| Northern America | 173 | 254 | 313 | 361 | 435 |
| Oceania | 13 | 23 | 31 | 41 | 57 |
| <i>Selected Asian Countries</i> | | | | | |
| China | 554 | 994 | 1 283 | 1 386 | 1 364 |
| India | 376 | 697 | 1 053 | 1 339 | 1 658 |
| Indonesia | 70 | 147 | 212 | 264 | 322 |
| Korea | 19 | 38 | 47 | 51 | 50 |
| Pakistan | 38 | 78 | 139 | 197 | 307 |
| Turkey | 21 | 44 | 63 | 81 | 96 |

Source: United Nations, *World Population Prospects*.

The United Nations (2017) Report revealed that the world's population had increased more slowly in comparison to the past. According to the report, ten years ago, the world's population grew at an average of 1.24% per year. Although there has been an increase of about 5 billion since 1950, the total population is estimated to reach approximately 9.8 billion by 2050.

However, as can be seen from Table 1, it is noteworthy that the Asian region has a significant share in the world's population. As of 2017, China and India, which belong to this region, accounted for 19% (approximately 1.4 billion) and 18% (approximately 1.3 billion) of the world's population, respectively. This important difference in the demographic aspect of the Asian region is one of the main factors behind this study. Developmental disparities among different regions of these countries, and reasons such as increasing population pressure, may lead to intercity migration movements and unplanned urbanization processes.

2.2. Migration Movements from Rural to Urban Areas

Migration movement is a very substantial concept that includes the distinction of national (internal) and international (external) migration. Especially during the recent years, such factors as war, economic crisis, and hunger which are encountered by some countries significantly increase the importance of international migration movements. Although the influence of international migration on urbanization remains consequential, this study mainly focuses on the internal migration characteristics of those countries. Notwithstanding the internal migration movements conceptually bring forth rural-urban migration tendency, they also include urban-urban as well as rural-rural migrations. These migration movements may be of temporary nature as well as of permanent nature.

There are important social, cultural, political and economic factors on the basis of migration movements from rural to urban life. The common feature of these factors involves people's pursuit of higher welfare levels. Urban

areas have significant privileges in terms of providing different employment opportunities and educational-health services in better conditions. They offer highly attractive conditions for the inhabitants with fragile economic conditions and livelihoods of rural areas (IOM, 2015: 4).

On the global scale, the percentage shares of urban populations in the total population are given in Table 2. The first striking feature of Table 2 is the fact that today more and more people live in urban areas. As of 2017, 54.8% of the world's population lived in cities. This ratio, which was 29.6% in 1950, is expected to increase more than twice in 2050 to 68.4%.

Table 2. Annual Urban Population (% of Population)

| <i>Region</i> | Urban Population (% of Population) | | | | |
|--|---|-------------|-------------|-------------|-------------|
| | 1950 | 1980 | 2000 | 2017 | 2050 |
| World | 29.6 | 39.3 | 46.7 | 54.8 | 68.4 |
| Africa | 14.3 | 26.8 | 35.0 | 42.1 | 58.9 |
| Asia | 17.5 | 27.1 | 37.5 | 49.2 | 66.2 |
| Europe | 51.7 | 67.6 | 71.1 | 74.2 | 83.7 |
| Latin America and the Caribbean | 41.3 | 64.6 | 75.5 | 80.4 | 87.8 |
| Northern America | 63.9 | 73.9 | 79.1 | 82.0 | 89.0 |
| Oceania | 62.5 | 70.9 | 68.3 | 68.2 | 72.1 |
| <i>Selected Asian Countries</i> | | | | | |
| China | 11.8 | 19.4 | 35.9 | 58.0 | 80.0 |
| India | 17.0 | 23.1 | 27.7 | 33.6 | 52.8 |
| Indonesia | 12.4 | 22.1 | 42.0 | 54.7 | 72.8 |
| Korea | 21.4 | 56.7 | 79.6 | 81.5 | 86.4 |
| Pakistan | 17.5 | 28.1 | 33.0 | 36.4 | 52.2 |
| Turkey | 24.8 | 43.8 | 64.7 | 74.6 | 86.0 |

Source: United Nations, *World Population Prospects*.

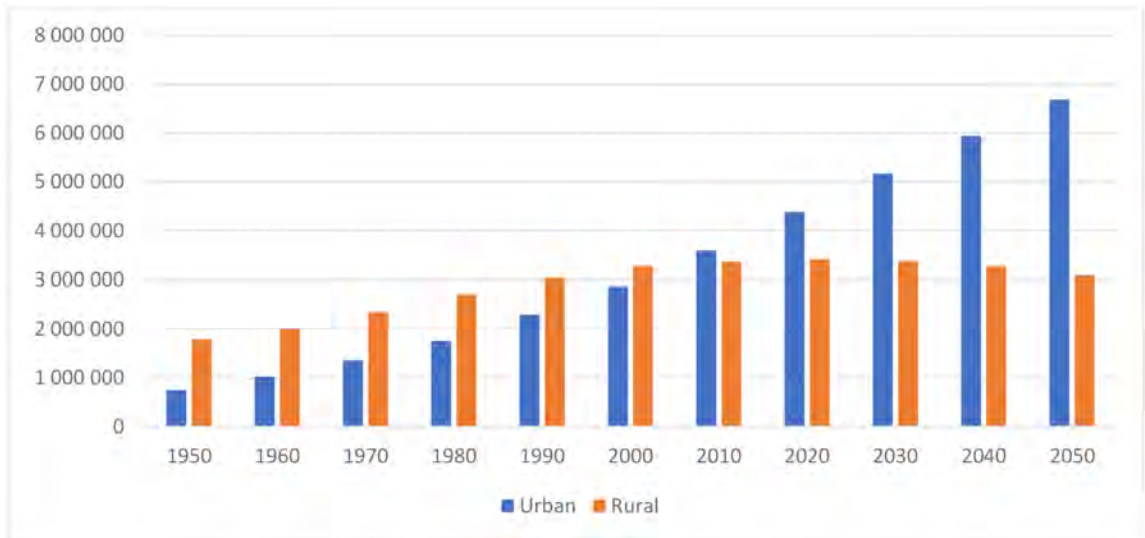
Upon examining in terms of regions, it can be said that the most urbanized region is North America with a share of 82% followed by Latin America and the Caribbean (80.4%), Europe (74.2%) and Oceania (68.2%), respectively. It is noteworthy that Asia and Africa, the two regions with the largest share of the world's population, have more rural structures. 49.2% of the Asian population and 42.1% of the African population live in urban areas.

China and India, along with their highest rural populations, are the most populous countries regarding population density in the world. As of 2017, India had the first rank in the world with a rural population of 889 million whereas China had the second rank with a rural population of 583 million. According to the United Nations (2018) Report, Asia and Africa are hosting about 90% of the world's rural population.

The comparative change of the urban and rural population in terms of years, which is included in Figure 1, states the reality of the urbanization process on the global scale. Accordingly, it is estimated that the world's urban population has been moving with an increasing trend from 1950 to the present day and it would continue until 2050 in the same way. On the other hand, it is expected that the world's rural population tends to increase until

the first quarter of the 21st century and reach its highest level (3.4 billion) by 2020. This figure is expected to decrease as of 2020, declining to approximately 3.1 billion by 2050.

Figure 1. Changes in the World's Urban and Rural Populations, 1950-2050



Source: United Nations, *World Population Prospects*.

To sum up, interregional differences among the world countries steer people to live mostly in urban areas by each year. The individuals who have the opportunity to solve the economic, social and cultural deficiencies of the rural areas in urban areas usually prefer the city life despite all difficulties in order to increase their welfare. If the rural migration phenomenon is not carefully planned by the country's administrations, the urbanization trend may become a serious social and societal crisis. Each new migration movement towards cities would result in additional costs, more energy use, and environmental degeneration. This study specifically investigates the impact of urbanization on energy consumption.

3. The Relationship between Urbanization and Energy Consumption

The urbanization trend has both positive and negative impacts on energy consumption. This distinction is usually formed by differences in income levels of the countries. Accordingly, urbanization trend in the higher-income countries increases energy efficiency, whereas urbanization trend in the lower-income countries causes a decrease in energy efficiency (Sardorsky, 2013: 52; Belloumi and Alshehry, 2015: 375).

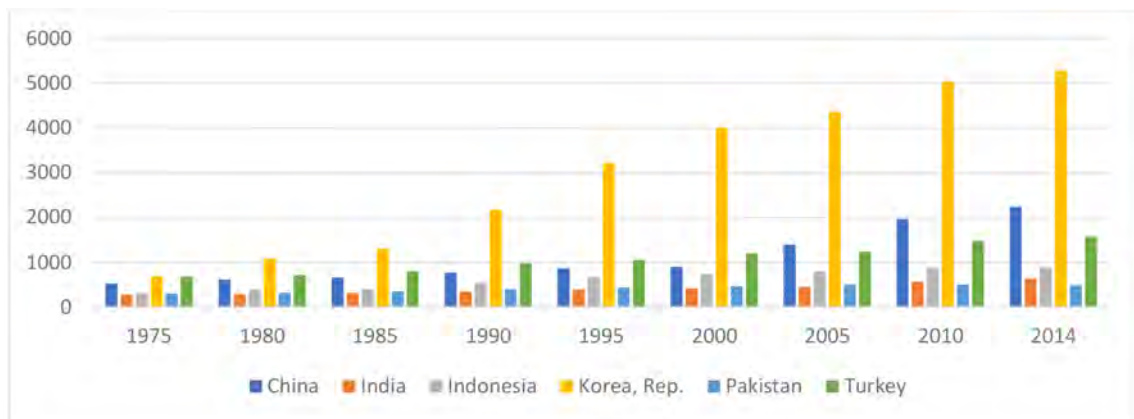
International research studies indicate a positive relationship between urbanization and energy consumption (Jones, 1986, 1991; York, 2007; Jiang and Lin, 2012). This is especially the result of the migration movements of the agricultural labor force living in rural areas to the industrial and services sectors in the cities. These migratory movements cause the production structure of the economy to shift from industrial production with low energy density toward the industrial sector with high energy density. The changes in energy consumption as a result of the introduction of new production activities and the relative decrease in the former activities contribute to the

development of the industrialization process. The shift of the production process from a traditional to a technology-intensive structure is undoubtedly one of the main reasons for the increase in energy consumption (Jones, 1989: 31).

In addition to changes in production activities and market structure, urban life has some other important differences in terms of energy consumption in comparison with rural areas. The first of these differences is related to increases in energy demand due to the intensive use of vehicles. There are many settlements in urban areas built on larger sites in comparison with rural areas. Both the working conditions and the necessity of fulfilling the needs steer the urban population to intensively use the transportation infrastructure. Nevertheless; construction, operation, and maintenance of urban infrastructure and services, including housing, water supply, roads, and bridges, are among the other important energy consumption items (Parikh and Shukla, 1995: 88; Salim and Shafiei, 2014: 581).

However, there are a limited number of studies conducted on the higher-income countries which indicate that the urbanization trend has a negative impact on energy consumption (Larivière and Lafrance, 1999). The economies of scale constitute the basis of this effect. Accordingly, the intensity of production and consumption activities in a specific area or city can provide an opportunity to create the economies of scale that may contribute to the overall energy efficiency (Elliott, Sun and Zhu, 2017: 678).

Figure 2. Change in Energy Consumption for the Selected Asian Countries, 1975-2014



Source: World Bank, World Development Indicator.

Figure 2 illustrates the change in energy consumption of developing Asian countries over the years. According to this, especially after the 1990s in Korea and China in parallel with the process of industrialization and urbanization, the realization of intensive energy consumption is noteworthy.

For the Asian countries, which have not yet completed the urbanization process and are expected to substantially complete it throughout the next 30 years, the evaluation of the changes in energy demand would play an important role in terms of sustainable development policies. Nowadays, it is intriguing to what extent these countries, which mostly meet the energy demand with coal, crude oil, natural gas, and electricity consumption, would adapt to the renewable energy resources in the future. If a planned urbanization process is not followed, intensive environmental degeneration and natural destruction would inevitably occur.

4. Literature Review

The impacts of urbanization on energy consumption have been significantly investigated during the last quarter of a century. The main findings indicate that urbanization has an increasing impact on energy consumption. However, this situation can result in energy efficiency in developed economies due to the economies of scale. It is noteworthy that no consensus could be reached regarding the impact of the urbanization trend on energy consumption. This study has an important place in the literature to overcome this deficiency.

Table 3. Selected Literature Review

| Author(s) | Period | Method(s) | Result(s) |
|---|---------------|--|--|
| Jones (1989) Jones (1991) | 1980 | Cross-Section Analysis | For 59 developing countries, urbanization increases energy consumption. |
| Parikh and Shukla (1995) | 1965-1987 | Pooled OLS and Fixed Effect | For a range of developing and developed countries, urbanization increases total energy consumption. |
| Larivière and Lafrance (1999) | 1991 | Regression Method | For Canada's 45 cities, more urbanized areas have lower energy consumption per capita. |
| Halicioglu (2007) | 1968-2005 | Granger Causality | For Turkey, there is a unidirectional causal relationship from gross domestic product (GDP), prices and urbanization to energy consumption in the long-run. |
| York (2007) | 1960-2000 | Prais-Winsten Regression Model | For 14 EU countries, urbanization has a positive effect on energy consumption. |
| Liu (2009) | 1978-2008 | ARDL Granger Causality | For China, there is a long-run relationship between urbanization, population, GDP, and energy. Urbanization → Energy. |
| Mishra, Smyth, and Sharma (2009) | 1980-2005 | Pedroni Coint. Panel Granger Causality | For 9 PICs, urbanization increases energy consumption. Urbanization → Energy in the short-run. |
| Poumanyong and Kaneko (2010) | 1975-2005 | Static Panel Data Analyses | For 99 countries, urbanization decreases energy use in low-income countries, while it increases energy use in the middle and high-income countries. |
| Li, Mu, and Zhang (2011) | 1991-2009 | Cubic Polynomial Model | For China, urbanization, population, economy are three main factors affecting China's energy consumption. |
| Jiang and Lin (2012) | 1978-2008 | Johansen Cointegration | For China, urbanization increases primary energy demand. |
| Shahbaz and Lean (2012) | 1971-2008 | ARDL Granger Causality | For Tunisia, there is a long-run relationship between energy consumption, economic growth, financial development, industrialization, and urbanization. There is no causal relationship between urbanization and energy consumption. |
| Al-mulali, Fereidouni, Lee and Sab (2013) | 1980-2009 | Pedroni Coint. Panel Granger Causality | For MENA countries, there is a long-run relationship between urbanization, energy consumption, and CO2 emission. There is a long-term bi-directional relationship between urbanization, energy consumption, and CO2 emissions. |

| Author(s) | Period | Method(s) | Result(s) |
|-------------------------------|-----------|---|---|
| Sadorsky (2013) | 1980-2010 | Static and Dynamic Panel Data Analyses | For 76 developing countries, increases in income reduce energy intensity. The impact of urbanization on energy intensity is mixed. |
| Ghosh and Kanjilal (2014) | 1971-2008 | Threshold Coint. Toda-Yamamoto Causality | For India, there is a long-run relationship between energy consumption, urbanization, and GDP. Energy → GDP, GDP → Urbanization |
| Salim and Shafiei (2014) | 1980-2011 | Johansen-Fisher and Westerlund Coint. Granger Causality | For 29 OECD countries, urbanization influences positively non-renewable energy consumption. There is no bilateral causal relationship between urbanization and renewable-nonrenewable energy. |
| Zhao and Wang (2015) | 1980-2012 | Coint. Test Granger Causality | For China, urbanization increases energy consumption. Urbanization → Energy consumption. |
| Belloumi and Alshehry (2016) | 1971-2012 | ARDL Toda-Yamamoto Causality | For Saudi Arabia, urbanization positively affects energy intensity in both the short term and the long term. Urbanization → Energy Intensity. |
| Elliott, Sun, and Zhu (2017) | 1995-2012 | Static Panel Data Analyses | For China's 30 provinces, the direct impact of urbanization on energy intensity is positive, while the indirect impact tends to be negative. |
| Bakirtas and Akpolat (2018) | 1971-2014 | Dumitrescu-Hurlin panel Granger causality | For new emerging market countries: Bivariate Analyses: Urbanization → Energy. Trivariate Analyses: Urbanization ↔ Energy |
| Yang, Liu, Lin, and Li (2018) | 1996-2014 | Static Panel Data Analyses | For China's 30 provinces, Urbanization has a positive effect on residential electricity consumption and shows heterogeneity across regions. |

Note: → and ↔ indicate the existence of unilateral and bilateral causal relationships between the variables, respectively. Although causality analyses, in particular, point out the results among various variables; the above table covers only the causality results between urbanization and energy consumption.

5. Empirical Section

In this section, the dataset is introduced first, then information about the model and econometric method is provided along with the empirical findings.

5.1. Sample Data, Model and Methodology

In this study, the impact of urbanization trend on energy consumption is examined via panel data analysis performed for the developing Asian economy over the period from 1975 to 2017. The countries included in the study are determined by the United Nations country classification. These countries include Bangladesh, China, India, Indonesia, Oman, Pakistan, Philippines, Saudi Arabia, Sri Lanka, Thailand, Turkey, and the United Arab Emirates. The application model is given in Equation 1.

Table 4: Descriptive statistics on the related variables

| Variables | Mean | Maximum | Minimum | Standard Deviation |
|--------------|----------|---------|---------|--------------------|
| Energy | 2.17 | 18.46 | 0.02 | 3.21 |
| Urbanization | 51.88 | 92.33 | 9.83 | 23.04 |
| GDP | 10423.28 | 113682 | 263.23 | 16671 |

Model 1 is established and estimated to determine the impacts of urbanization and gross domestic product on energy consumption in the direction of the aim of this study.

$$Energy_{it} = \beta_0 + \beta_1 GDP_{it} + \beta_2 Urbanization_{it} + \varepsilon_{it} \quad (1)$$

Energy consumption, as one of the variables in Equation 1, is included in the model as the dependent variable and refers to the per capita energy consumption (million tonnes oil equivalent). The independent variables, GDP and urbanization, denote per capita real income (constant 2010 US \$) and share of the urban population in the total population, in other words, the urbanization trend, respectively. On the other hand, β_0 refers to the constant term, β_1 and β_2 to the coefficient parameters and ε_{it} to the error term.

The urbanization and GDP data are obtained from the World Bank database, and the energy consumption data are obtained from the BP Statistical Review of World Energy June 2018. In general, it is expected that the results of urbanization increase the energy consumption of Asian countries.

The panel data can be defined as the collection of cross-sectional observations pertaining units such as individuals, countries, firms within a certain time interval. The panel is a set of data consisting of N number of units and T number of observations and, thus, having a total of N x T observations. The panel data analyses, as a combination of the cross-section and the time-series, were first introduced by Hildreth (1950), Kuh (1959), Swamy (1970), but the related practical studies in the real sense have begun as of the early 1990s.

The use of panel data analysis in econometric surveys has some advantages over the use of time-series or cross-sectional data. According to Hsiao (2007), the first one of these advantages involves more consistent determinations to be made since the higher degrees of freedom are utilized. Secondly, it is more suitable for modeling complex human behaviors than horizontal cross-sectional or time-series data sets. The third one is heterogeneity. Datasets used in the econometric analysis are usually heterogeneous. Panel data analysis can take this into account, whereas time-series and cross-sectional data cannot control this variation alone.

The cross-sectional dependence should be tested in the first stage of the panel data analysis methodology due to three basic reasons. The first reason is associated with one of the general assumptions of panel data analysis suggesting that the error terms being independent of the units, however, the errors along the cross-sectional units usually have simultaneous correlations.

The second main reason is based on the assumption that all countries are affected at the same degree by a certain shock and also that the other countries which constitute the panel are not affected by a macroeconomic shock initially emerged in any of those countries.

It is more realistic to anticipate an economic shock emerging in any country to affect other countries differently as it did in the 2008 global financial crisis, along with the rise of globalization and the increase in the level of international trade as well as the degree of financial integration in today's world. Therefore, it is necessary to test whether or not cross-sectional dependence exists between the series before commencing the analysis (Menyah et al., 2014), since the results obtained without consideration of cross-sectional dependence would be deviated and inconsistent.

The third and last reason involves the selection of unit root and cointegration test (referred as the second generation tests in the literature) in which such characteristics of the series should be taken into account upon the detection of cross-sectional dependence.

There are several tests in the literature to test the existence of the cross-sectional dependence. In the analysis section of the study, Pesaran, Friedman, and Frees cross-sectional dependence tests are used to analyze the cross-section dependence.

Panel unit root tests that take information about both time and cross-sectional dimensions of the data into consideration are considered to be statistically stronger than time-series unit root tests which take only time dimension information into account (Im, Pesaran and Shin, 2003; Maddala and Wu, 1999; Taylor and Sarno, 1998; Levin, Lin and Chu, 2002; Hadri, 2000; Pesaran, 2007; Beyaert and Camacho, 2008). Because, the inclusion of the cross-sectional dimension in the analysis increases variability (Charemza and Deadman, 1997). The first problem encountered in the panel unit root test is to determine whether or not the cross-sections that formed the panel are independent of each other. Panel unit root tests are divided into two categories at this point, namely, the first- and the second-generation tests. The first-generation tests are divided into two groups according to whether the cross-sections that formed the panel are homogeneous or heterogeneous. Levin, Lin and Chu (2002), Breitung (2005), and Hadri (2000) are based on the assumption of homogeneity; while Im, Pesaran, and Shin (2003), Maddala and Wu (1999), and Choi (2001) are based on the assumption of heterogeneity. The first-generation unit root tests are based on the assumption that the cross-sectional units that formed the panel are independent of each other and that all other cross-sectional units are influenced at the same level by the shock initially experienced by one of the units. To eliminate this shortcoming, the second-generation unit root tests that analyze stationarity by taking the dependence among cross-sectional units into consideration have been developed. The major second-generation unit root tests include Multivariate Augmented Dickey-Fuller (MADF) developed by Taylor and Sarno (1998), Seemingly Unrelated Regression Augmented Dickey-Fuller (SURADF) developed by Breuer et al. (2002), and Cross-sectional Augmented Dickey-Fuller (CADF) developed by Pesaran (2007). In this study, Pesaran (2007) CADF unit root test is used in order to determine the stationarity of the series.

Pesaran (2007) The CADF test is the extended version of the ADF regression along with the cross-section averages of the first-differences and lagged levels of the individual series. In the test, the individual results for each cross-section are obtained by CADF statistics, while cross-sectionally augmented IPS (CIPS) statistics developed by obtaining means are used. The CADF test provides highly consistent results even if the cross-section (N) and time (T) dimensions are relatively small. Also, this test can be used when both $T > N$ and $N > T$ (Pesaran, 2007: 266-267). Hypotheses of the CADF unit root test are constructed as in Equation 2.

$$H_0 = \rho_i^* = 0 \text{ (The series is not stationary for all panels)}$$

$$H_A = \rho_i^* < 0 \text{ (The series is stationary for all panels)} \quad (2)$$

In cases where the series of economic variables contain a unit root, the linear composition of these series may be stationary, and the series may be associated in the long-term. There are many panel cointegration tests used in the literature. These include Kao panel cointegration test, Pedroni panel cointegration test, McCoskey panel cointegration test, Hanck panel cointegration test, and Westerlund panel cointegration test. In this study, the long-run relationship between variables is tested using the Westerlund panel cointegration test.

5.1.1. Westerlund Panel Cointegration Test

Westerlund (2007) proposed four panel cointegration tests based on error-correction model to test the existence of cointegration in dealing with panel datasets. At the basis of the tests, there is a test for detecting the existence of cointegration by determining whether or not each unit has its own error-correction. The Westerlund panel cointegration test has three main advantages. The first one involves a fairly flexible test the heterogeneity that is allowed in the long and short-term parameters of the error-correction model. Secondly, unequal lengths of series and unbalanced panels are allowed in units. Lastly, if there is a possibility of correlation between units, resistant critical values can be obtained by bootstrap method. The hypothesis of the the Westerlund panel cointegration test is given in Equation 3.

H_0 = No cointegration exists among all panels.

H_A = Cointegration exists among all panels. (3)

5.2. Empirical Results

In order to explain long-term relationships between income inequality and globalization, the cross-sectional dependence characteristics of the series should be determined first. Therefore; Pesaran, Friedman and Frees cross-sectional dependence tests are applied, and the results are presented in Table 5.

Table 5: Cross-sectional dependence test results

| Cointegration Equation | Pesaran | Friedman | Frees |
|------------------------|----------------|-----------------|--------------------|
| $EN=f(URB,GDP)$ | 21.268 (0.000) | 127.048 (0.000) | 3.073 ³ |

Note: The values in the parentheses indicate probability values.

The null hypotheses of the tests are rejected since the probability values of the three tests performed to determine the cross-sectional dependence are lower than 5%. That is to say; there is cross-sectional dependence among the series. As the cross-sectional dependence is detected among the series, CADF test as the second generation unit root test is performed. The CADF unit root test results are indicated in Table 6.

³ At % 5 significance level, Frees cross-sectional dependence critical value 0.3103.

Table 6: CADF unit root test results

| | | Critical Values | | | Probability Value |
|-----------------------------|-----------------|-----------------|--------|--------|-------------------|
| At Level | CADF Test Value | 1% | 5% | 10% | |
| EN | -1.214 | -2.528 | -2.219 | -2.025 | 0.306 |
| URB | -1.591 | -2.528 | -2.219 | -2.025 | 0.451 |
| GDP | -1.356 | -2.528 | -2.219 | -2.025 | 0.857 |
| | | Critical Values | | | Probability Value |
| 1 st Differences | CADF Test Value | 1% | 5% | 10% | |
| EN | -4.853 | -2.528 | -2.219 | -2.025 | 0.000 |
| URB | -4.025 | -2.528 | -2.219 | -2.025 | 0.000 |
| GDP | -5.014 | -2.528 | -2.219 | -2.025 | 0.000 |

Upon the evaluation of the obtained results, the null hypothesis which expresses the stationarity at level is rejected since the CADF test values are lower than the critical table value. According to the results of CADF unit root test performed by taking the first differences, the null hypothesis is accepted since the test values are higher than the critical values at 1%, 5%, and 10% significance levels. Thus, the three variables included in the analysis are not stationary at the level, and they are stationary [I (1)] when the first differences are taken.

The Westerlund panel cointegration test is applied in order to determine whether or not a long-term relationship among the series exists as the next step after determining that the series are difference stationary. The Westerlund panel cointegration test results are shown in Table 7.

Table 7: Westerlund panel cointegration test results

| Cointegration Tests | Value | Z-Value | Probability Value |
|---------------------|---------|---------|-------------------|
| G_t | -19.546 | -87.012 | 0.000 |
| G_a | -5.124 | 3.789 | 0.647 |
| P_t | -19.634 | -10.561 | 0.000 |
| P_a | -12.547 | -8.234 | 0.000 |

The basic hypothesis of Westerlund panel cointegration tests suggests that there is no cointegration, since the probability value of all statistical values except G_a is less than 5%, the basic hypothesis is rejected and a long-term relationship between variables is found.

The *pooled mean group estimator* (PMGE) method is used to obtain the long-run coefficients after determining that the series are cointegrated, meaning that they are related in the long-run. The most important advantage of the PMGE method is that it predicts both the short- and the long-term parameters by constructing an error-correction model. The error-correction model to be constructed is shown in Equation 4.

$$\Delta Y_{it} = \phi_i Y_{i,t-1} + \beta'_i X_{it} + \sum_{j=1}^{p-1} \lambda_{ij} \Delta Y_{i,t-j} + \sum_{j=0}^{q-1} \delta_{ij} \Delta X_{i,t-j} + \varepsilon_{it} \quad (4)$$

Here, ϕ_i denotes the error correction parameter. Given that ϕ_i is significant and negative, the existence of a long-run relationship between Y_{it} and X_{it} is confirmed. PMGE estimation results are shown in Table 8.

Table 8: PMGE estimation results

| Variables | Coefficients | Standard Errors | Probability Values |
|------------------------------|--------------|-----------------|--------------------|
| URB | 0.126 | 0.057 | 0.002 |
| GDP | 0.249 | 0.021 | 0.000 |
| Error-Correction Coefficient | -0.417 | 0.058 | 0.000 |

According to the estimation results, the error-correction parameter is statistically significant since they are negative and their probability values do not exceed 5%. This parameter indicates the rate at which the short-term deviations offset in the next period due to non-stationarity of the series. Accordingly, deviations in one period would offset at approximately 41% in the following period. According to Table 8 that indicates the estimation results of long-term coefficients of by which the impact of urbanization and GDP on energy consumption is determined, 1% increase in urbanization and GDP increases energy consumption by 0.12% and 0.24% respectively.

Conclusion

Urbanization has a significant impact on sustainable development policies due to its social, economic, political and environmental effects. It is noteworthy that countries which exhibit good planning and management, in general, would contribute to their economic and social development by turning urban population intensity into an opportunity. Nonetheless, it is observed that the countries experiencing a rapid and unplanned urbanization process would encounter severe natural destruction. This situation renders the development policies of the Asian countries, which have the largest share of the world's population and are still in a rural structure as of today, important.

In this study, the long-term impact of urbanization trend on energy consumption for 17 emerging Asian economies is investigated by panel cointegration analysis. The findings of the study, in which the data of 1975-2017 is used, revealed that urbanization has a positive impact on energy consumption. It is thought that the positive impacts of the urbanization trend in developing Asian countries on energy consumption are caused by two reasons. The first one is the increase in energy demand due to increased population pressure. The second one is the pressures of unplanned migration movements from rural to urban areas on urban infrastructure investments due to regional development differences. It is estimated that energy consumption which could not be taken under control attributes to the increase of imports and occurrence of foreign trade deficits, especially in energy-dependent countries. In line with the practices in developed countries, it is recommended that these countries should use their natural resources effectively and also give more importance to the renewable energy resources, which is an important value of the future. Besides, it is thought that the elimination of regional development differences among countries would contribute to controlling of urbanization trend and thus energy consumption.

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15

AN ANALYSIS FOR ECONOMIC, POLITICAL AND SOCIAL DETERMINANTS OF BUDGET DEFICITS

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1. Introduction

The role of the state in the economy is one of the most discussed topics among economists and politicians. Especially after the Great Depression of 1929, the state undertook various activities in order to meet social needs such as defense, justice, and security, to ensure development, to eliminate economic instabilities, to improve the living standards and to ensure a fair income distribution. Along with the development of the idea of the social welfare state, the level of state intervention has increased in economic and social life, which has resulted in rising public expenditures. The inability of public revenues to meet these increases has revealed budget deficits. Especially in the 1970s, budget deficits rose significantly, especially in developed countries, and turned into a problem limiting the effectiveness of economic policies.

Until the end of the 1980s, conducted studies on the budget deficit and its determinants were concentrated on economic factors. Roubini and Sachs (1989) and Alesina et al. (1989) asserted that in countries with similar macroeconomic indicators, budget deficit differences cannot be explained only by economic factors and that political and social factors may have impacts on budget deficits. Thus, they caused attention shifting toward political and social factors.

This study aims to examine the relationship between the economic, political and social factors that cause budget deficits and budget deficits. In this context, firstly theoretical approaches related to budget deficits are examined, and applied studies in the literature are presented. Afterward, the impacts of those economic, social and political factors on the budget deficits of nine OECD countries³ which experienced significant deterioration in their budget balances following the Global Financial Crisis of 2008 and Turkey are investigated over the period 2003-2017 via panel data analysis.

2. Theoretical Approaches Regarding the Budget Deficits

Economic approaches may have similar views on budget deficits and certain issues associated with the impacts of budget deficits on the economy as well as having different views on some other issues. These similarities and differences are summarized below within the framework of economic approaches.

2.1. The Classical School

The Classical Political Economy is an economics school which was coined by Adam Smith and formed by D.Ricardo and J.S.Mill. The main basis of the school, which represents opposition to the Mercantilist thought dominated

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by the state's intervention over social and economic life, was "the invisible hand" metaphor. The school, which defended the view that the economic life defined by the existence of self-functioning excellent markets and all kinds of interventions would create negative results, has also emphasized the necessity of the state not intervening in the economy.

The world of economics with the politically-immune institution, which was designed by Adam Smith, is based on two characteristics of the individual: individuals' preference for better over worse and their tendency to exchange. These two basic characteristics are inherent characteristics of human beings, and good economic order is a system that leads to wealth in line with these natural tendencies (Tekeoğlu, 1993).

Smith considered that all types of interventions or arrangements of the state would diminish overall prosperity. According to Smith, the state had three basic duties. These include: protecting society from attacks of other societies; establishing a complete justice system; and maintaining private property rights (Hunt, 2002). According to Ricardo, if the increased taxes due to public expenditures do not lead to a reduction in the household's consumption, the taxes are considered to be imposed on income and the total capital of the nation is not harmed. Nonetheless, if taxes do not reduce non-productive consumption, taxes are considered to be imposed on capital by reducing the allowance for productive consumption. The decrease in the capital of a country would mean a decrease in production and hence contraction of the economy over time. As taxation or government spending increases, individuals who cannot increase their capital and income at the same rate would reduce their luxury consumption. Encouraging individuals to practice such savings and not to impose inevitable taxes on capital should become a policy (Ricardo, 2008).

According to the Ricardian view, the over-lapping generations were associated with voluntary, sacrifice-driven resource transfers. Under certain circumstances, this implies that consumption is defined as a function of a dynasty's resources (the total source of a taxpayer and its descendants). Since deficits only shift the payment of taxes toward future generations (the current tax and expenditure values must be equal), they do not affect household resources. Thus, the budget deficit policy is an issue of indifference (Bernheim, 1989).

The basic assumptions based on the Ricardian equivalence model, which argued that the financing of budget deficits through borrowing or taxation would not produce different results on the economy, are as follows (Bernheim, 1987):

- Individuals are rational.
- Each generation is linked to the next generation by the sacrifice it makes for them.
- Individuals can also borrow and lend as governments do.
- Tax-deferrals do not result in a redistribution of income.
- Taxes are lump-sum and do not affect the market.
- The use of budget deficits may not create any benefit or value.
- The use of the deficit financing does not influence the political process.

The Barro-Ricardo Equivalence model, which was later developed by Robert Barro, is based on the assumption that individuals tend to act as if there is an endless life span instead of a limited life. Barro-Ricardo Equivalence was criticized for such reasons as the fact that people do not care for future generations once noticing that they do not have an unlimited life span, the imperfections of capital markets, the uncertainty of future income and taxes, and the validity of the equivalence depends on the conditions of full employment (Barro, 1990).

2.2. The Neoclassical School

The point at which the neo-classical view distinguishes from the Ricardian viewpoint is the assumption that individuals are more or less farsighted and rational, and that individuals have limited life spans and that they plan only throughout their own life cycles. Neoclassics also assumed that the economy was in full employment and that the consumption of individuals was a function of continuous income, which was limited to the life span of individuals (Verbon and Van, 1993).

Under these assumptions, the budget deficits shift taxes to subsequent generations and increase total life-long consumption. If economic resources are fully employed, increased consumption would necessarily mean reduced savings. Then, interest rates should increase in order to balance capital markets. Thus, permanently deficits “crowd-out” private capital accumulation. In the current economic environment, many economists have accepted that these results would be extremely detrimental (Bernheim, 1989).

According to the Neoclassical approach, in the financing of public deficits, the preference of taxation or borrowing does not change the consequence. In both cases, there is a transfer of resources from the private sector to the public sector. Upon the state’s preference of borrowing over taxation, a competition between the public sector and the private sector is created, and the public sector’s collection of private resources from the private sector through taxation would lead to the “crowding-out” of the private sector due to changes in interest rates (Rosen, 1995).

2.3. The Keynesian School

According to the Keynesian view, there are a large number of shortsighted consumers under the liquidity constraint. In addition, current consumption level is sensitive to the increase in disposable income. The assumption of the Keynesian approach regarding the possible underemployment constitutes its main difference with the Neoclassical approach (Verbon and Van, 1993).

In the Keynesian analysis, the questions of how public deficits would be financed and what results would be are analyzed within the framework of the IS-LM Model. According to the model, upon financing public deficits by borrowing in a closed economy, the returns of public borrowing instruments issued for financing the deficit would lead to an increase in the private sector’s wealth. This increase would result in an expansion in the commodity market. According to Keynesian economists, the financing of public deficits by borrowing would not impose any burden on the future generations as long as the resources provided by borrowing are used for self-financing investments.

The individuals that are assumed to suffer myopia and liquidity constraints according to the Keynesian view tend to consume their current disposable income at a higher rate. Therefore, a temporary tax deduction has an important and quantitative impact on total demand. If the economy is initially at the underemployment level, the national income rises due to tax cuts. Thus the second-round effects and the reputable “Keynesian multipliers” occur. Since the budget deficits promote both consumption and national income, the savings and capital accumulation do not have to be adversely affected. Thus, appropriately timed deficits yield beneficial results (Bernheim, 1989).

2.4. The Monetarist School

Keynesian policies were assumed responsible for the high rate of inflation that became a major problem by the end of the 1960s. The criticism of the argument that the deficient demand problem of the Keynesian view could be solved by fiscal policies had increased, and Monetarist views began to gain prevalence in this period.

According to Friedman, the founder of the Monetarist School, and his followers, money is a form of withholding wealth, and the alternative uses of money are more than those predicted by Keynes. The demand for money is not only related to financial assets but also to real assets. In this case, the number of substitutable assets increases and the interest rate sensitivity of money demand decreases. In case the interest rate sensitivity of the money demand is low, the increase in the money supply (emissions) not only increases the demand for liquidity but also increases the demand for real goods and eventually causes inflation. On the other hand, fiscal policy would raise interest rates as well as it reduces the investments. Fiscal policy is a weak policy that exhibits its influence in the long-run with a delay (Tekeoğlu, 1998).

Governments that seek to increase public spending would prefer to finance this increase with taxation. Political powers, who are timid of the people's reactions for increasing taxes and aiming to be re-elected, would not be able to finance all of their expenses with taxation and the problem of budget deficit occurs. The sources of funding for governments other than taxation are emissions and borrowing. As a result of the government's attempt to finance public expenditures with domestic borrowing, interest rates would rise. The rise of interest rates results in a contraction in production. External borrowing would not cause a problem as long as it is limited and applied in productive areas. Nevertheless, as a result of high-rate external debt and borrowing of borrowed funds in inefficient areas, the external debt interest burden of the state may increase, and it leads to balance of payments disequilibria (Aktan, 2008).

2.5. Public Choice Theory

Public choice theorists such as Buchanan, Tullock, and Downs argued that actors in the public economy act rationally and egotistically, same as individuals since both groups aim to maximize special interest. For this reason, the public sector actors affect the voters' behavior by providing them with inadequate information or misinformation. Inadequate information on the supply and demand for public goods may induce inefficiency regarding resource allocation. The demands of the public sector actors on power, dignity, luxury consumption and comfort in the office would lead to the supply of public goods that are formed by these demands. The resulting inefficient production would lead to a waste of resources and the reduction of overall welfare (Dura, 2006).

In public choice models, the budget deficits are affected by political institutions. Under the assumption that there are no constitutional restrictions, modern democracies tend to overspend and hence create a budget deficit. Moreover, in the case of coalition governments, there would be higher budget deficits considering disagreements on the budget. However, empirical studies do not support these results. The conducted country-specific studies indicate that only a subset of democracies tend to result in a systematic financial deficit, and financial deficits can also be found in the non-democratic regimes (Akçoraoğlu and Yurdakul, 2004).

3. Selected Literature Reviews

The budget deficit, which would be defined as public expenditures exceeding public revenues in the simplest form, is one of the macroeconomic and financial problems encountered by both developed and developing countries. From the 1970s onwards, many studies have been conducted to investigate the impacts of economic, political and social factors on budget deficits, which are seen as a chronic problem in developing countries. Upon examining these studies, it can be seen that a universal conclusion could not be drawn due to the differences in the countries, used methods and considered time periods.

Although only economic factors were taken into consideration in previous studies conducted on the determinants of budget deficits, it is recently seen that the political, social and institutional factors that may have an impact on budget deficits are also taken into consideration besides economic factors (Woo, 2003). In this part of the study, the studies conducted on the economic, political and social determinants of budget deficits are summarized in chronological order.

3.1. Studies Conducted on Economic Determinants of Budget Deficits

Upon examining the studies on the economic determinants of budget deficits, it is seen that the relationship between the budget deficit and inflation is concentrated on, and the studies about the relations between the budget deficit and the macroeconomic variables such as interest rate, economic growth, current account deficit, and unemployment are quite limited.

Hutchison and Pyle (1984), using the data obtained over the period 1973-1982 via the least squares (OLS) method, investigated whether or not there was a relationship between the budget deficit and the real interest rates for the USA, the UK, France, Japan, Italy, Canada, and Germany. The analysis results indicated that there was a positive relationship between the real interest rates and the budget deficits of the countries under examination in the short-run.

Evans (1985), using the OLS method, tested the relationship between the budget deficits and interest rates for the USA within the framework of the IS-LM model. The study, in which the data from four different periods (1912-1922, 1938-1950, 1958-1970, and 1979-1984) were used, found no relationship between budget deficits and interest rates.

Oxley (1994) examined the relationship between budget deficits and economic growth for the UK using the annual data over the period 1870-1913. The results of the cointegration and Granger causality analysis indicated that there was a relationship between the budget deficit and economic growth, and the direction of this relationship was running from the economic growth toward the budget deficits.

Egeli (1999) examined the relationship between budget deficits and inflation for 23 developing countries using the cross-sectional analysis method. The study, in which the data of the year 1995 were used, concluded that the impacts of inflation and public expenditures on the budget deficits were negative and positive, respectively.

Günaydın (2000) analyzed the causal relationships among real budget deficit, real exchange rate, the inflation rate and real exchange rates for Turkey over the period 1968-1998. In his study using the cointegration and error correction

model (ECM), the author concluded that there were unidirectional causalities running from real budget deficits toward real exchange rates and from inflation rates toward real exchange rates in both the short- and the long-run.

Kaufmann et al. (2002) examined whether or not there was a relationship between the budget deficit and the current account deficit in Austria over the period 1976-1998. The study, in which the vector error correction model (VECM) was used, found no association between those variables.

Woo (2003) examined the impacts of inflation, real GDP, financial depth and population on the budget deficits of 57 developed and developing countries. The study in which the data of the 1970-1990 period were used concluded that those variables had positive impacts on the budget deficit.

Compass and Saadi-Sedik (2006) investigated the impacts of trade deficits on the budget deficits of 66 developing countries over the period 1974-1998. The results of the generalized moments method (GMM) indicated that the foreign trade deficits rendered the country vulnerable to external shocks and the budget deficits increased.

Afonso and Rault (2009) examined the relationship between the budget deficit and the current account deficit for the different EU and OECD country groups by using the Panel Granger causality test. The study, in which the obtained data from 1970-2007 period were used, a causal relationship was found between the budget deficits and the current account deficit in Bulgaria, Czech Republic, Estonia, Finland, France, Italy, Hungary, Lithuania, Poland, and Slovakia.

Georgantopoulos and Tsamis (2011) examined the relationship among budget deficit, consumer price index, GDP and the nominal effective exchange rate for Greece by using vector autoregression (VAR) and VECM analyses. The study, in which the obtained data from the period 1980-2009 were used, concluded that there was a unilateral causality relationship running from the nominal effective exchange rate toward the budget deficit, and hence the nominal effective exchange rate was directly effective on the budget deficit.

Kurt et al. (2012) investigated the impacts of the 2008 financial crisis on budget deficits of 25 European countries using data over the period 1998-2008 via panel data analysis. The analysis results revealed that total public income and inflation decreased budget deficits and total public expenditures and the crisis variable increased budget deficits.

Chi-Chi and Ogomgbunam (2013), using the data over the period 1981-2012 via the Granger causality test, examined the relationship among interest rate, exchange rate, inflation, and money supply and the budget deficit in Nigeria. The study concluded that there was a bilateral relationship between budget deficit and exchange rates in the long-run and that there was no relationship between the other variables used in the study and the budget deficit.

Khumalo (2013) analyzed the relationship between budget deficit and inflation by using the data for South Africa over the period 1980-2012. In the study, using VAR analysis, it was concluded that budget deficits and inflation were related in the long term.

Tiwari et al. (2015) investigated the relationship between budget deficit and inflation for nine EU member countries by using Granger causality test over the period 1990-2013. The results indicated that there was no short- or medium-term relationship between the budget deficit and inflation. However, only the budget deficit in Belgium and France Granger caused inflation in the long-run.

Arjomand et al. (2016) examined the relationship among economic growth, labor productivity and the budget deficit for selected MENA countries using static panel data analysis method. In their study using the data of the 2000-2013 period, the authors found that the budget deficit there was a positive relationship between economic growth and inflation; and a negative relationship between budget deficit and labor productivity.

Bangura et al. (2016) analyzed the impacts of basic macroeconomic determinants of the budget deficit of Sierra Leone such as real GDP, inflation, interest rate, exchange rate and government investments on the budget deficit using annual data over the period via the vector error correction model. The analysis results indicated that the short-term budget deficit was determined by the real GDP, interest rates and government investments; however, in the long run, the real GDP, interest rate and exchange rate had a negative impact on the budget deficit, while inflation and government investments had a positive impact on the budget deficit.

Epaphra (2017) examined the relationship between the budget deficit and various macroeconomic variables in Tanzania using the VAR and VECM methods over the period 1996-2015. The analysis results revealed a long-term relationship between the variables; the real GDP and exchange rates had negative impacts on the budget deficit, while inflation, money supply, and interest rates had positive impacts. Also, the main determinants of the budget deficit were real GDP, inflation and real exchange rate, respectively.

Sa'ad et al. (2018), using the data over the period 1981-2016, examined the relationship among exchange rate, inflation and budget deficit in Nigeria with the help of structural vector autoregression (SVAR) and ECM models and they concluded that exchange rate had a positive impact on inflation and budget deficits.

3.2. Studies Conducted on Political and Social Determinants of Budget Deficits

Besides the economic factors, political (political stability, the legal system, economic freedoms, government size) and social factors (income inequality, ethnic differences, social polarization) can also affect budget deficits (Alesina and Perotti, 1999; Javid et al., 2011).

The theories regarding the political economy of budget deficits are based on the Tax Smoothing Hypothesis proposed by Barro (1979) and Lucas and Stockey (1983). According to the hypothesis; the government, as a benevolent social planner who seeks to maximize the benefits of individuals, should keep the tax rate constant in order to eliminate the detrimental impacts of taxes on labor supply. In addition, since the tax rate is determined by the intertemporal budget constraint, the present value of expenditures should be equivalent to the present value of the taxes. Governments would increase the tax rate whenever public deficits increase debt. As a result, the tax smoothing hypothesis asserts that budget deficits are the outcome of political, economic decisions; and budget deficits can be preferred in order to minimize the welfare loss due to taxation and to sustain the expenditures in the economy (Farah, 2010; Pinho, 2004).

De Haan and Sturm (1994) classified the constraints in political and institutional models into four categories to explain the differences among the countries regarding fiscal policies. First-class models explore the extent to which political systems, instability, and polarization, in particular, have an impact on the policy-makers' behavior. These models indicate that unstable and polarized political systems have higher budget deficits. Second-class models consider disagreements between a variety of decision-makers and imply that budget deficits would increase as the disagreement increases. Third-class models suggest that ideological differences can have an impact on budget

deficits, for example, left-wing governments can accept higher budget deficits. Fourth-class models focus on the possibility that budgetary procedures may have important outcomes on the budget deficits. Some of the empirical studies that take these classifications into account are summarized below.

Roubini and Sachs (1989a), using the cross-sectional data over the period 1973-1985, investigated the political determinants of the budget deficit in 15 OECD countries. For this purpose, they developed a political cohesion index for developed countries and stated that coalition governments could increase budget deficits due to fewer years in office and the difficulty of reaching consensus among different political parties.

Roubini (1991), using the cross-sectional data of 77 developing countries, investigated the impact of the frequency of government changes on the budget deficits over the years 1971-1982 for the examined countries and concluded that the budget deficits would increase as the frequency of government changes increased.

De Haan and Sturm (1994), using the pooled regression method over the period from 1981 to 1989, investigated why the volume of the public sector and debt accumulation in the EU Member States were different among countries. The analysis results indicated that the increase in public debt was positively related to the frequency of government changes of and was negatively associated with strong budgetary procedures. Moreover, it was observed that the share of public expenditures increased even more under the administration of left-wing governments.

Alesina et al. (1999) investigated whether or not there were any differences between the countries for the preparation, approval, and completion of the budget for 20 Latin American and Caribbean countries over the period 1980-1992. The results of the cross-sectional analysis indicated that budgetary procedures in Latin American countries had a significant impact on the control of budget deficits.

Annett (2002) investigated whether or not the political and institutional variables in 19 industrialized countries were associated with public expenditure, public revenues, and budget balance. The study, in which the pooled regression method was used over the period 1980-1999 divided into five-year sub-periods, concluded that there was no statistically significant impact of ethnic diversity and elderly population on overall public balance, and that there was a strong relationship between the choice of expenditure and tax system and the type of political system.

Woo (2003), besides the economic factors, also investigated the impacts of socio-political and institutional factors on the budget deficit; and concluded that models such as socio-political instability within the financial decision-making process, income inequality, cabinet size, social polarization and lack of centralized authority had negative impacts on the budget deficits of developed and developing countries.

Bayar and Smeets (2009) examined the economic, political and institutional determinants of budget deficits for 15 EU-member countries over the period 1971-2006 using the panel corrected standard errors estimator. The analysis results revealed that policymakers with opportunist behavior caused political business cycles, and political fragmentation did not quite affect the budget deficit and the governments with stabilized structure reduced the budget deficit.

Nurudeen (2010) examined whether or not the economic and political variables for the Nigerian economy had any impact on the budget deficit. The OLS results, which used data over the period 1977-2007, claimed that international capital flows, international interest rate, debt service rate, public expenditures, political instability, and economic growth were the main determinants of the budget deficit.

Javid et al. (2011) investigated the economic, political and institutional determinants of the volatility in budget deficits for selected 9 Asian countries over the period 1984-2010. According to the results of the dynamic panel data model, economic factors, as well as political and institutional factors, were crucial for the budget deficit. While the presence of corruption, institutional drawbacks, and conflicts (ethnic and regional) caused even greater fluctuations in the budget deficit; the existence of democracy and better social conditions reduced the volatility of budget deficit.

Anwar and Ahmad (2013) investigated whether or not there was a long-term relationship among budget deficit, democracy, and cabinet size for Pakistan over the period from 1976 to 2009. The study, in which the Autoregressive Distributed Lag (ARDL) test and ECM model were used, concluded that there was a long-term relationship between the budget deficit and the mentioned variables.

Milasi (2013) examined 17 OECD countries over the period regarding the relationship between the income share of the top one percent and budget deficits using panel data analysis method and found the existence of a positive relationship between the variables.

Torayeh (2015) focused on the question of whether the budget deficit for Egypt was a macroeconomic or political-institutional problem over the period 1985-2013. The study, in which the ARDL method was used, concluded that the budget deficit, as a political-institutional problem, was decreased by political stability even though the roles of macroeconomic variables on budget deficit were not omitted.

Hayo and Neumeier (2016) investigated the relationship between the socio-economic background of the political leaders and the budget deficit for 21 OECD countries over the period 1980-2008. In their studies using panel data analysis method, the authors concluded that the politicians with fewer years in office would increase the budget deficit.

Safdar and Padda (2017) investigated whether or not institutional factors had impacts on the budget deficit in Pakistan over the period 1984-2014. The results of cointegration and VAR analyses indicated that corruption, weakness of institutional nature and deterioration of the legal system increased the budget deficit; and political stability decreased the budget deficit.

Ifere and Okoi (2018) investigated how political activities had impacts on the budget deficit in Nigeria. According to the results of the regression analysis using the data of 2003-2015 period, the voters had financial illusions, and political considerations had significant impacts on the budget deficit.

4. Model, Sample Data, Methodology, and Empirical Results

The economic factors that have impacts on the budget deficit have not been able to fully explain the differences in the budget deficit in countries with similar development levels and have caused attention shifting towards the political and social factors that may have impacts on the budget balance (Alesina and Perotti, 1995). In this study, it is tried to determine the relationship between the budget deficit and the economic, political and social factors that may cause the budget deficits and the direction of this relationship. For this purpose, firstly information about the model and the data set are provided, and then the obtained findings from the analysis are explained by the econometric method used in the study.

4.1. Model, Sample Data and Methodology

In the study, which is conducted on the determinants of budget deficits for nine OECD member countries including Turkey over the period 2003-2017, two models are estimated, namely, the economic and social factors model and the political factors model. The variables used in both models are selected from the variables used in the literature ((Bayar and Smeets, 2009; Lavigne, 2006; Woo, 2003)).

The mathematical expression of the economic and social factors model is shown in Equation 1.

$$BD_{it} = \beta_0 + \beta_1 TO_{it} + \beta_2 GDP_{it} + \beta_3 PCGDP_{it} + \beta_4 INF_{it} + \beta_5 GINI_{it} + \varepsilon_t \quad (1)$$

In Equation 1, BD denotes the ratio of the budget deficit to the gross domestic product; TO denotes trade openness level; GDP denotes economic growth (annual rate of change in GDP); PCGDP denotes per capita income level; INF denotes the consumer price index, and GINI denotes income inequality.

The political factors model consisting of selected political factors that have an impact on the budget deficit is shown in Equation 2.

$$BD_{it} = \alpha_0 + \alpha_1 PS_{it} + \alpha_2 EF_{it} + \alpha_3 RL_{it} + \varepsilon_t \quad (2)$$

In Equation 2, BS denotes the ratio of the budget deficit to the gross domestic product; PS denotes the level of political stability; EF denotes the level of economic freedom, and RL denotes the legal rules and laws. The political stability index and the legal rules and law index values range between -2.5 and 2.5. Low values indicate that there is no political stability and that the legal rules and laws are insufficient; whereas high values indicate that political stability is achieved and the legal rules and laws are sufficient. Descriptive information and descriptive statistics on the variables used in the analysis are presented in Table 1 and Table 2, respectively.

Table 1: Information on economic, social and political data used in the study

| Variables | Source | Expected sign |
|-----------|--|---------------|
| BD | World Development Indicators | |
| TO | World Development Indicators | - |
| GDP | World Development Indicators | +, - |
| PCGDP | World Development Indicators | +, - |
| INF | World Development Indicators | + |
| GINI | World Development Indicators | + |
| PS | The Worldwide Governance Indicators | - |
| EF | 2018 Index of Economic Freedom, All Index Data | - |
| RL | The Worldwide Governance Indicators | - |

Table 2: Descriptive statistics on economic, social and political data used in the study

| Variables | Mean | Maximum | Minimum | Standard Deviation |
|-----------|-------|---------|---------|--------------------|
| BD | 3.65 | 8.46 | -9.97 | 4.64 |
| TO | 86.63 | 169.40 | 45.60 | 38.45 |
| GDP | 1.22 | 5.18 | -8.26 | 2.11 |
| PCGDP | 0.66 | 4.73 | -8.70 | 2.08 |
| INF | 1.74 | 4.48 | -0.5 | 1.11 |
| GINI | 31.27 | 36.20 | 26.80 | 2.93 |
| PS | 0.68 | 1.69 | -0.47 | 0.47 |
| EF | 69.87 | 80.40 | 58.80 | 5.31 |
| RL | 1.46 | 2.10 | 0.28 | 0.48 |

The panel data can be defined as the collection of cross-sectional observations pertaining to units such as individuals, countries, firms within a certain time interval. The panel is a set of data consisting of N number of units and T number of observations and, thus, having a total of N x T observations. The panel data analyses, as a combination of the cross-section and the time-series, were first introduced by Hildreth (1950), Kuh (1959), Swamy (1970), but the related practical studies in the real sense have begun as of the early 1990s.

The use of panel data analysis in econometric surveys has some advantages over the use of time-series or cross-sectional data. According to Hsiao (2007), the first one of these advantages involves more consistent determinations to be made since the higher degrees of freedom are utilized. Secondly, it is more suitable for modeling complex human behaviors than horizontal cross-sectional or time-series data sets. The third one is heterogeneity. Datasets used in the econometric analysis are usually heterogeneous. Panel data analysis can take this into account, whereas time-series and cross-sectional data cannot control this variation alone.

The cross-sectional dependence should be tested in the first stage of the panel data analysis methodology due to three basic reasons. The first reason is associated with one of the general assumptions of panel data analysis suggesting that the error terms being independent of the units, however, the errors along the cross-sectional units usually have simultaneous correlations.

The second main reason is based on the assumption that all countries are affected at the same degree by a certain shock and also that the other countries which constitute the panel are not affected by a macroeconomic shock initially emerged in any of those countries.

It is more realistic to anticipate an economic shock emerging in any country to affect other countries differently as it did in the 2008 global financial crisis, along with the rise of globalization and the increase in the level of international trade as well as the degree of financial integration in today's world. Therefore, it is necessary to test whether or not cross-sectional dependence exists between the series before commencing the analysis (Menyah et al., 2014), since the results obtained without consideration of cross-sectional dependence would be deviated and inconsistent.

The third and last reason involves the selection of unit root and cointegration test (referred as the second generation tests in the literature) in which such characteristics of the series should be taken into account upon the detection of cross-sectional dependence.

There are several tests in the literature to test the existence of the cross-sectional dependence. In the analysis section of the study, Pesaran, Friedman, and Frees cross-sectional dependence tests are used to analyze the cross-section dependence.

Panel unit root tests that take information about both time and cross-sectional dimensions of the data into consideration are considered to be statistically stronger than time-series unit root tests which take only time dimension information into account (Im, Pesaran and Shin, 2003; Maddala and Wu, 1999; Taylor and Sarno, 1998; Levin, Lin and Chu, 2002; Hadri, 2000; Pesaran, 2007; Beyaert and Camacho, 2008). Because, the inclusion of the cross-sectional dimension in the analysis increases variability (Charemza and Deadman, 1997). The first problem encountered in the panel unit root test is to determine whether or not the cross-sections that formed the panel are independent of each other. Panel unit root tests are divided into two categories at this point, namely, the first- and the second-generation tests. The first-generation tests are divided into two groups according to whether the cross-sections that formed the panel are homogeneous or heterogeneous. Levin, Lin, and Chu (2002), Breitung (2005), and Hadri (2000) are based on the assumption of homogeneity; while Im, Pesaran, and Shin (2003), Maddala and Wu (1999), and Choi (2001) are based on the assumption of heterogeneity. The first-generation unit root tests are based on the assumption that the cross-sectional units that formed the panel are independent of each other and that all other cross-sectional units are influenced at the same level by the shock initially experienced by one of the units. To eliminate this shortcoming, the second-generation unit root tests that analyze stationarity by taking the dependence among cross-sectional units into consideration have been developed. The major second-generation unit root tests include Multivariate Augmented Dickey-Fuller (MADF) developed by Taylor and Sarno (1998), Seemingly Unrelated Regression Augmented Dickey-Fuller (SURADF) developed by Breuer et al. (2002), and Cross-sectional Augmented Dickey-Fuller (CADF) developed by Pesaran (2007). In this study, Pesaran (2007) CADF unit root test is used in order to determine the stationarity of the series.

Pesaran (2007) The CADF test is the extended version of the ADF regression along with the cross-section averages of the first-differences and lagged levels of the individual series. In the test, the individual results for each cross-section are obtained by CADF statistics, while cross-sectionally augmented IPS (CIPS) statistics developed by obtaining means are used. The CADF test provides highly consistent results even if the cross-section (N) and time (T) dimensions are relatively small. Also, this test can be used when both $T > N$ and $N > T$ (Pesaran, 2007). Hypotheses of the CADF unit root test are constructed as in Equation 3.

$$H_0 = \rho_i^* = 0 \text{ (The series is not stationary for all panels)} \quad (3)$$

$$H_A = \rho_i^* < 0 \text{ (The series is stationary for all panels)}$$

In cases where the series of economic variables contain a unit root, the linear composition of these series may be stationary, and the series may be associated in the long-term. There are many panel cointegration tests used in the literature. These include Kao panel cointegration test, Pedroni panel cointegration test, McCoskey panel cointegration test, Hanck panel cointegration test, and Westerlund panel cointegration test. In this study, the long-run relationship between variables is tested using the Westerlund panel cointegration test.

Westerlund (2007) proposed four-panel cointegration tests based on error-correction model to test the existence of cointegration in dealing with panel datasets. At the basis of the tests, there is a test for detecting the existence of cointegration by determining whether or not each unit has its error-correction. The Westerlund panel cointegration test has three main advantages. The first one involves a fairly flexible test the heterogeneity that is allowed in the long and short-term parameters of the error-correction model. Secondly, unequal lengths of series and unbalanced panels are allowed in units. Lastly, if there is a possibility of a correlation between units, resistant critical values can be obtained by the bootstrap method. The hypothesis of the Westerlund panel cointegration test is given in Equation 4.

$$H_0 = \text{No cointegration exists among all panels.} \quad (4)$$

$$H_A = \text{Cointegration exists among all panels.}$$

4.2. Empirical Results

In order to explain long-term relationships between budget deficits and economic, political and social determinants of budget deficits, the cross-sectional dependence characteristics of the series should be determined first. Therefore; Pesaran, Friedman and Frees cross-sectional dependence tests are applied, and the results are presented in Table 3.

Table 3: Cross-sectional dependence test results

| Cointegration Equation | Pesaran | Friedman | Frees |
|---|-------------------|-------------------|--------------------|
| $BD=f(TO,GDP,PCGDP,INF,GINI)$ | 27.010 (0.000) | 107.697 (0.000) | 4.179 ⁴ |
| $BD=f(PS,EF,RL)$ | 18.567 (0.000) | 97.021 (0.000) | 3.601 |

Note: The values in the parentheses indicate probability values.

The null hypotheses of the tests are rejected since the probability values of the three tests performed to determine the cross-sectional dependence are lower than 5%. That is to say; there is cross-sectional dependence among the series. As the cross-sectional dependence is detected among the series, the CADF test as the second generation unit root test is performed. The CADF unit root test results are indicated in Table 4.

⁴ At 5% significance level, Frees cross-sectional dependence critical value 0.3103.

Table 4: CADF unit root test results

| | | Critical Values | | | Probability Value |
|-----------------------------|-----------------|-----------------|--------|--------|-------------------|
| At Level | CADF Test Value | 1% | 5% | 10% | |
| BD | -1.567 | -3.021 | -2.983 | -2.217 | 0.147 |
| TO | -1.241 | -3.021 | -2.983 | -2.217 | 0.798 |
| GDP | -1.054 | -3.021 | -2.983 | -2.217 | 0.934 |
| PCGDP | -0.972 | -3.021 | -2.983 | -2.217 | 0.679 |
| INF | -0.687 | -3.021 | -2.983 | -2.217 | 0.214 |
| GINI | -1.654 | -3.021 | -2.983 | -2.217 | 0.873 |
| PS | -1.994 | -3.021 | -2.983 | -2.217 | 0.856 |
| EF | -1.576 | -3.021 | -2.983 | -2.217 | 0.971 |
| RL | -1.125 | -3.021 | -2.983 | -2.217 | 0.998 |
| | | Critical Values | | | Probability Value |
| 1 st Differences | CADF Test Value | 1% | 5% | 10% | |
| BD | -7.570 | -3.021 | -2.983 | -2.217 | 0.000 |
| TO | -8.146 | -3.021 | -2.983 | -2.217 | 0.000 |
| GDP | -9.451 | -3.021 | -2.983 | -2.217 | 0.001 |
| PCGDP | -6.147 | -3.021 | -2.983 | -2.217 | 0.000 |
| INF | -5.874 | -3.021 | -2.983 | -2.217 | 0.000 |
| GINI | -6.379 | -3.021 | -2.983 | -2.217 | 0.004 |
| PS | -6.140 | -3.021 | -2.983 | -2.217 | 0.000 |
| EF | -4.931 | -3.021 | -2.983 | -2.217 | 0.021 |
| RL | | -3.021 | -2.983 | -2.217 | 0.009 |

Upon the evaluation of the obtained results, the null hypothesis which expresses the stationarity at level is rejected since the CADF test values are lower than the critical table value. According to the results of CADF unit root test performed by taking the first differences, the null hypothesis is accepted since the test values are higher than the critical values at 1%, 5%, and 10% significance levels. Thus, the nine variables included in the analysis are not stationary at the level, and they are stationary [I (1)] when the first differences are taken.

The Westerlund panel cointegration test is applied in order to determine whether or not a long-term relationship among the series exist as the next step after determining that the series are difference stationary. The Westerlund panel cointegration test results are shown in Table 5 and Table 6.

Table 5: Westerlund panel cointegration test results (Model 1)

| Cointegration Tests | Value | Z-Value | Probability Value |
|---------------------|---------|---------|-------------------|
| G_t | -12.091 | -87.456 | 0.000 |
| G_a | -5.217 | 3.027 | 0.894 |
| P_t | -12.172 | -8.379 | 0.000 |
| P_a | -10.031 | -7.642 | 0.000 |

Table 6: Westerlund panel cointegration test results (Model 2)

| Cointegration Tests | Value | Z-Value | Probability Value |
|---------------------|---------|---------|-------------------|
| G_t | -9.351 | -48.218 | 0.000 |
| G_a | -4.967 | 2.466 | 0.826 |
| P_t | -11.964 | -4.012 | 0.004 |
| P_a | -10.587 | -6.257 | 0.002 |

The basic hypothesis of Westerlund panel cointegration tests suggests that there is no cointegration, since the probability value of all statistical values except G_a is less than 5%, the basic hypothesis is rejected and a long-term relationship between variables is found.

The *pooled mean group estimator* (PMGE) method is used to obtain the long-run coefficients after determining that the series are cointegrated, meaning that they are related in the long-run. The most important advantage of the PMGE method is that it predicts both the short- and the long-term parameters by constructing an error-correction model. The error-correction model to be constructed is shown in Equation 5.

$$\Delta Y_{it} = \phi_i Y_{i,t-1} + \beta'_i X_{it} + \sum_{j=1}^{p-1} \lambda_{ij} \Delta Y_{i,t-j} + \sum_{j=0}^{q-1} \delta_{ij} \Delta X_{i,t-j} + \varepsilon_{it} \quad (5)$$

Here, ϕ_i denotes the error correction parameter. Given that ϕ_i is significant and negative, the existence of a long-run relationship between Y_{it} and X_{it} is confirmed. PMGE estimation results are shown in Table 7 and 8.

Table 7: PMGE estimation results (Model 1)

| Variables | Coefficients | Standard Errors | Probability Values |
|------------------------------|--------------|-----------------|--------------------|
| TO | -0.125 | 0.046 | 0.004 |
| GDP | 0.047 | 0.079 | 0.000 |
| PCGDP | 0.307 | 0.127 | 0.002 |
| INF | 0.089 | 0.057 | 0.000 |
| GINI | 0.104 | 0.062 | 0.000 |
| Error-Correction Coefficient | -0.239 | 0.039 | 0.000 |

Table 8: PMGE estimation results (Model 2)

| Variables | Coefficients | Standard Errors | Probability Values |
|------------------------------|--------------|-----------------|--------------------|
| PS | -0.068 | 0.022 | 0.041 |
| EF | -0.102 | 0.214 | 0.001 |
| RL | -0.046 | 0.330 | 0.007 |
| Error-Correction Coefficient | -0.109 | 0.048 | 0.000 |

According to the estimation results, the error-correction parameters in the two models are statistically significant since they are negative and their probability values do not exceed 5%. This parameter indicates the rate at which the short-term deviations offset in the next period due to the non-stationarity of the series. Accordingly, deviations in one period would offset at approximately 24% and 12% in the following period for Model 1 and Model 2, respectively.

The signals obtained from the estimation results of both models are consistent with economic expectations. As can be seen in Table 7, where the estimation results for the long-term coefficients of the economic and social determinants of budget deficits are given, the 1% increase in trade openness as measured by the ratio of the total of exports and imports to the GDP decreases the budget deficits by 0.125%.

Economic growth, per capita national income, inflation and 1% increase in income inequality increase the budget deficit by 0.047%, 0.307%, 0.089% and 0.104%, respectively.

According to Table 8, which includes the estimation results for the long-term coefficients of the political determinants of the budget deficits, the 1% increase in the level of political stability, the level of economic freedom and the legal rules and laws, decrease the budget deficit by 0.068%, 0.102% and 0.046%, respectively.

Conclusion

Budget deficits are the main macroeconomic problems faced by both developed and developing countries. The negative impacts of budget deficits on economic growth, the general level of prices, income distribution, and social welfare reflects the importance of the issue regarding economists and politicians. The changes in the understanding of the state within the historical process, especially the widening of the welfare state concept, has been very crucial in increasing public expenditures and hence the budget deficits. Especially in the 1970s, the budget deficits have turned into chronic structures in many countries.

In the Maastricht Treaty, which entered into force in 1993, some arrangements were made in order to reduce the debts of the countries due to the provision of the budget balances. The Maastricht Criteria required that the share of annual budget deficits in the GDP should be 3% in order to enable the member states of the European Union to participate in the Economic and Monetary Union. However, along with the 2008 Global Crisis, it is seen that this ratio has been exceeded in many developed countries and the budget balances have deteriorated. In this study, the impacts of the economic, social and political factors on the budget deficits of eight OECD countries including Turkey which involved in a significant deterioration in their budget balances after the Global Financial Crisis of 2008 are examined over the period 2003-2017 via panel data analysis. For this purpose, two different models are formed, the first of which being consisted of economic and social indicators, and second of which being consisted

of political indicators. It is concluded that error correction parameters are negative and statistically significant in both models in which the budget deficit is used as a dependent variable.

In the economic and social factors model, trade openness, economic growth, per capita income level, inflation and Gini coefficient representing income inequality. In the first model, the globalization index is used as an independent variable. According to the estimation results which indicate consistency with expectations; a 1% increase in the trade openness rate decreases the budget deficits by 0.125%, a 1% increase in economic growth, per capita income level, inflation and income inequality increase the budget deficit by 0.047%, 0.307%, 0.089%, and 0.104%, respectively.

The results obtained from the political factors model also exhibit consistency with the theoretical expectation. Accordingly, a 1% increase in the level of political stability, economic freedom and legal rules and laws decrease the budget deficit by 0.068%, 0.102%, and 0.046%, respectively. Consequently, the support of the economic policies in the struggle against budget deficits through the development of economic freedoms, the rule of law and political stability would both reduce the budget deficits and have an indirect impact on the budget deficit by positively affecting other variables that may cause a budget deficit.

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A SWITCHING REGRESSION ANALYSIS ON THE VALIDITY OF REBOUND EFFECT AND ENERGY EFFICIENCY IN TURKISH ECONOMY

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1. Introduction

The energy production, which is the focus of main economic policies of most of the countries (whether developed or underdeveloped), is accepted as one of the main components of the sustainable economic structure and the energy production through the efficient technologic developments is seen as one of the main objectives of national economies. The energy input, which is the main necessity in all the industries, especially in the production industry, necessitates the technology policies aiming to increase the energy efficiency and to find new energy sources, and it is accepted to be one of the main requirements of having sustainable national economies. This necessity gained a significant importance because of the oil shocks especially during 1970s and the countries focused on both increasing the energy production and efficiency through new technological developments and decreasing the input costs. This process has been designed in order to achieve the acceleration in the energy saving in the way increasing the production and efficiency through the new technologies and decreasing the consumption.

In today's consumption societies, in which the consumption gradually increases on the contrary with the concept of energy saving, the concept of energy efficiency became a paradoxical structure and the demand for energy significantly increased throughout the world. Ironically, today's world creates the trends towards increasing the energy consumption in parallel with the energy production, which is achieved through increasing energy efficiency. In the literature of economics, the effect that increases the energy consumption because of the increase in the energy production and efficiency is called "rebound effect". The *rebound effect* was introduced to the literature by Jevons (1865) and, hence, it is also known as the *Jevons Paradox*. Expressing that the invention of steam engines decreased the consumption of coal and this decreased the prices of coal, Jevons stated that this process did not only increase the number of persons having access to the coal but it also increased the demand for coal and the coal consumption gradually increased, also. From this aspect, the *rebound effect* suggests that the economic gains obtained by means of increased energy efficiency and consequently decreased energy prices cause more energy consumption (Buluş and Topallı, 2011: 356). The explanations made by Jevons on the coal production, efficiency, and consumption were systematized in the studies carried out by Brookes (1978), Khazzoom (1980) and Saunders (1992), and the conclusion that increasing energy efficiency would increase the energy consumption through the decreasing prices was named as *Khazzoom-Brookes Postulate* by Saunders (1992).

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At the macro level, the *rebound* effects are divided into *direct* and *indirect effects*. The *direct rebound effect* incorporating the personal energy services such as heating, illumination, and cooking suggests that the increasing energy efficiency would increase the energy production and, hence, the energy consumption would increase because of the decreasing energy prices. From the aspect of consumers, the *direct rebound effect* is divided into *substitution* and *income effects*. The *substitution effect* is based on substituting the more expensive energy services with the cheaper ones in order to achieve a higher level of utility and to sustain this level. The *income effect* is defined as the increase in the energy consumption by means of the real income increasing in parallel with the increase in energy efficiency, and consequently achieving a higher level of utility. From the aspect of producers, the *direct rebound effect* is divided into *substitution* and *output effects*. The *substitution effect* is defined as the substitution of cheaper energy sources with capital, labor, and other production factors in order to achieve a specific output level. The *output effect*, on the other hand, is described as the higher level of output by means of savings from the production costs due to the increase in energy efficiency, and the increase of the consumption of all the inputs including the energy (Sorrell, 2007: 4).

The *indirect rebound effect* focuses on how savings obtained from the energy efficiency are used. For instance, the saving achieved by making use of vehicles offering fuel economy may be allocated to the travels by plane rather than the automobiles and this would negatively affect the savings obtained from the energy efficiency. The *indirect rebound effect* is examined in two parts: *embodied energy effects* and *secondary effects*. The *embodied energy effects* refer to the energy consumption needed for ensuring an increase in the energy efficiency. The energy input needed for establishing thermal energy systems and ensuring the production can be given as an example for this. The *secondary effects* refer to the increase in output level by means of the savings obtained from increase in energy efficiency and, consequently, the increase in the use of capital, labor, and other production factors requiring energy consumption (Sorrell, 2007: 2, 4).

The main objective of this study is to investigate the short- and long-term effects of *rebound effect* on the energy consumption for the period between 1967 and 2015 in Turkey using the switching regression analyses and to reveal the characteristics of *rebound effects*. Within this context, the present study consists of five sections. After discussing of the studies focused on the *rebound effect* in the literature in the second section, the methodological background and dataset of the study are presented in the third section. The econometric results are presented in fourth section and a general discussion is made in fifth section.

2. Literature Review

Regardless of the level of development, the energy policies currently being implemented in most countries aim to ensure the maximum level of energy production, distribution, and consumption at the minimum cost. In other words, the main objective of the energy policies is to achieve the Pareto Optimum regarding the energy production and consumption, and it is aimed to ensure the macroeconomic stability of the national economies by increasing the energy savings. For this purpose, the theoretical and applied studies on the energy efficiency and *rebound effect* differ in terms of parameters such as analyzed period, country, and industry, as well as the econometric analysis methods that have been employed. From this aspect, the summaries of studies carried out on *rebound effect* are presented in Table 1.

Table 1. Literature Summary

| Author(s) | Country | Method | Results |
|--------------------------------|----------------|-------------------------------------|---|
| Greene (1992) | USA | Time Series Analysis | In this study, in which the rebound effect of the use of light commercial vehicles on the economy of USA was examined for the period between 1966 and 1989, it was determined that the rebound effect was at very low level and between 5% and 15%. |
| Berkhout et al. (2000) | Holland | Index Analysis | In this study carried out on the Holland's economy, the authors emphasized that the rebound effect was at low level for the national economy and it ranged between 0% and 15%. |
| Haas and Biermayr (2000) | Austria | Panel Data Analysis | In this study carried out on the question if the central heating systems in Austria would have rebound effect, it was reported that the rebound effect might range between 20% and 30% at micro level. |
| Guertin et al. (2003) | Canada | Index and Regression Analysis | In this study carried out on the Canadian economy, it was determined that the rebound effect ranged between 34% and 38% for the water heating in the long-term and between 32% and 49% for the illumination and electronic appliances. |
| Bentzen (2004) | USA | Dynamic Time Series Analysis | It was determined that the increase in energy efficiency in American production industry created a rebound effect and the level of this effect was approx. 24%. |
| Grepperud and Rasmussen (2004) | Norway | Computable General Balance Analysis | The rebound effect was investigated for the electricity and oil that are two important energy sources for the six industries (paper and paper products production, metal production, chemical and mineral products, finance and insurance, fisheries, and road transport) in economy. At the end of the study, it was determined that the rebound effect for the production industries was at higher level in the long-term (even lower than 100%). |
| Dimitropoulos (2007) | India | Index Analysis | The author, who examined the rebound effect for the lighting, production, and transportation industries by using computable general balance analysis, determined that the rebound effect was remarkable especially at the macroeconomic level. |
| Jin (2007) | South Korea | Non-Linear Time Series Analysis | The analysis results showed that the long- and short-term rebound effects were 30% and 38%, respectively, at the macro level but they ranged between 57% and 70% for at the micro level. |
| Small and Van Dender (2007) | USA | Simultaneous Equation Systems | The short- and long-term rebound effects were 4.5% and 22.5%, respectively. |
| Brannlund et al. (2007) | Sweden | Panel Data Analysis | It was determined that 20% increase in energy efficiency caused 5% increase in carbondioxide emissions and 130% increase in carbon taxes is required in order to compensate this increase. |
| Sorrell et al. (2009) | OECD | Panel Data Analysis | It was found that the direct rebound effect on the household energy services in OECD countries is less than 30%. |

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Table 1. Literature Summary (Continued)

| Author(s) | Country | Method | Results |
|----------------------------|----------------------------|--------------------------------------|---|
| Nassen and Holmberg (2009) | Sweden | Panel Data Analysis | The analysis results indicating that the advances in energy efficiency generally caused a rebound effect between 5% and 15% suggested that this effect might be dependent upon the price elasticity. Moreover, it was also emphasized that the rebound effect is at higher levels in heating and transportation industries and it ranged between 10% and 20%. |
| Yetişkul and Şenbil (2010) | 75 cities around the world | Stochastic Boundary Regression Model | It was determined that the urban density increased the energy efficiency in both private and public transportations and the oil prices are the most important independent variable affecting the energy efficiency for the private transportation. Moreover, it was found that the presence of traced roads increased the energy efficiency for public transportation. However, it was also found that the higher level of energy consumption in public transportation in developed countries is related with the low level of use. |
| Gonzalez (2010) | Spain | Panel Data Analysis | In a study carried out on the municipalities in Catalonia region, it was determined that the direct rebound effect was 35% in short-term and 49% in the long-term. It was emphasized that the rebound effect would play important role in increasing the energy efficiency through the energy policies. |
| Ouyang et al. (2010) | China | Panel Data Analysis | It was found that the rebound effect at minimum 30% would increase the energy consumption by stimulating the total demand for energy. |
| Matos and Silva (2011) | Portugal | Two-Stage LS and Ordinary LS | The authors investigating the rebound effect on the railway transportation in Portuguese economy for the period between 1987 and 2006 reported that 1% increase in energy efficiency decreased the energy consumption by 0.759% and the direct rebound effect is approx. 24.1%. |
| Wang et al. (2012) | China | LA-AIDS | The analysis results indicated that the increase in energy efficiency due to 96% of rebound effect did not decreased the energy consumption but the energy saving remained at 4%. |
| Wang et al. (2012) | Hong-Kong | Ordinary LS | In this study covering the 1993-2009 and 2002-2009 periods, the authors investigated the rebound effect on the amount of energy used in private sector transportation in Hong-Kong. The analysis results showed 35% and 45% rebound effects, respectively. Even though these findings revealed that the rebound effect is prone to decreasing, the authors alleged that the rebound effect in the private sector transportation has positive contribution to all the industries and the economy of Hong-Kong. |
| Lin and Liu (2012) | China | Malmquist Index Analysis | The results of analysis performed by the authors revealed that, for the period between 1981 and 2009, the technology-based rebound effect was 53.2% and the instruments of economic policy should be effectively used in order to reduce the emission and the energy consumption. |
| Yu et al. (2013) | China | Logit Regression Model | The analysis results showed that there is on rebound effect on the coolers, electric fans, TVs, and computers. However, there is an important rebound effect on the air conditioners, washing machines, microwave ovens, and automobiles. The rebound effect on the automobiles was found to be 100.79% by the authors. |
| Evans and Schafer (2013) | USA | Horizontal Cross-Section Analysis | The results of analysis, in which the rebound effect on aviation industry in the USA was investigated, showed that the air vehicles increased the demand for air transportation and the rebound effect was approx. 19%. |

Table 1. Literature Summary (Continued)

| Author(s) | Country | Method | Results |
|--------------------------|------------------------|--|---|
| Schleich et al. (2014) | Germany | Panel Data Analysis | In this study, in which the direct rebound effect of using fluorescent light offering high level of energy efficiency instead of bulb, it was determined that the rebound effect of 1 lamp is approx. 6% and this effect was below 3% for the fluorescent lamps. |
| Chitnis (2014) | England | Index Analysis | In this study, in which the rebound effects of energy consumptions of households in English economy for the year 2009 were examined, it was determined that the minimum rebound effect was 0-32%, higher level was 25-65%, and the maximum level was 66-106%. Besides that, the households having the minimum level of income constituted the maximum level of rebound effect and there is a direct relationship between the household income and total rebound effect. |
| Lin and Li (2014) | China | Dynamic LS | The rebound effect in the heavy industry sector of Chinese economy for the period between 1980 and 2011 was calculated to be 74.3%. Based on the results they obtained, the authors advocated that the 5-year policies of Chinese governments based on the energy saving and taxation are necessary and effective. |
| Lin and Liu (2015) | China | Panel Data Analysis | The authors determined that the housing construction in China caused 20% additional electricity consumption annually. |
| Wang and diğ. (2016) | China | Time Series Analysis | According to this study examining the rebound effect in the household expenses by making use of energy input-output tables for Pekin, the capital city of China, for the period between 1989 and 2012, the short-term direct rebound effect was found to be 24% and 37%, whereas the long-term direct rebound effect was found to range between 46% and 56%. Thus, it was emphasized that, even partially, the electricity usage of family houses are in tendency to recovery. |
| Topallı and Buluş (2016) | Turkey | Time Series Analysis | In this study on the rebound effect of electric energy consumed in Turkey between 1964 and 2009, the rebound effect was calculated to be 18%. Moreover, in addition to emphasizing that the long-term pieces of electric energy were no elastic, the authors also stated that the rebound effect is not at the desired level in Turkey. |
| Gonzalez (2017) | 27 EU-member countries | Horizontal Cross-Section Data Analysis | According to the analysis made by using industrial input-output tables of 27 EU-member countries for year 2007, it was aimed to determine the countries' industrial rebound risk, potential rebound intensity, and economic rebound sensitivity. The results of analyses showed that the countries, in which the economic sensitivity is affected from the rebound effect at most, were Malta, Ireland, France, Slovenia, Romania, Estonia, and England. Moreover, the results indicate that the direct or indirect rebound effect is independent from the income indicators. |
| Akıncı et al. (2018) | Turkey | VEC | The time series analyses performed for the period between 1967 and 2015 showed that the energy consumption increased because of the increase in energy efficiency and production and that the <i>Jevons Paradox</i> or <i>rebound effect</i> is valid for the Turkish economy. Moreover, the estimation finding showed that the energy import increased in parallel with the increase in energy consumption and thus the current accounts deficit and inflation are prone to worsening. |

3. Dataset and Methodological Background

The main objective of this study is to examine the impacts of *rebound effect* on the energy consumption in Turkish economy for the period between 1967 and 2015 using the switching regression analyses. The main reason for selecting this period is the availability of the dataset. The energy production and energy consumption dataset are used in order to determine the energy efficiency (*rebound effect*) and this dataset is expressed as the amount of energy obtained from 1 kiloton crude oil (*kt of oil equivalent*). The energy-saving data which are needed for calculating the *rebound effect* were found as the difference between energy production and energy consumption. On the other hand, the expected energy production dataset which are needed for obtaining the energy efficiency series are calculated by using the hypothetical assumption suggesting “potential production that may be achieved by allocating the resources to the energy production instead of energy import”⁴. Hence, the expected savings which are needed for obtaining the energy-efficiency series are calculated by subtracting the actual production from the expected energy production. As a general expression, the relevant datasets are obtained using the equations below:

$$\text{Actual Energy Saving} = \text{Energy Production} - \text{Energy Consumption} \quad (1)$$

$$\text{Expected Energy Production} = \left(\frac{\text{Actual Energy Production} \times \text{Energy Import}}{100} \right) + \text{Actual Energy Production} \quad (2)$$

$$\text{Expected Energy Saving} = \text{Expected Energy Production} - \text{Actual Energy Consumption} \quad (3)$$

$$\text{Rebound Effect} = \left(\frac{\text{Expected Energy Saving} - \text{Actual Energy Saving}}{\text{Expected Energy Saving}} \right) \quad (4)$$

In the equation numbered (4) used in order to measure the *rebound effect* as an indicator of energy efficiency, the complete success refers to 0%, whereas the complete failure of *rebound effect* refers to 100%. On the other hand, the variables of GDP per capita, energy import, saving from the energy usage, kt of oil equivalent, and energy production are the control variables integrated to the regression in order to test the robustness of regression model. The logarithmic values of variables considered in econometric modeling process are used. The datasets to be used in analyses are obtained from the official webpages of World Bank and IMF.

Regarding the time series data, the most important point to consider is to determine if the dataset of variables used in the analyses is stationary. As stated by Granger and Newbold (1974), a model estimated with non-stationary data may cause spurious regressions that can be described as non-existing relationships seeming like they exist. For this reason, the stationary process of the variables used in model is generally determined by employing Augmented Dickey-Fuller (ADF) and Phillips-Perron (PP) unit root tests. The process used in ADF and PP unit root tests can be shown as the equation in equation (5):

$$\Delta Y_t = \alpha + \gamma \text{Trend} + \rho Y_{t-1} + \sum_{i=1}^k \delta_i \Delta Y_{t-i} + \varepsilon_t \quad (5)$$

In equation (5), Y refers to the variable subjected to the stationarity test, Δ to the first degree difference operator, γ to linear time trend, ε to error term, and k number of dependent variable's lags (Taban, 2008: 155). ADF and

⁴ Energy import is expressed as the percentage of total energy use.

PP tests are used in testing if ρ in regression equation numbered (5) equals to 0 or not. If H_0 hypothesis, which is described as $\rho = 0$ can be rejected, then it is determined that Y variable is stationary at its original level but it is not otherwise (Yamak and Küçükale, 1997: 6).

After obtaining the stationarity information of variables, the cointegration tests are employed in order to determine if the relationships between the aforementioned variables are valid in the long-term. Johansen-Juselius cointegration test, which has been introduced to the literature by Johansen (1988, 1991, 1995) and Johansen-Juselius (1990) and in which it is considered that every variable used in the models must be cointegrated at first degree and also the cointegration degrees must be equal to each other in order to test the cointegration relationship between the variables, is calculated by using the equation below,

$$\Delta x_t = \alpha(\beta' x_{t-1} - \beta_0 - \beta_{1t}) - \gamma_0 - \gamma_{1t} + \sum_{j=1}^k \Gamma_j \Delta x_{t-j} + \varepsilon_t \quad (6)$$

Where, X_t refers to the $p \times 1$ vector of variables observed in t period, α to $p \times r$ coefficients matrix, β to the matrix of $p \times r$ coefficients defining the r cointegrated vectors, β_0 to interrupted $r \times 1$ vector for cointegrated vectors, β_1 to $r \times 1$ coefficients vector enabling the linear deterministic trends in cointegrated vectors, γ_0 to $p \times 1$ interrupted vector in equation, γ_1 to $p \times 1$ linear trend coefficients vector, and Γ_j to $p \times p$ matrices up to $j=1 \dots k$ and defining the lag length.

In order to determine the causality relationships between the variables considered in the model, the causality test developed by Granger (1964, 1969) can be applied. Depending on the cointegrated relationship between the variables, the error terms (EC) obtained from the cointegration analysis within the scope of Vector Error Correction Model (VECM) are added to the Granger causality, in which the direction of relationship between variables such as X and Y , and it is investigated if the short-term error margins can be eliminated in the long-term. The Granger causality relationship between two variables is examined using equations numbered (7) and (8):

$$Y_t = \sum_{i=1}^n \alpha_i Y_{t-i} + \sum_{i=1}^n \beta_i X_{t-i} + \varepsilon_{1t} EC_{r,t-i} + u_{1t} \quad (7)$$

$$X_t = \sum_{i=1}^n \gamma_i X_{t-i} + \sum_{i=1}^n \zeta_i Y_{t-i} + \varepsilon_{2t} EC_{r,t-i} + u_{2t} \quad (8)$$

In the present study, the dynamic threshold model (switching regression) developed by Hansen (1999) for internal estimators and extended by Kremer et al. (2013) is used. The model used in the paper follows the cross-sectional threshold analysis of Caner and Hansen (2004) and Kremer et al. (2013) in which Generalized Method of Moments (GMM) estimation procedure is utilized to stand for endogeneity. In this context, a general form of dynamic panel threshold model can be defined as follows:

$$y_t = \mu_t + \beta_1' z_t I(q_t \leq \gamma) + \beta_2' z_t I(q_t > \gamma) + \varepsilon_t \quad (9)$$

where t ($t = 1, \dots, T$) represent the time. y_t indicates the dependent variable, y_t is based on the countryspecific fixed effect and ε_t is the error term. The indicator function, $I(\cdot)$, presents the regime behaviours represented by the threshold variable of q_t . γ indicates the threshold level and z_t consists of a set of independent variables that

is based on m -dimensional vector. It is also possible that the explanatory variables can contain lagged values of the dependent regressor (Kremer et al., 2013: 4).

The second step of the estimation process is to perform Two Stage Least Squares (2SLS) method to determine the income threshold level. Following Caner and Hansen (2004: 818) and Kremer et al. (2013: 865), a reduced form of the regression for the independent variables of z_t as a function of the instrumental variants of X_t is estimated in the first phase. Then, the estimated values of independent variables of \hat{z}_t are substituted in the structural model for the independent variables of z_t . In the second phase, by using predicted values of independent variables of \hat{z}_t , the regression equation numbered (9) is estimated with the help of Ordinary Least Squares method for a fixed threshold level of γ . Let $S(\gamma)$ define the sum of the squared residuals of least squares, this procedure is repeated until finding a suitable threshold value of γ that has the smallest sum of squared residuals. In other words, γ is called the threshold estimator that minimizes the sum of squared error terms (Hansen, 2000):

$$\hat{\gamma} = \operatorname{argmin} S_n(\gamma) \quad (10)$$

In order to determine the critical values for income threshold, the 95% confidence interval needs to be computed. Hansen (1999), Caner and Hansen (2004) and Kremer et al. (2013) suggest a constraint process which should be applied to find the optimal confidence values:

$$\Gamma = \{\gamma: LR(\gamma) \leq C(\alpha)\} \quad (11)$$

where, $LR(\gamma)$ is the asymptotic distribution of the likelihood ratio and $C(\alpha)$ is the 95% percentile concerning the distribution process. When the optimal threshold value ($\hat{\gamma}$) is determined, the slope coefficients can be predicted by applying GMM estimation process. In order to examine the impacts of *rebound effect* on the short- and long-term energy consumption, the switching regression model established using generalized moments method is presented in Equation (12).

$$\begin{aligned} \text{Energy Consumption}_t = & \mu_t + \beta_1 \text{Rebound}_t I(\text{Rebound}_t \leq \gamma) + \delta_1 I(\text{Rebound}_t \leq \gamma) \\ & + \beta_2 \text{Rebound}_t I(\text{Rebound}_t > \gamma) + \psi z_t + \varepsilon_t \end{aligned} \quad (12)$$

In Equation (12), the Rebound_t represents both the threshold values and regime-dependent regressors for two different kinds of regime, whereas z_t refers to the vector of the control variables or else regime-independent regressors. β_1 and β_2 are the gradient coefficients of regime, whereas δ_1 shows regime intercepts.

According to Roodman (2009), the use of all the lagged values of dependent variable as the instrumental variable in switching regression analysis causes the estimations to be both unbiased and consistent. For this reason, considering the study of Arellano and Bover (1995), all of the lagged values of dependent variable were used in the model as instrumental variables.

4. Results of the Analysis

Time series analyses generally start with the unit root tests, in which it is examined if the variables are stationary or not. In Table 2, the results of ADF and PP unit root tests are presented. Given the fact that all the variables are subjected to the ADF and PP tests with constant, constant-trend, and without constant-trend, it can be seen that all of the variables are stationary at first difference level from the aspect of both unit root tests.

Table 2. The Results of ADF and PP Unit Root Tests

| Results of ADF Unit Root Test | | | | | | |
|-------------------------------|--|--|--|--|--|--|
| Variable | With Constant | | With Constant & Trend | | Without Constant & Trend | |
| | Level | First Difference | Level | First Difference | Level | First Difference |
| L(Rebound) | -1.826(8) | -3.774(7)*** | 0.337(8) | -5.774(9)*** | -2.886(8)*** | -2.982(7)*** |
| L(Income) | -1.774(0) | -7.996(1)*** | -1.751(0) | -7.113(1)*** | -1.151(0) | -7.004(1)*** |
| L(Energy Import) | -2.118(0) | -6.339(0)*** | -2.002(0) | -6.174(0)*** | 3.173(0) | -2.334(7)** |
| L(Energy Saving) | 1.224(0) | -6.995(0)*** | -1.456(0) | -6.127(1)*** | 4.412(0) | -4.375(0)*** |
| L(Energy Consumption) | 0.119(0) | -6.741(0)*** | -2.007(0) | -6.731(0)*** | 3.777(0) | -5.989(0)*** |
| L(Energy Production) | -0.323(1) | -4.753(0)*** | -2.511(2) | -4.951(0)*** | 1.960(1) | -3.008(0)*** |
| Critical Values | *: -2.606 **: -2.936 ***: -3.605 | *: -2.606 **: -2.936 ***: -3.605 | *: -3.198 **: -3.533 ***: -4.219 | *: -3.198 **: -3.533 ***: -4.219 | *: -1.611 **: -1.949 ***: -2.624 | *: -1.611 **: -1.949 ***: -2.624 |
| Results of PP Unit Root Test | | | | | | |
| Variable | With Constant | | With Constant & Trend | | Without Constant & Trend | |
| | Level | First Difference | Level | First Difference | Level | First Difference |
| L(Rebound) | -1.175(3) | -3.998(0)*** | -2.223(2) | -4.003(2)** | -1.074(4) | -3.691(0)*** |
| L(Income) | -1.443(4) | -6.041(1)*** | -2.123(4) | -6.747(2)*** | -1.550(4) | -6.754(2)*** |
| L(Energy Import) | -2.052(3) | -6.258(3)*** | -2.153(2) | -6.525(3)*** | 2.111(4) | -5.007(4)*** |
| L(Energy Saving) | 2.453(3) | -6.654(5)*** | -1.751(6) | -4.651(4)*** | 5.983(9) | -5.129(3)*** |
| L(Energy Consumption) | 1.441(5) | -7.453(8)*** | -2.440(1) | -8.451(7)*** | 8.775(8) | -5.276(2)*** |
| L(Energy Production) | -0.282(4) | -4.733(1)*** | -1.991(4) | -4.114(1)** | 2.651(4) | -3.111(1)*** |
| Critical Values | *: -2.599 **: -2.923 ***: -3.574 | *: -2.599 **: -2.923 ***: -3.574 | *: -3.183 **: -3.506 ***: -4.161 | *: -3.183 **: -3.506 ***: -4.161 | *: -1.612 **: -1.947 ***: -2.614 | *: -1.612 **: -1.947 ***: -2.614 |

Note: *L* indicates the logarithm of relevant variable. In ADF test, the values in parentheses refer to the optimum lag lengths of relevant variable and these values are obtained using Schwarz information criteria over maximum 10 lag lengths. In PP test, the values in parentheses refer to the optimum lag lengths determined using Newey-West criteria. *, ** and *** refer to the stationarity at significance levels of 10%, 5%, and 1%, respectively.

The results of Johansen-Juselius cointegration test, suggesting if there are long-term relationships among the variables are presented in Table 3. The analysis results show that there are four cointegrated vector among the variables involved in the model and, hence, the cointegration relationships are valid. From this aspect, it can be said that the *rebound effect* might be appeared over the long-term, and that at least unidirectional causality relationship can be expected for the relevant variables.

A SWITCHING REGRESSION ANALYSIS ON THE VALIDITY OF REBOUND EFFECT AND ENERGY EFFICIENCY IN TURKISH ECONOMY

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Table 3. The Results of Johansen-Juselius Cointegration Test

| Trace Statistics | 1% Critical Value | 5% Critical Value | 10% Critical Value | Maximum Eigenvalue Statistics | 1% Critical Value | 5% Critical Value | 10% Critical Value |
|---------------------|-------------------|-------------------|--------------------|-------------------------------|-------------------|-------------------|--------------------|
| 136.713*** | 92.713 | 83.937 | 79.532 | 59.797*** | 42.233 | 36.630 | 33.927 |
| 76.916*** | 67.636 | 60.061 | 56.285 | 33.921** | 35.726 | 30.439 | 27.915 |
| 42.995** | 46.571 | 40.174 | 37.035 | 21.570 | 29.060 | 24.159 | 21.836 |
| 21.425 | 29.513 | 24.275 | 21.777 | 10.062 | 22.251 | 17.797 | 15.717 |
| 11.362 [*] | 16.361 | 12.320 | 10.474 | 8.989 | 15.091 | 11.224 | 9.474 |
| 2.372 | 6.940 | 4.129 | 2.976 | 2.372 | 6.940 | 4.129 | 2.976 |

Note: The optimum lag lengths are calculated over maximum 10 lag lengths by using Schwarz Information Criteria. ^{*}, ^{**} and ^{***} refer the presence of cointegration relationships among the variables at significance levels of 10%, 5%, and 1%, respectively.

The presence of a long-term relationships among the variables involved in the model suggests that there might be a causality relationship among the variables. In Table 4, the results of Granger causality test are presented.

Table 4. The Results of Granger Causality Analysis

| Pair of Variables | Direction of Causality | F Statistics | Prob | EC _{t-1} |
|--|------------------------|--------------------|-------|---------------------|
| Optimum Lag Length of Model: 1 | | | | |
| $\Delta(\text{LEnergy Consumption})-\Delta(\text{LEnergy Production})$ | - | 0.365 | 0.504 | -0.252 |
| $\Delta(\text{LEnergy Production})-\Delta(\text{LEnergy Consumption})$ | → | 2.077 [*] | 0.071 | -0.114 [*] |
| Optimum Lag Length of Model: 2 | | | | |
| $\Delta(\text{LRebound})-\Delta(\text{LEnergy Consumption})$ | → | 2.409*** | 0.000 | -0.377** |
| $\Delta(\text{LEnergy Consumption})-\Delta(\text{LRebound})$ | - | 0.015 | 0.911 | 0.127 |
| Optimum Lag Length of Model: 2 | | | | |
| $\Delta(\text{LEnergy Consumption})-\Delta(\text{LEnergy Import})$ | → | 1.894 [*] | 0.091 | -0.224 [*] |
| $\Delta(\text{LEnergy Import})-\Delta(\text{LEnergy Consumption})$ | → | 6.669*** | 0.000 | -0.445*** |
| Optimum Lag Length of Model: 1 | | | | |
| $\Delta(\text{LEnergy Consumption})-\Delta(\text{LEnergy Saving})$ | - | 1.560 | 0.275 | -0.355 |
| $\Delta(\text{LEnergy Saving})-\Delta(\text{LEnergy Consumption})$ | → | 2.774*** | 0.003 | -0.408** |
| Optimum Lag Length of Model: 4 | | | | |
| $\Delta(\text{LEnergy Consumption})-\Delta(\text{LIncome})$ | → | 2.124** | 0.038 | -0.117** |
| $\Delta(\text{LIncome})-\Delta(\text{LEnergy Consumption})$ | → | 4.016*** | 0.000 | -0.087** |

Note: L indicates the logarithm of relevant variable. Δ refers to the difference operator of the relevant variable. Optimum lag lengths of the models are calculated using Schwarz information criteria over maximum 10 lag lengths. ^{*}, ^{**} and ^{***} refers to the presence of causality relationships between the variables at significance levels of 10%, 5%, and 1%, respectively.

In Table 4, it is determined that the unidirectional causality relationships from *rebound effect*, energy production and energy saving arising from the energy efficiency to the energy consumption are valid. These unidirectional causality relationships prove that the energy backfire (*rebound effect*) might exist in Turkish economy. Moreover, obtaining the bidirectional causality relationships between energy consumption and energy import and between energy consumption and economic growth may confirm the presence of results that may strengthen the *rebound effect* on one hand and it also reveals the dependence of growth dynamism in Turkish economy on the energy consumption. Especially the causality findings from the energy import to energy consumption and from energy consumption to economic growth show that the energy production is very important for Turkish economy from economic aspect and, if the efficiency is not improves, the energy import becomes inevitable. However, since the energy savings that are not injected to the system or that are allocated to higher level of energy consumption (when injected) increase the energy consumption, it may lay foundation for a remarkable problem in the country. The main economic problem is that the energy saving may affect the energy consumption and, hence, the energy import may be affected, also. Even though this interaction may accelerate the economic development, the energy consumption that the growth process may trigger and the vicious cycle arising from this process shows the need for a sustainable energy policy. In order to validate these interpretations that are emphasized, the switching regression analysis is employed and the results are presented in Table 5.

Table 5. The Results of Short- and Long-Term Switching Regression Analysis

| | Δ Energy Consumption (Short-Term) | Energy Consumption (Long-Term) |
|---|---|-----------------------------------|
| <i>Estimated Rebound Threshold Value and Confidence Intervals</i> | | |
| Threshold Value | 43.6%*** | 58.7%*** |
| 95% Confidence Interval | [36.1%, 56.5%] | [47.4%, 66.9%] |
| <i>Regime-dependent Regressors (Effects of the level of rebound)</i> | | |
| L(Low Rebound Regime) | 0.249*** (0.000) | 0.306*** (0.000) |
| L(High Rebound Regime) | 0.388*** (0.001) | 0.411*** (0.004) |
| <i>Regime-independent Regressors (Effects of control variables)</i> | | |
| Constant (C) | -1.566 (0.411) | -0.991 (0.455) |
| Δ (LIncome) | 0.377* (0.031) | 0.470*** (0.004) |
| Δ (LEnergy Production) | 0.264*** (0.008) | 0.312*** (0.003) |
| Δ (LEnergy Import) | 0.399* (0.062) | 0.413** (0.041) |
| Δ (LEnergy Saving) | 0.019* (0.071) | 0.037** (0.038) |
| EC_{t-1} | -0.250*** (0.004) | |
| <i>Statistics of the Model</i> | | |
| R^2 | 0.618 | 0.673 |
| F-Statistics (Prob) | 5.317*** (0.002) | 7.112*** (0.000) |
| DW | 1.973 | 2.113 |

Not: L indicates the logarithm of relevant variable. The probability values are shown in the parentheses. ***, ** and * refer to the significance levels at 1%, 5%, and 10%, respectively. In estimating the long-term coefficients, only the logarithmic values of variables were taken into consideration.

In Table 5, the results of the switching regression analysis confirming the findings of the causality analysis show that the *rebound effect* is valid in Turkish economy for the period between 1967 and 2015 and this effect is 43.6% for the short-term and 58.7% for the long-term. Since these threshold values are within 95% confidence level, it can be stated that these threshold values are statistically reliable. On the other hand, for the low *rebound* regimes, a 1% change in the *rebound effect* up to the threshold value of 43.6% is achieved changes the energy consumption by 0.249% positively. Moreover, for the high *rebound* regimes, a 1% change in *rebound effect* beyond to the threshold value of 43.6% is achieved changes the energy consumption by 0.388% positively. Similar results are achieved also for the long-term and, up to 58.7% threshold value, the effect on the energy consumption for the low and high *rebound* regimes are found to be 0.306% and 0.411%, respectively. The low *rebound* regime coefficients lower than the high *rebound* regime coefficients suggest that up to the threshold value the increases in energy efficiency would be relatively limited effect on the energy consumption when compared to the high *rebound* regimes. On the other hand, the aforementioned analysis indicate that for the short- and long-term, the energy consumption increases much more after the threshold value is exceeded (because the high *rebound* regime coefficients are higher than low *rebound* regime coefficients). From this aspect, as the energy efficiency increases the energy consumption increases much more in Turkey and this effect is more remarkable for the long-term. Moreover, the *rebound* threshold values found to be 43.6% and 58.7% for the short- and long-term, respectively, indicate that the energy backfire effect is dominant and, in other words, no successful results could be achieved in terms of the energy policies.

As well as the results specified above, the positive and statistically significant short- and long-term effects of the changes in economic growth, energy production, energy import, and energy saving on the energy consumption suggest that the factors other than the energy efficiency should also be considered while analyzing the energy consumption. Moreover, long-term coefficients of control variables, which might affect the energy consumption higher than the short-time indicate that the pressure on the energy consumption may become more severe in the long-term.

5. Conclusion

In this study carried out on Turkish economy for the period between 1967 and 2015, the effects of energy efficiency (*rebound effect*) on the energy consumption are analyzed using the switching regression analyses.

For this purpose, the stationarity of the variables are examined using ADF and PP unit root tests and the results of analyses show that all the variables examined within the scope of model are stationary at the first difference level. After obtaining the stationarity information about the variables, the validity of long-term relationships is tested within the scope of Johansen-Juselius cointegration model considering the multiple linkages. In other words, the presence of cointegration relationships is proven. On the other hand, the results of Granger causality analyses are parallel with the expectations and show the presence of unidirectional causality relationships at least. The results of switching regression analysis performed in order to investigate if the *rebound effect* is valid for Turkish economy show the presence of energy backfire effect calculated to be 43.6% for short-term and 58.7% for long-term and they also revealed the validity of *Jevons Paradox* (in other words, the rebound effect). The control variables included in the model in order to test the robustness of analyses indicate that the validity of analysis results continued. Moreover, the low *rebound* regime coefficients being at more moderate levels when compared to high *rebound* regime coefficients show that up to the threshold value, the effects of increases in the energy efficiency on the energy

consumption remained relatively limited. On the other hand, the results of aforementioned analysis revealed that after exceeding the *rebound* threshold value in the short- and long-term, the energy consumption increases at much higher levels. From this aspect, it can be stated that as the energy efficiency increased, the energy consumption also increased in Turkey and this effect is more dominant especially in the long-term.

The unsuccessfulness in achieving a similar success in energy production despite the efforts made for increasing the energy efficiency in Turkish economy may cause the problem that the energy production needed for ensuring the dynamism of economic growth process cannot be supported on one hand, and it may also cause higher level of energy consumption depending on the consumption habits on the other hand. The process called as *energy backfire* can occur because the production is not at desired level and the consumption also increases despite the energy efficiency. Moreover, increasing in energy import in parallel with increasing in energy consumption may cause the higher inflation trends because of, at least, increasing in energy import. Raising inflation rates which trigger the current account deficits may result in current account deficit-inflation cycle in the country. The fact that approximately 43% of the current account deficits consist of the energy expenses corroborates this result. From this aspect, the energy policies constantly increasing the energy consumption level would obviously have negative effect on the macroeconomic balances such as current account balance and inflation. Therefore, an economic policy that limits the energy consumption or allowing a more efficient usage can be considered as a solution (at least for the short-term) even if it is very restrictive. In the long-term, an education reform raising awareness on the energy production, consumption, and savings in addition to the energy efficiency may yield effective results. In other words, motivating the sense of social awareness and reinforcing the consciousness and education process on the energy consumption and saving, revising the consumption policies, and increasing the efficiency through the incentives and measures ensuring the optimality in energy production can be the main starting points. At the end of analyses, the result that the energy savings cause energy consumption corroborates that, in addition to the *direct rebound effect*, the *indirect rebound effect* can be seen in Turkish economy. As emphasized by Stanford (2013), the trends towards purchasing the products with low energy efficiency may arise because, without considering the potential benefits in the future, the consumers avoid from purchasing the energy-efficient products because of relatively high prices and they focus on the money that they spend in current period. This process may both makes it difficult to translate the energy efficiency into energy production and economic growth and also cause the increase in energy consumption at the cost of inefficiency. Hence, the government should implement macroeconomic policies promoting the higher level of production for the products with high energy efficiency (within the scope of scale economies). Moreover, the state should also prioritize the practices, which will decrease the energy consumption without any sacrifice from the welfare of consumers, in the context of Pareto optimality. In addition, focusing on the renewable energy sources as well as the classical energy sources and improving the environment-friendly energy systems should be discussed within the scope of economic policies.

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A SWITCHING REGRESSION ANALYSIS ON THE VALIDITY OF REBOUND EFFECT AND ENERGY EFFICIENCY IN TURKISH ECONOMY

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R&D INVESTMENTS AND INTERNAL FINANCE: EVIDENCE FROM TURKISH MANUFACTURING FIRMS

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1. Introduction

The central role of R&D activities in the long-term economic growth is broadly accepted by economists and policymakers. Schumpeter (1942) is one of the first mentioned economists who pointed out the importance of innovation in determining the long-term growth. Economic growth is driven by the activities of economic agents and their products, processes and services are carried out in a creative manner. The expenditures on R&D provide formation of creative knowledge accumulation in private as well as public sectors. While innovative activities are essential for firms in order to survive in a competitive environment the financing of innovation is a deeply troubling issue.

A large theoretical and empirical literature is created on the examining the role of financial factors in investment decisions of firms. In the corporate finance literature, the sensitivity of investment to cash flow is attributable to financial market problems arising from asymmetric information between borrowers and lenders (Nelson, 1959; Arrow, 1962; Myers and Majluf, 1984). However, the evidence on the interaction between financial factors and R&D investment is not clear. The theoretical view that internal finance is an important determinant of R&D expenditures goes back at least to Schumpeter's (1942) analysis. While most of the studies in the survey by Cohen (1996) point to a positive relationship, the earlier survey by Kamien and Schwartz (1982) concluded that there was only weak empirical evidence of a significant effect. Due to high adjustment costs of R&D investment and covering largely intangible assets, the cost of external funds for R&D funding is significantly greater than for other firm investments and more sensitive to fluctuations in internal cash flow (Schumpeter, 1942; Hillier et al., 2010; Hall and Lerner, 2010). Several significant factors can be responsible for the high external fund costs for R&D investment in comparison with the cost of internal funds such as asymmetric information between inventor and investor, moral hazard on the part of the inventor and tax incentive legislation (Hall, 2002). Internal funds are preferred to debt or external funds especially in financing R&D investment (Brown and Petersen, 2011). Many papers find significant and positive impact of cash flow on R&D investments (Hall, 1992; Hao and Jaffe, 1993; Himmelberg and Petersen, 1994; Mulkay et al., 2001; Bond et al., 2003; Bloch, 2005; Brown et al., 2012; Sasidharan et al., 2015). Some papers find that the relationship does not always hold (Bhagat and Welch, 1995; Harhoff, 1998; Bond et al., 1999; Bougheas et al., 2003).

The intangible nature of the R&D investment makes it more likely to face financial obstacles due to risks involved in R&D activities (Hubbard, 1998). Moreover, internal funds come to the forefront in R&D investment. Ross et al. (1993) state that nearly 80% of all R&D financing is realized via internal funds. Thus the financing problem of large number of firms to put into action their innovation projects are likely to hinder the economic growth in the case of emerging economy like Turkey.

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In this study, it is examined that the effect of internal cash flow on funding R&D expenditures of Turkish manufacturing firms. Empirical analysis is based on firm level data of listed in Borsa Istanbul firms during 2000-2012. Considering the paper by Brown et al (2009) as starting point, a dynamic panel data model is constructed and it is estimated using Sys-GMM method developed by Blundell and Bond (1998). The data is mainly drawn from the annual reports and balance sheets of the firms. Although all firms operate in the manufacturing industry, firms exhibit quite heterogeneous structural patterns. To reduce this heterogeneity and to reveal systematic differences, firms are grouped according to their ages. In addition, this grouping is also important in terms of determining whether cash flow sensitivity changes in each group. Due to the high start-up costs and having risks of R&D investments, debt is a disfavored source of funding for R&D expenditures (Hall, 2002). Since internal funds are seen more important in financing R&D expenditures in the literature, external financing factors are kept on the back burner in this paper. Empirical findings provide support for the important effect of cash flows in explaining firms' R&D expenditures.

The contribution to the growing body of empirical literature on the financing of R&D investment is twofold. First, this study presents the role of internal finance on R&D investments from an emerging market perspective. Over the last two decades although Turkey has increased its research and development expenditure from 0.45 percent of GDP in 1996 to 1.01 percent in 2014, a sufficiently rise could not be achieved and GERD (gross domestic expenditure on R&D) still has remained at lower levels. Second, the literature is related to relationship between financial constraint and investment in general is scarce in Turkey. According to the author's knowledge, this paper is the first paper that investigates the relationship between internal finance and R&D investment expenditures for the case of Turkey's manufacturing sector.

Following the introduction, the structure of the study is designed as follows. The second part of the study presents the dataset, variables, and the model used in this study. The third part reveals the econometric methodology and empirical findings and the conclusion follows it.

2. Model and Data

To describe the specification of the R&D investment model based on Brown et al (2009), the following dynamic panel equation is specified.

$$R\&D_{i,t} = \varphi_1 + \varphi_2 RD_{i,t-1} + \varphi_3 CF_{i,t-1} + \eta_i + v_i; \quad i = 1, \dots, N, t = 1, \dots, T \quad (1)$$

where i indicates the firm ($i = 1, \dots, 65$) and t indicates the time period ($t = 2000, \dots, 2012$). η_i represents firm-specific effects; v_i is random error terms. R&D is an indicator for expenditures for innovation of firms and CF refers to cash flow from firm activities. All independent variables including sales are scaled by shareholders equity. Control variables including age and size variables are also converted to logarithmic form. The coefficients of these control variables including sales are not estimated in the regressions, only used as exogenous instrumental variables.

Although all firms operate in the manufacturing industry, firms exhibit quite heterogeneous structural patterns. To reduce this heterogeneity and to reveal systematic differences, firms are grouped according to their ages. In addition, accessing external finance may be more difficult for younger firms, particularly when they hold more risky projects compared to their mature counterparts. This would imply that younger firms will have to rely more heavily on their internal funds to finance their R&D projects. Mature firms often have sufficient cash flow for

their investment and depend less on equity or debt issues (Brown et al., 2009). Hence, increasing the supply of internal funds should have more impact on the R&D decisions of younger firms compared to more mature firms.

Descriptive statistics of the data are presented in table 1. When the mean values of the variables are taken into consideration, R&D values are higher for younger firms.

Table 1: Descriptive statistics

| | Obs. | Mean | Std. dev. | Min. | Max. |
|---------------------|------|-------|-----------|---------|---------|
| All Firms | | | | | |
| Independent V. | | | | | |
| <i>R&D</i> | 843 | 0.222 | 0.099 | -0.380 | 2.333 |
| <i>CF</i> | 843 | 0.146 | 1.227 | -25.217 | 7.110 |
| Control V. | | | | | |
| <i>Age</i> | 845 | 1.560 | 0.144 | 0.602 | 1.886 |
| <i>Size</i> | 781 | 2.923 | 0.497 | 1.342 | 4.358 |
| <i>Sales</i> | 843 | 3.767 | 10.277 | -31.646 | 263.376 |
| Young Firms | | | | | |
| Independent V. | | | | | |
| <i>RD</i> | 364 | 0.027 | 0.135 | -0.380 | 2.333 |
| <i>CF</i> | 364 | 0.078 | 1.520 | -25.217 | 6.189 |
| Control V. | | | | | |
| <i>Age</i> | 364 | 1.450 | 0.133 | 0.602 | 1.623 |
| <i>Size</i> | 343 | 2.873 | 0.446 | 1.342 | 4.136 |
| <i>Sales</i> | 364 | 4.216 | 14.242 | -31.646 | 263.376 |
| Mature Firms | | | | | |
| Independent V. | | | | | |
| <i>RD</i> | 479 | 0.018 | 0.060 | -2.232 | 0.905 |
| <i>CF</i> | 479 | 0.198 | 0.943 | -10.020 | 7.110 |
| Control V. | | | | | |
| <i>Age</i> | 481 | 1.644 | 0.082 | 1.491 | 1.886 |
| <i>Size</i> | 438 | 2.961 | 0.530 | 1.342 | 4.358 |
| <i>Sales</i> | 479 | 3.427 | 5.632 | -24.550 | 79.769 |

While size of firms is nearly same in young and mature firms, CF in mature firms nearly equals to twice of the young firms. This indicates that R&D remains lower in the mature firms relative to young firms.

3. Empirical Methodology and Estimation Results

Dynamic panel data estimation is more appropriate in cases where some unobservable factors affect the both dependent explanatory variables and some explanatory variables are strongly related to past values of the dependent variable. This is likely to be the case in regressions of cash flow on R&D expenditures. Dynamic panel data model

in these equations are proposed by Blundell and Bond (1998) and the extended version of the GMM estimator also known as system-GMM (sys-GMM). It is derived from the estimation of a system of two simultaneous equations: one in levels (with lagged first differences as instruments) and the other in first differences (with lagged levels as instruments). In presence of heteroscedasticity and serial correlation the two-step sys-GMM uses a consistent estimate of the weighting matrix taking the residuals from the one-step estimate (Davidson and MacKinnon, 2004). Though asymptotically more efficient, the two-step GMM carries out estimations of the standard errors that tend to be critically downward biased. However it is possible to overcome this problem using the finite-sample correction to the two-step covariance matrix developed by Windmeijer (2005) which can make two-step robust GMM estimates more efficient than one-step robust ones especially for sys-GMM (Roodman, 2009b). Another weakness of GMM estimations is too many instrument problems. There are various methods that are used to reduce instrument variable number. The first one is to use only certain lags instead of all available lags for instruments (limited lags). The second one, called as collapsing, is to combine instruments by adding them into smaller sets. Another way is to use the two techniques together (Roodman, 2009b). There are several reasons for preferring a dynamic sys-GMM panel model. First, static panel estimation omits dynamics causing dynamic panel estimation bias (Baum, 2006; Bond, 2002). Omitted dynamics means that such models are misspecified, because they pass over the impacts of lagged dependent variable as a right-hand-side variable on dependent variable (Bond, 2002). Second, the endogeneity problem which occurs when the independent variable is correlated with the error term in a regression model can be solved easier in dynamic panel data models than in the static models. Third, in multivariable dynamic panel models the sys-GMM estimator is known to perform better than the differenced-GMM (DIF-GMM) proposed by Arellano and Bond (1991). The sys-GMM estimation is more appropriate when variables are “random walk” or close to be random walk variables (Bond, 2002; Roodman, 2009a, 2009b) because DIF-GMM estimator can suffer from a weak instruments problem in that case (Sarafidis et al., 2009).

In this paper, it is analyzed the significance of internal funds (as measured by the cash-flow) in the determination of the R&D investment, in order to investigate whether there is evidence that financing constraints on R&D arise in general. It should be noted that there is no distinction in terms of financial constraints between firms in the sample. The empirical analysis addresses two dimensions. The first part of the analysis examines effect of cash flow as an indicator of internal finance on R&D investment for full sample. In the second part, the estimation is based on repeating the same model for the young and mature firms to control the effect of age following Brown et al. (2009). Table 2 presents results of estimation the interaction between cash flow and R&D investment.

Table 2: Sys-GMM two step estimates

| Dependent Variable | All Firms | Mature Firms | Younger Firms |
|---|---------------------|---------------------|----------------------|
| $R\dot{C}D_t$ | | | |
| <i>Constant</i> | 0.0137* (1.68) | 0.0084** (2.31) | -0.0019 (-0.29) |
| $R\dot{C}D_{t-1}$ | 0.1477*** (2.24) | 0.4092*** (7.82) | 0.7643*** (6.66) |
| CF_{t-1} | 0.0268*** (4.00) | 0.0130*** (2.72) | 0.1088*** (10.97) |
| AR(1) (<i>p</i> -value) | (0.039) | (0.083) | (0.088) |
| AR(2) (<i>p</i> -value) | (0.532) | (0.325) | (0.397) |
| Hansen J-test (<i>p</i> -value) | (0.659) | (0.770) | (0.347) |
| <u>Difference Hansen tests (<i>p</i>-value)</u> | | | |
| <i>All sys-GMM instruments</i> | (0.817) | (0.466) | (0.272) |
| <i>Those based on lagged RD only</i> | (0.790) | (0.745) | (0.270) |
| Instruments | 23 | 28 | 27 |
| Observations | 647 | 373 | 293 |

Note: Robust *t*-statistics are reported in parentheses of estimated coefficients. GMM type variables are $R\dot{C}D$, and CF and their lags range is set to from one to three in all models. Following the suggestions of Roodman (2007), the standard type instrumental variables are *age*, *sales*, *time dummies* and first and second lags of *size*. Time dummies which are not reported in the table are involved in the regressions. *AR (1)* and *AR (2)* are tests for autocorrelation in differences. *Hansen J-test* is a test for over identification restrictions. *p-values* for these tests are shown in parentheses. * $p < 0.10$. ** $p < 0.05$ and *** $p < 0.01$

System GMM estimations presents that R&D expenditures show persistence since the sample estimates for lagged R&D is positive for all groups. Cash flow is the major variable of interest and lagged cash flow has a positive and significant effect on R&D expenditures for all groups.

In addition, the magnitude of the estimated lagged cash flow coefficient should be higher for the financially constraint firms. Hadlock and Pierce (2010) imply age and size are the two most significant variables reflecting the existence of financial constraint. This paper prefers only age variable to classify the sample young and mature due to limited data. As expected, the estimated coefficient for cash flow is large (0.1088) for young firms in comparison with mature firms (0.013). It is almost 10 times larger for young firms. In other words, when it is compared financing constraints on R&D for young to the others' results, it can be seen that effect of cash flow variable is significantly more important for young firms. This makes intuitive sense, since young firms may face the possibility of future distress caused by limited debt capacity and high costs for external financing.

4. Conclusions

This paper aims to explain the financing of R&D by the listed innovator manufacturing firms in Turkey using a dynamic R&D investment model. Estimation results indicate that a significant and positive relationship between internal finance and R&D expenditures for all sample groups. This is consistent with theoretical models that emphasize the extent to which R&D expenditures are sensitive to internal finance.

Internal finance is more important to take place in R&D activities for young firms than mature firms. A considerably higher estimated coefficient of cash flow shows that young firms will be very sensitive to negative cash flow shocks. Facing a cash flow problem, young firms asymmetrically may reduce R&D investment and are only able to rise limited external financing to offset the consequences of negative cash flow shocks, providing more direct evidence that young firms face external financing constraints. Unlike young counterparts, mature firms have rather symmetric reactions in R&D and financing variables to cash flow movements in either direction, which offers little evidence that mature firms are financially constrained in innovative activities. The empirical results of this paper prove that supporting policies for financing R&D investments of young firms are important in terms of ensuring economic growth through innovation.

Although findings of the present study support the literature on the positive effects of internal finance in R&D investment, this paper has several limitations due to dataset. First, in spite of used dataset is suitable for the dynamic panel analysis, it is quite insufficient to achieve the overall policy implications. Second, a sub-group classification of the manufacturing sector could not be used due to the small dataset.

In future studies sectoral grouping can be extended and analyses are performed with different classification scale according to size, owner-structure ect. when new data sets become accessible in Turkey. In addition the impact of external financing variables on investment in R&D can be handled in comparison with internal funds.

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18

MEAN REVERSION IN OIL MARKETS

Samet EVCI²

I. Introduction

Since crude oil is a commodity that plays a critical role in the world economy, the fluctuations in its prices are a major concern among researchers, policy makers and market participants (Wang & Wu, 2012, p.2167). Oil prices change depending on many factors such as countries' oil reserves and stocks, the production and transportation costs, natural disasters, investment politics of oil companies, legal regulation and embargo of the countries which have oil reserves, global economic growth, developments on transportation sector, speculation movements of investors, global political problems and terrorist incidents. Understanding the behavior of the volatility in crude oil prices is the important in terms of pricing of financial assets, application of hedging strategies for financial risk and evaluation of regulatory offers to the restriction of international capital flows (Charles & Darne, 2014, p. 3).) Permanent changes in volatility causes the producers and industrial consumers to be exposed to the risks and this may also affect oil stocks and investments in facilities for production and transportation (Narayan & Narayan, 2007, p.6549). The change in oil prices is a source of disturbance, especially in terms of the economic stability of oil exporters and importers. Oil production generally constitutes a large part of the gross domestic products of oil exporting countries. The increase in oil prices directly raises the currency value of these countries (Rezazadehkarsalari, Haghiri, & Behrooznia, 2013, p.3221). As a consequence, the changes in oil prices cause the fluctuation of national income by affecting the export proceeds of countries. On the other hand, the volatility in oil prices may cause instability in the oil importing country's macroeconomic indicators such as the foreign trade deficit and inflation and this may restrict the impact and sustainability of the policies implemented by the countries. Therefore, the predictability of the impact of the shocks in the oil market, which affects many economic units, above the prices is important. In this study, the mean reverting tendency in the oil prices and the impact of market shocks on volatility of the prices are examined.

The volatility in prices removes the mean reverting tendency of price series. The mean reversion in price series indicates that the price volatility is temporary and possible capital gains and losses are predictable (Bessembinder, Coughenour, Seguin & Smollers, 1995, p. 362). Different methods have been developed in the literature to test the persistence of the volatility in prices. One of these methods is unit root tests. The Unit root tests are usually used to analyze stationary properties of time series (Ranganathan & Ananthakumar, 2010, p.3). The stationary series are series that return to a fixed mean after a shock (Ahrens & Sharma, 1996, p.60). However, the price volatility caused by the shocks may cause a break in the trend of the data series or a change in level or a change in both (Ranganathan & Ananthakumar, 2010, p.3). Studies in the literature reveal that structural breaks have an impact on the mean reverting tendency and persistency of shocks (Narayan & Liu, 2011, p. 410). In this context, while investigating the oil price behavior, LM unit root test with two structural breaks developed by Lee and Strazicich (2003) were used as well as the traditional Augmented Dickey Fuller (ADF) and Phillips-Perron (PP) unit root tests in the study.

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The remainder of the study is organized as follows. Section II provides a brief about the related the literature. Section III presents the econometric methodology while Section IV describes the data employed in the study. Section V presents empirical results and final section provide some concluding remarks.

II. Literature

In the literature, there are studies examining the mean reverting tendency of oil price series by using different methods, oil price series at different periods and at different frequencies. Findings from these studies change with regard to method and the period of the data set. Serletis (1992) analyzed whether New York Mercantile Exchange (NYMEX) crude oil future prices follow random walk process or not by using the structural break unit root test. In the study, the traditional ADF and PP unit root tests and Zivot and Andrews unit root test with one structural break were applied to daily prices for the period 1983 to 1990. According to the ADF and PP test results, the series had a unit root. On the other hand, Zivot and Andrews unit root test, which takes into account the structural break, showed that the series did not contain the unit root, so it was stationary. Bessembinder, Coughenour, Seguin, and Smoller (1995) tested the mean reverting tendency of the spot prices of various real and financial assets by using futures contracts prices with different maturities. Findings from the study using The Cost-of-Carry Model showed that the mean reversion for crude oil was high and 44% of the price shocks would turn reversed over the next eight months. Postali and Picchetti (2006) conducted quantitative analysis of the annual international oil price path. The sample period covering 1861-1999 was divided into different sub-samples. In addition to the traditional unit root tests, Lee and Strazicich (2003, 2004) LM unit root tests with one and two structural breaks was applied. Postali and Picchetti (2006) stated that the traditional unit root tests could reject null hypothesis in the sample periods including price series of more than 100 years. For sub-samples, both the traditional and LM unit root tests with two intercept-breaks were unable to reject unit root null hypothesis. But LM unit root test with two intercept and two trend breaks could reject unit root null hypothesis. Findings from the study showed that the mean reverting process could be more accurate to represent the development of oil prices over time. Geman (2007) examined the mean reversion in crude oil and natural gas prices between 1994 and 2004 years. The ADF and PP unit root test results showed that mean reverting tendency was observed in crude oil between 1994 and 2004 years, and after 2000, the price movements showed random walking process. The assumption of mean reversion was rejected for the whole sample period. Skorodumov (2008) estimated the mean reverting tendency of crude oil and natural gas market with the scope of single factor mean reversion model by using Henry Hub, Brent and WTI spot prices. The results showed that the coefficient of mean reversion was statistically significant in approximately half of the sample data. Maslyuk and Smyth(2008) analyzed whether WTI and Brent oil spot and futures prices had one and two break unit root or not by using weekly data from the period 1991 to 2004. In the study, Lee and Strazicich (2003, 2004) LM unit root tests with one and two structural breaks were applied. The test results showed that both oil series had random walk process and structural breaks were statistically significant. Chinhamu and Chikobvu (2013) examined whether Brent, WTI and Dubai Fatch crude oil prices from the period 1980 to 2010 were mean reverting or whether they followed a random walk or not. In the study, two data sets were created from the sample period and Auto Correlation Function (ACF), ADF unit root test and GARCH models were applied. The results of the study showed that the test results varied depending on the period of the data set used in the study. According to the unit root test results, while the random walking process was valid for the data set for 1980-2007 period, there was a mean reverting tendency for the period of 1980-1995. Liao, Linb and Huang (2014) concluded that the spreads between WTI and Brent crude oil prices in the lower quantiles had a unit root by applying a novel quantile unit root test with structural breaks. However, the prices in the upper quantiles spreads were mean reverting tendency.

In the literature, there are many studies examining different subject except the mean reversion tendency, but applying unit root tests to oil prices. Sivapulle and Moosa (1999) examined the relationship between WTI spot and futures contracts. In the study, the daily WTI spot and futures prices covering the period 1985-1996 applied ADF, PP and KPSS unit root tests. The results of the study showed that spot and futures prices were not stationary. Pindyck (1999) examined the long-term behavior of energy prices, including crude oil prices, and reported that unit root tests were inadequate in the analysis of annual prices. From the ADF unit root test results, it was concluded that the price series belonging to the periods of 1870-1996 were not stationary. Taback (2003) tested whether the Brent oil spot and futures prices for the period covering 1861-1999 were stationary or not by using the ADF unit root test. The unit root test result revealed that the series were not stationary. Another study examining Brent oil spot and futures prices was conducted by Coimbra and Esteves (2004). Coimbra and Esteves (2004) found that spot and futures prices were not stationary for the period 1989-2003 by applying the ADF test.

III. Methodology

The mean reverting tendency of prices indicates that there is a normal level of prices that will return after the prices rise or fall. In mean reverting markets, if prices are over the average price in the long run, it is expected to be below the average for the next few periods. Thereby average price will revert back to the trend in the long run (Chinhamu & Chikobvu, 2010, p. 7).

In this study, whether or not the oil prices tend to mean reversion are examined by applying unit root tests. If a time series is stationary, mean and variance of this series is time independent (Yavuz, 2004, p.241). These time series tend to return to its mean and its volatilities of around the means has a fixed width (Chinhamu & Chikobvu, 2010, p. 7). In this context, the traditional ADF and PP unit root tests and LM unit root test with structural break developed by Lee & Strazicich (2003) is used in this study.

The ADF unit root test equations with a constant and with constant and trend developed by Dickey-Fuller (1979) are as follows (Sevüktekin & Nargeleşkenler, 2010, p.323);

$$\Delta Y_t = \mu + \delta Y_{t-1} + \sum_{j=1}^p \delta_j \Delta Y_{t-j} + \varepsilon_t \quad (1)$$

$$\Delta Y_t = \mu + \beta t + \delta Y_{t-1} + \sum_{j=1}^p \delta_j \Delta Y_{t-j} + \varepsilon_t \quad (2)$$

The equation 1 and 2 obtained by including lags of dependent variable (Y) describe the model with a constant and with constant and trend model respectively. These models are based on ADF unit root tests. The parameters in the equations are estimated and the τ statistic (DF test statistic) is calculated for the δ parameter. These parameters are compared with critical value tabulated by MacKinnon (Mackinnon, 1990; Sevüktekin & Nargeleşkenler, 2010, pp.317-323). If the absolute value of τ statistics is smaller than the MacKinnon critical values calculated at various levels of significance, the series have a unit root. In other words, the null hypothesis ($\delta=0$) which is stated as the series are nonstationary can be rejected. Otherwise, the alternative hypothesis ($\delta<0$) which is stated as the series are stationary, in other words have no unit root, can be accepted (Tarı, 2010, p.389).

Another traditional unit root test applied in the study is the unit root test developed by Phillips-Perron (1988). PP unit root test differ from ADF test on the assumption of relating to error terms of the model (Tari, 2010, s.400). In addition, PP test is more successful than ADF in non-normal series (Demireli, Akkaya& İbař, 2010, p.60). The equation used in PP test is shown below:

$$Y_t = a_0 + a_1 Y_{t-1} + u_t \quad (3)$$

$$Y_t = a_0 + Y_{t-1} + a_2 \left(t - \frac{T}{2} \right) + u_t \quad (4)$$

In the equation above, t represents number of observation; u_t represents error term with expected mean of zero. However, the assumptions of homogeneity and independency between error terms are not required (Tari, 2010, p.400). In the PP unit root test, the null hypothesis is stated as the series have a unit root, in other words the series are non-stationary. On the other hand, the alternative hypothesis is stated as the series have no unit root. If the absolute value of calculated PP test statistics is greater than the calculated critical value for different significance level, the null hypothesis is rejected, otherwise the hypothesis is accepted.

Shocks caused by positive and negative news in financial markets cause structural breaks on time series. This causes the series to deviate from the long-term equilibrium (Edison,1987). The unit root tests performed without taking into account the structural breaks in the time series may give incorrect results (Peron, 1989). ADF and PP unit root tests ignore the structural breaks in constant and trend of series' function. Therefore, a version of LM unit root test with two structural breaks developed by Lee and Strazicich (2003) is used in this study.

The structural breaks are determined endogenously in Lee and Strazicich (2003) LM unit root tests (Berke, Özcan & Dizdarlar, 2014, p.627; Lee & Strazicich, 2004). LM unit root test with two-break is modeled in two types as Model A and Model C. Model A allows two breaks in level and it is stated as $Z_t = [1, t, D_{1t}, D_{2t}]$. Regarding to breaks in level, where D_{jt} represent dummy variable and where T_{Bj} represent time of break, if $t \geq T_{Bj} + 1$ ($j=1,2$) is 1, in other cases is 0. Model C contains two break in level and trend and defined as $Z_t = [1, t, D_{1t}, D_{2t}, DT_{1t}, DT_{2t}]$. D_{jt} and DT_{jt} represents dummy variable in level and trend respectively. DT_{jt} , $t \geq T_{Bj} + 1$ ($j = 1, 2$) is equal to value of $t - T_{Bj}$, otherwise is equal to 0. The data generating process (DGP) both the null ($\beta=1$) and alternative ($\beta<1$) models in a consistent manner. Depending on the value of β , the null hypothesis (H_0) and the alternative hypothesis of Model A is shown below (Lee ve Strazicich, 2003, p.3);

$$H_0: y_t = \mu_0 + d_1 B_{1t} + d_2 B_{2t} + y_{t-1} + v_{1t} \quad (5)$$

$$H_1: y_t = \mu_1 + \gamma \cdot t + d_1 D_{1t} + d_2 D_{2t} + v_{2t} \quad (6)$$

In the equation above, v_{1t} and v_{2t} represent stationary error terms. If dummy variable as B_{jt} , $t = TBj + 1$ ($j=1,2$) is equal to 1, otherwise is equal to 0. The null hypothesis for Model C is generated by adding D_{jt} term to the equation (5), and the alternative hypothesis is generated by adding DT_{jt} term to the equation (6).

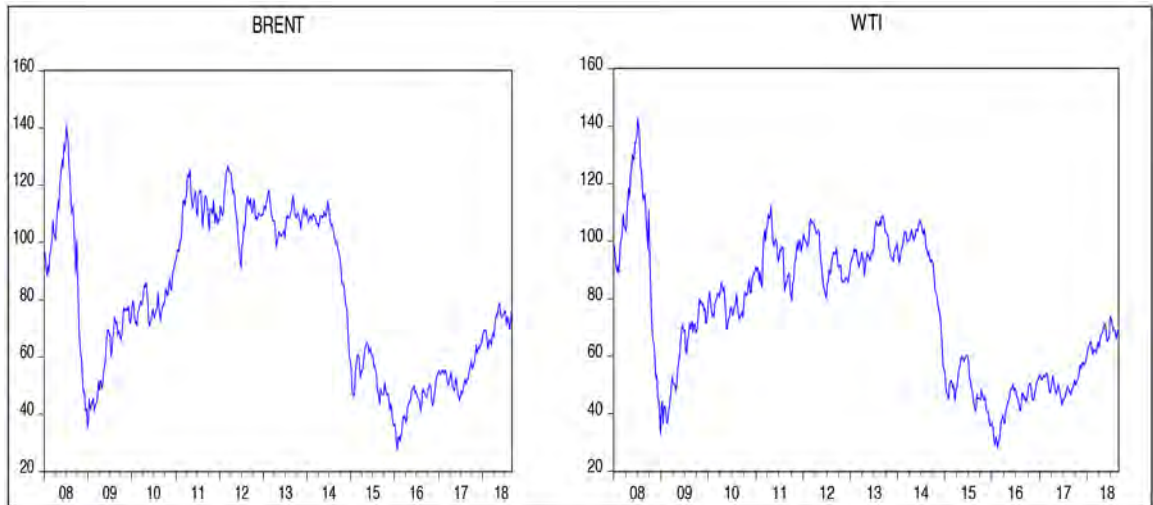
IV. Data

In order to investigate the presence of mean reversion in oil markets, the weekly spot prices of Brent and WTI crude oil for the timeframe January 2008 to August 2018 was used. Graphs and descriptive statistics for Brent and WTI oil price series are given in Graph1 and Table 1.

Table 1. Descriptive Statistics for oil prices

| | BRENT | WTI |
|-----------------------|----------------------|-----------------------|
| Mean | 81.22379 | 75.76975 |
| Median | 77.24000 | 78.12000 |
| Maximum | 141.0700 | 142.5200 |
| Minimum | 27.76000 | 28.14000 |
| Std. Dev. | 27.55979 | 24.14637 |
| Skewness | 0.000301 | 0.059406 |
| Kurtosis | 1.641272 | 2.063380 |
| Jarque-Bera (Prob) | 42.84588 (0.0000) | 20.68730 (0, 0000) |

Table 1 and Graph 1 show that the Brent and WTI oil price series are very volatile and their average price is \$81.22 and \$75.76 respectively. The oil prices, which were around \$100 at the beginning of 2008, reached a peak of approximately \$140 in July. Because of the effects of the crisis experienced in this period, the oil prices started to decline rapidly and decreased by \$35 at the end of 2008. After this period, the decrease in the effects of the crisis, OPEC's production cuts and the recovery in the world economy led to a rise in the oil prices. As of the first quarter of 2011, oil prices rose again to over \$ 100. Oil prices, which started to decline again in the second half of 2014, decreased to below \$30 at the beginning of 2016. The decision to cut down the production of OPEC members and Russia has led to a gradual increase in the oil prices after 2016.

Graph 1: Time Series Plot of Weekly Oil Prices in US Dollars for The Period January 2008 to August 2018

V. Empirical Results

In the study, firstly the conventional ADF and PP unit root tests was applied in order to examine mean reversion in Brent and WTI weekly oil prices. The ADF and PP test results with a constant and with constant and trend are reported in Table 2. As observed in Table 2, the calculated ADF and PP unit root t-statistics for both oil price series are lower than the critical values at %1, %5 and %10 levels. Hence, it is not possible to reject the null hypothesis implying that oil prices are non-stationary. This means that both of the oil price series are not mean reverting process.

Table 2. ADF and PP Unit Root Tests Results for Oil Prices

| | | ADF | | PP | |
|--|--------------------------|-----------------------|-------------------------|-----------------------|-------------------------|
| | | With constant | With constant and trend | With constant | With constant and trend |
| BRENT | Test statistic (p-value) | -1.628220 (0.4674) | -1.717064 (0.7427) | -1.869526 (0.3468) | -1.981682 (0.6096) |
| | Critical Values (%1) | -3.441903 | -3.974677 | -3.441882 | -3.974647 |
| | Critical Values (%5) | -2.866529 | -3.417937 | -2.866519 | -3.417923 |
| | Critical Values (%10) | -2.569487 | -3.131423 | -2.569482 | -3.131415 |
| WTI | Test statistic (p-value) | -1.861671 (0.3506) | -2.007464 (0.5955) | -2.133246 (0.2317) | -2.303797 (0.4307) |
| | Critical Values (%1) | -3.441903 | -3.974677 | -3.441882 | -3.974647 |
| | Critical Values (%5) | -2.866529 | -3.417937 | -2.866519 | -3.417923 |
| | Critical Values (%10) | -2.569487 | -3.131423 | -2.569482 | -3.131415 |
| Lag Length is selected according to SIC for ADF unit root test. Barlett kernel for spectral estimation method and Newey-West for bandwidth is used in the PP unit root test. | | | | | |

ADF and PP unit root tests do not take into account the structural breaks in the constant and trend of the oil price series. Many studies have found the evidence of structural breaks in oil market ((Serletis (1992), Postali and Picchetti (2006), Maslyuk and Smyth (2008)). For this reason, in the study, LM unit root test developed by Lee ve Strazichich (2003) which takes into account two structural breaks was applied. Table 3 shows the results for the LM unit root tests with two breaks. Model A includes two breaks in the constant while Model C includes two breaks in the constant and trend. As can be seen from Table 3, in both Model A and Model C the null of unit root with two structural breaks can be rejected because the LM test statistic of Brent and WTI price series is bigger than the critical values at %1, %5 and %10 levels. These results imply that each of the oil price series is stationary with two breaks and mean reversion. The two breaks in the constant occurred in July 2009 and September 2016 while the breaks in the constant and trend appeared in April 2009 and November 2016 for Brent oil price series. In the WTI price series, while the breaks in the constant observed September 2009 and February

2010, the breaks in the constant and trend occurred in April 2009 and June 2016. The breaks in 2009 and 2010 could be because of the decrease in the effects of the crisis and OPEC's production cuts. The reason for the break in 2014 could be the excess production. On the other hand, in the break of 2016, OPEC and Russia's decision to cut production could be effective.

Table 3. LM Unit Root Test with Two Break Results for Oil Prices

| | Model | Lag order(k) | Break points (T_{B1} - T_{B2}) | LM test statistic |
|--|-------|--------------|--------------------------------------|-------------------|
| BRENT | A | 15 | 31.07.2009-30.09.2016 | -4.5642 |
| | C | 14 | 24.04.2009-04.11.2016 | -10.7252 |
| WTI | A | 7 | 18.09.2009-12.02.2010 | -6.9439 |
| | C | 12 | 17.04.2009-06.06.2014 | -11.8078 |
| The critical values for Model A: -4.545, -3.842 and -3.504; Model C: -6.16, -5.59, and 5.28 at % 1, % 5 and % 10 levels respectively ((Lee and Strazicich, 2003) | | | | |

In summary, the traditional ADF and PP unit root test results without structural breaks indicate that the Brent and WTI price series do not mean revert in other words, are non-stationary. On the other hand, the results of LM unit root test allowing for two structural breaks shows that the reason for non-stationary series is that the structural breaks in the oil series are not taken into account. Also LM test results reveal that the oil series are stationary with structural breaks and mean reverting. The results obtained from traditional unit root tests are similar to the studies by Sivapulle and Moosa (1999), Pindyck (1999), Taback (2003), Coimbra and Esteves (2004). The results of LM unit root test show similarity with Serletis (1992) and Postali and Picchetti (2006) that find evidence of mean reversion in oil market.

VI. Conclusion

In this study, the existence of mean reversion in weekly Brent and WTI price series for the period January 2008 to August 2018 is examined. In this context, the conventional ADF and PP unit root test and LM unit root test with two breaks developed Lee and Strazicich (2003) were employed. Unit root tests analyze the stationary of time series. If a series are stationary, it will tend to mean reversion and fluctuations in the series will be temporary.

According to ADF and PP test results, Brent and WTI oil prices is non-stationary in given period. This mean that there is not a mean reversion in oil markets. Whereas, LM unit root tests with two breaks could reject the null of unit root. LM test results show that each of the oil price series is stationary with structural breaks and mean reversion. The unit root test results are contradictory because of the fact that the conventional unit root tests do not consider structural breaks. Therefore, the results obtained from the conventional unit root tests that do not allow structural breaks may not reflect the truth.

Findings from the study show that there are structural breaks in the oil price series and the oil market tends to mean reversion. This situation indicates that the oil prices will return to the long-term equilibrium again if the prices are removed from the long-term equilibrium because of positive and negative news in the market. Shocks experienced in the market will not be persistent. In this respect, it is expected that the findings of the study will contribute to the investment decisions of the policy makers, investors and researchers by allowing them to make more accurate estimates of oil prices.

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AN OBSERVING ON THE CAUSALITY BETWEEN INFLATION AND INTEREST RATES IN TURKEY

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1. Introduction

In economic literature, the interest rates defined in various ways such as nominal and real term play an important role to ensure stability in the market. On the other hand, the inflation rate is also an important indicator for the stability of economy. In this study, it is tried to analyze the causality between interest rate and inflation. Even though political authority ruled government monetary policy in Turkey has frequently claimed that the high interest rates are the major factor for increasing inflation recently. The general consensus in literature has accepted that high inflation results in the high interest rates.

The relation between nominal interest rate and inflation is well known hypothesis, defined by Fisher (1930). This hypothesis claimed that expected inflation has an effect on nominal interest rate while real interest rate remains constant. Many of papers have confirmed the basic Fisher Hypothesis associated with the Fisher's findings³ (Crowder and Hoffman, 1996, p. 103). Although many papers have analyzed the relationship between interest rates and inflation in both theoretical and empirical methods. The definitions of interest rates such as real rates, nominal rates, deposit rates, and money market rates have differed from each other. These studies usually have focused on inflation effect on interest rates, e.g. Wilcox (1983), Benhabib, Schmitt-Grohe and Uribe (2002), Berument and Jelassi (2002), and Fahmy and Kandil (2003) On the other hand, Barshky and Delong (1991) examine the influence of interest rates on inflation (Teker, et al, 2012: 42). Barsky and Delong (1991) have examined interest rates and inflation from 1879 to 1913 in the US, even though they have seen deflation before 1896 and after followed by inflation. Average inflation has been 3.1 percent higher in years after 1896 but nominal interest rates have not been any higher after 1896. The study said that there was no serial correlation between interest rates and inflation.

The study investigates the causality between interest rates and inflation in Turkey for the period of 2004 and 2008 used monthly data. The organization of this study is as follows. In section 2, the empirical literature is outlined for the relationship between interest rates and inflation. Section 3 defines the data and method of this study. Section 4 is the conclusion and some remarks about the hypotheses.

2. Literature Review

The debates on the Fisher effect or hypothesis, nominal interest rates had a one to one relationship, examined in numerous papers. It can be said that most of the papers confirmed the Fisher effect in long run but not in the short run. Another hand, some papers have totally rejected the Fisher Hypothesis in their empirical application. The limited works had a different view on the relationship between nominal interest rates and inflation, they claimed that the dimension of the Fisher effect is vice versa that means high interest rates led to high inflation. Some of the papers about the Fisher effect's discussion as follows;

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3 For details, see Fama (1975), Levi and Makin (1978), Melvin (1982), Lucas (1980), Fried and Howitt (1983), Rose (1988), Mishkin (1992), Evans and Levis (1995).

Kugler (1982) applied the bivariate autoregressive model to data from five countries (US, UK, Germany, France and Switzerland). The inflation variable was given by consumer price index and because of that the short term interest rates used was not the same for all countries, for the US the rate on one month treasury bills was used, for UK, France and Germany the rate on one month interbank deposits, for Switzerland the rate on one month eurocurrency deposits were preferred as proxies. The empirical evidence presented that the traditional approach (inflationary expectations as the distributed lag of actual inflation), as well as the approach of Fama (rational expectations and constant real interest rates) to the modelling, was not appropriate

Al-Khazali (1999) examined the Fisher effect in nine countries in the Pasific-Basin. It used the Augmented Dickey Fuller test to detect the stationary level of interest rates and inflation. The result showed that short and long run interest rates, inflation and spread the long run interest rate and inflation was in the first degree of integration for all countries. The study found that the hypothesis of no-cointegration between inflation and short term interest rates while between inflation and long run interest rates were not rejected for all countries. Thus, it might be said that short term and long term interest rates have no influence on future inflation in the Pasific-Basin countries. The VAR model used in the study showed that nominal interest rates were insufficient predictors for future inflation in most countries.

Booth and Ciner, (2001) used monthly data which were nominal Eurocurrency interest rates and inflation for 10 countries in the period of 1978 and 1997. The study indicated that each country's Eurocurrency rate cointegrated with its inflation rate in long run. Majority of the countries in the sample had a one to one relationship between expected inflation and Eurocurrency rate.

Berument and Jelassi (2002) had tested Fisher effect for a sample 26 countries specifying the long run relationship between nominal interest rates and inflation considered with short run dynamics of interest rates. It is found that the strong version of Fisher effect appeared in 16 out of 26 countries and also Fisher effect held more for developed countries than the developing ones in the sample for the period of 1966 and 1998.

Fahmy and Kandil, (2003) claimed that there was no fisher effect in short run since short term interest rates were associated with changes in expected inflation. Nevertheless, inflation and nominal interest rates moved together with common stochastic trends in a one to one relation at the long horizon. They used monthly data from 1980 to 1990 and preferred Johansen method for cointegration.

Million (2004) used a Threshold Autoregressive model (TAR) to residuals of the cointegration relationship. It was found that there was strong evidence for non-linear mean reversion properties for the real interest rates of the US Treasury Bill market. The evidence also showed the puzzle of why the Fisher effect appears to be strong in some periods but not in others. Fisher effect appears to be strong in the periods when interest rates and inflation exhibit stochastic trends, however, these variables did not exhibit stochastic trends simultaneously. It is exactly in these periods that Mishkin (1992), reexamined the widely accepted view that there is a strong Fisher effect in postwar US data, unable to detect any evidence for Fisher effect.

Granville and Mallick, (2004) examined Fisher effect used by Johansen cointegration test with annual data over from 1900 to 2000 in UK. Nominal interest rates adjust on a one by one basis with the change in expected inflation like Fisher effect.

Herwartz and Reimers (2006) examined the link between nominal interest rates and inflation with the cross section data of 114 countries over a period capturing at most 43 years of monthly observations. The study focused on widely known econometric approaches to integration and cointegration tests. The result of the study showed that the Fisher Coefficient is likely less than unity. Interest rates and inflation have been found in a long run relation

for most countries. However, large positive changes of inflation, high inflation risk or high interest rates may not exist in a long run in the states in where the different economic conditions arise.

Şimşek and Kadilar (2006) analyzed nominal interest rates without tax and inflation and that these variables were co-integrated in long run used ARDL test and Johansen method, thus it is said that there was Fisher effect in Turkey for the period of 1987 and 2004.

Nezhad and Zarea (2007) investigated the Granger causality relationship between interest rates and inflation in Iran's economy, Toda –Yamamoto's Ganger causality test, as well as ARDL method, were used for the period of 1959 -2002. Since the hypothesis was that the rate of interest is the Granger cause of the rate of inflation the results of empirical analysis showed that the rate of interest was the cause of inflation in Iran's economy

Gul and Açıkalin (2008) empirically investigated the cointegration used Johansen methodology between nominal interest rates and inflation in the Turkish Economy. The cointegration results provide the expected hypothesis in which a long run stable relationship between nominal interest rates and inflation exist. This indicated that the result of the study had confirmed the Fisher Hypothesis in the case of Turkey from 1990 to 2003.

Sathye et al, (2008) performed ADF unit root test for stationary level and thereafter for the co-integration used Engle-Granger method, finally used Granger causality test on monthly data of inflation and interest rates for the period of 1996 and 2004. It is found that expected inflation and nominal interest rates were co integrated in India. Therefore, the study confirmed the Fisher effect in the Indian financial market and expected inflation caused by nominal short term interest rates.

Westerlund, (2008) proposed two new panel cointegration tests applied under general conditions and shown by simulation gave more powerful than existing tests. The news tests applied to a panel of quarterly data of 20 OECD countries for the period of 1980 and 2004. Finally, Fisher effect accepted once panel evidence on cointegration was taken into account.

Yılançı, (2009) investigated the Fisher effect in Turkey for the period of 1989 and 2008 used quarterly data. The study applied nonlinear cointegration method and used Engle Granger method to compare the results. The study claimed that there was no evidence to support the Fisher effect.

Teker et al, (2012) examined the relationship between deposit interest rates and the consumer price index in Turkey by using the threshold vector error correction (T-VEC) t-model with a threshold autoregressive unit root analysis in the first step for period 2002 and 2011. The results of T-VEC model showed that the inflation are positively affected by their past two and one periods of respectively.

Awomuse and Alimi, (2012) worked the relationship between expected inflation and nominal interest rates in Nigeria for the period of 1970 and 2009. They used Johansen method and EC mechanism and found that nominal interest rates and inflation moved together in long run but not one to one basis, that meant Fisher effect did not hold in Nigeria

3. Empirical Method and The Results

Nominal interest rate represented for the monthly average rate of return in Domestic Treasury Bond as a Proxy and CPI data have a correlation for the period of 2004 and 2018 in Turkey. Especially, both variables tremendously have gone up since mid-2018. Increasing interest rates may spoil the financial stability of the banking system that's why the interest rate is one of main indicators considered for the stability of the Turkish Economy (Apaydın, 2015 and 2018).

Table 1 Trend Between Nominal Interest Rates and Inflation in Turkey (2004-2018)



Source: HYPERLINK “<http://www.tcmb.gov.tr>” www.tcmb.gov.tr , and HYPERLINK “<http://www.treasury.gov.tr>” www.treasury.gov.tr

It can be seen in Table 1 that nominal interest rate and inflation have a close relation with each other recently. This study examines whether inflation rate causes high interest rate or vice versa in long run. The study analyzed the causality between nominal interest rate and inflation with monthly data by the period of 2004 and 2018. In the empirical application, inflation represents for the change of CPI rates in the base year of 2003 and nominal interest rates are determined by the monthly average rate of return in domestic borrowing bond as a proxy variable. Data were obtained from websites of the Ministry of Treasury and Finance and the Central Bank of the Republic of Turkey.

In the study, firstly, stationary tests of variables have been run thereafter it is examined Toda-Yamamoto causality testing procedure based on VAR model. It is summarized the results of Augmented Dickey Fuller (ADF) test for the stationary of variables and also used Phillips-Peron test to compare the ADF results in Table 2.

Table 2: Augmented Dickey Fuller and Phillips Peron tests for Unit Root

| ADF Tests | | | | | | | |
|-----------|------------|-----------------|--------------------------|------------------|-----------------|-------------------------|---------|
| | Level | | | First Difference | | | |
| Variables | Test Rank* | Test Statistics | Critical Value** (0.05) | Test Rank* | Test Statistics | Critical Value** (0.05) | Results |
| NIR | (1, c) | -2.1474 | -2.877919 | (0, c) | -18.45499 | -2.877919 | I(1) |
| INF | (1, c) | 0.0633 | -2.877919 | (0, c) | -8.326966 | -2.877919 | I(1) |
| PP Test | | | | | | | |
| | Level | | | First Difference | | | |
| | Test Rank* | Test Statistics | Critical Values** (0.05) | Test Rank* | Test Statistics | Critical Value** (0.05) | Results |
| NIR | (2, c) | -1.82806 | -2.877823 | (1, c) | -18.43132 | -2.877919 | I(1) |
| INF | (1, c) | 0.44594 | -2.877823 | (3, c) | -8.471932 | -2.877919 | I(1) |

*The terms in parentheses represent for lag length and constant term, respectively

**MacKinnon (1996) critical values.

Note: NIR denotes nominal interest rates and INF denotes inflation rates

Table 2 has shown that the results of ADF and PP tests defines variables as stationary in order of first degree, therefore it can be used traditional Granger method to analyze causality between nominal interest rate and inflation. The Granger Causality test is appropriate to carry out empirical studies. However, traditional Granger Causality test has its limitations. Two-variable Granger Causality test without considering the effect of other variables may be led to possible specification bias. Because of that, two variable Granger Causality test results might be insufficient. Additionally, time series data could be non-stationary and this problem could illustrate the problem of spurious regression. The solving for this kind problem in Granger Causality test is to consider the first degree values of variables. Nevertheless, this solution might induce a loss of information.

Toda and Yamamoto (1995) proposed a simple procedure requiring the estimation of augmented VAR, given the asymptotic χ^2 -distribution of the Wald statistics, when the testing procedure is robust to cointegration properties.

This study uses a bivariate VAR ($k + d_{\max}$), k denotes lag lengths of VAR and maximum order of integration for the level values of variables, two steps procedure is followed; the first, the determination of the lag length and the second the selection of the maximum order of integration for the level values of variables in the system.

The equations seen below are used the estimation of Toda-Yamamoto Causality;

$$NIR_t = \alpha_0 + \sum_{i=1}^k \alpha_{1i} NIR_{t-i} + \sum_{i=1}^{k+d_{\max}} \alpha_{2j} NIR_{t-j} + \sum_{i=1}^k \phi_{1i} INF_{t-i} + \sum_{i=1}^{k+d_{\max}} \phi_{2j} INF_{t-j} + \varepsilon_{1t}$$

$$INF_t = \beta_0 + \sum_{i=1}^k \beta_{1i} INF_{t-i} + \sum_{i=1}^{k+d_{\max}} \beta_{2j} INF_{t-j} + \sum_{i=1}^k \theta_{1i} NIR_{t-i} + \sum_{i=1}^{k+d_{\max}} \theta_{2j} NIR_{t-j} + \varepsilon_{2t}$$

Firstly, as VAR model runs using with this equation system, the information criteria shown in Table 3 was used for the choice of optimum lag length. As a result of this, VAR model is estimated with the number two lags according to information criteria in Table 3.

Table 3 Optimum Lag Length Selection

| Lag | LogL | LR | FPE | AIC | SC | HQ |
|-----|----------|------------------|------------------|-------------------|-------------------|-------------------|
| 0 | 697.7925 | NA | 9.10e-07 | -8.234231 | -8.197191 | -8.219199 |
| 1 | 1021.476 | 635.8761 | 2.07e-08 | -12.01747 | -11.90635 | -11.97238 |
| 2 | 1038.108 | 32.27972* | 1.78e-08* | -12.16696* | -11.98176* | -12.09180* |
| 3 | 1038.615 | 0.970530 | 1.86e-08 | -12.12562 | -11.86634 | -12.02040 |
| 4 | 1040.390 | 3.361164 | 1.91e-08 | -12.09929 | -11.76592 | -11.96400 |
| 5 | 1044.196 | 7.116278 | 1.91e-08 | -12.09699 | -11.68955 | -11.93164 |
| 6 | 1046.510 | 4.272746 | 1.95e-08 | -12.07704 | -11.59552 | -11.88163 |
| 7 | 1048.583 | 3.778545 | 2.00e-08 | -12.05424 | -11.49864 | -11.82877 |
| 8 | 1051.270 | 4.832710 | 2.03e-08 | -12.03870 | -11.40901 | -11.78316 |

It is used the lags number ($k + d_{max} = 2 + 1 = 3$) of two with adding to an exogenous lag for Toda-Yamamoto causality test. Finally, it is presented the estimation results of MWald (Modified Wald) test in Table 4.

Table 4 Toda-Yamamoto Causality (MWald) Test Results

| | <i>Chi-Square</i> | <i>Probability</i> |
|-------------------------|-------------------|--------------------|
| <i>INF</i> → <i>NIR</i> | 8.587658 | 0.0137 |
| <i>NIR</i> → <i>INF</i> | 2.970895 | 0.2264 |

As seen Table 4, it is estimated that nominal interest rate is not Granger cause to inflation but inflation has been Granger cause to interest rates in Turkey for the period of 2004:1 and 2018:9.

4. Conclusion

Since mid-2018, both variables have jointly started to increase and the debates on this case have occurred whether high inflation cause high interest rates or not. Answering this questions, the study has investigated the causality between nominal interest rates and inflation using Toda-Yamamoto method for the period of 2004 and 2018 in Turkey. For the empirical application, monthly data have been obtained the ministry of treasury and finance and central bank, interest rates were represented for the rate of return in domestic borrowing bonds and inflation calculated from CPI. In related literature, it is widely accepted that expected inflation causes one to one relation on interest rates in long run, called Fisher Hypothesis. Even though the limited works claimed that there is no correlation between interest rates and inflation or interest rates have influenced inflation, unlike Fisher Hypothesis. Since mid-2018, the Turkish economy has been met turbulence with increases of exchange rates, high inflation and high interest rates. From this point of view, the causality between interest rates and inflation plays an important role on whole economy for the policymakers aimed to stabilize the Turkish economy. Results of this study have shown that inflation has influenced high interest rates in Turkey for the period of 2004:1 and 2018:9. Therefore, policymakers might have measures high inflation to reduce interest rates.

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THE IMPACT OF R & D EXPENDITURES ON EXPORT AND ECONOMIC GROWTH

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1. Introduction

For all countries in the world, economic growth and development is extremely important. Nowadays, technological innovations have become a very important driving force in terms of development of countries and economic development. In this process, technological innovations play an important role in increasing production and export volume. It is possible to have technological innovations in two ways, which are so important for the economies of the countries and which provide facilities in the production process. The first one is the investments made by companies and countries for R & D activities, and the other is the transfer of these technologies from the countries that have reached the level of technology by completing R & D investments. In this way, enterprises aim to produce new products by using the technology obtained in the production process, to improve the quality of the products produced in the present, and to obtain competitive advantages in the production process by achieving cost advantages. (Yücel ve Ahmetoğulları, 2015, s. 89). In this way, national firms can easily sell their products in international markets and thus, foreign trade deficits may decrease. It is possible to say that the increases in R & D investments have positive effects on foreign trade as well as on economic growth. Thanks to the technological development obtained as a result of R & D investments, the production process can accelerate and thus the number of production can be increased. In addition, thanks to the new technologies obtained as a result of R & D investments, production with different tastes and preferences can be realized and product variety will be ensured. The increase in product variety and production amount would increase the amount of goods sold in the national market, which would contribute to the increase in domestic product and economic growth. More specifically, the companies and countries will be able to produce new and more quality products by catching the advanced technology level thanks to the R & D investments they will make, thus improving the quality of life of individuals and in the process of economic growth. (Özcan ve Arı, 2014, s. 40). Furthermore, thanks to R & D activities, more and more people can reach scientific knowledge which is one of the most important determinants of economic growth. In this way, the lack of knowledge and hardware of the domestic human capital, which causes the underdevelopment of nations, can be eliminated, and the production can be improved with more qualified personnel and improvements in production quality can be achieved. Therefore, the realization of economic growth especially in developing countries depends primarily on the realization of human capital. In this context, the investments to be made for R & D activities will not have much meaning unless the quality of human power, ie human capital is improved. (Keskin, 2011, s. 125). For this reason, it is of great importance to focus on investments in human capital in order to realize economic growth.

2. Literature Review

In the study conducted by Gülmez and Yardicioğlu (2012), the long-term relationship between R & D expenditures and economic growth using 1990-2010 period data from 21 OECD countries has been examined and the long-

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term expenditures of R & D in the result of the review has been found to have a two-way and meaningful causality relationship between economic growth.

In the study conducted by Yıldırım and Kesikoğlu (2012), the causal relationship between R & D expenditures and exports for the 1996-2008 period was examined using data from 25 sub-sector, as a result of the review of R & D expenditures exports direct one-way causality relationship has been found.

In the study conducted by Akıncı and Sevinç (2013), the relations between R & D expenditures and economic growth were examined in Turkey by utilizing the data from the 1990-2011 period. As a result of the examination, there has been a one-way causality relationship between private R & D expenditures, higher education R & D expenditures and total R & D expenditures and economic growth.

In the study conducted by Göçer (2013), the effects of R & D expenditures on high-tech product exports, foreign trade balance and economic growth were examined. As a result of the study, it was found that 1% increase in R & D expenditures increased the exports of high-tech products by 6.5%, information-communication technologies exports by 0.6% and economic growth by 0.43%.

In the study conducted by Özcan and Arı (2014) for 15 OECD countries in the 1990-2011 period, the relationship between R & D expenditures and economic growth was examined and it was determined that R & D expenditures had a positive effect on economic growth.

In the study conducted by Bozkurt (2015), the relationship between R & D expenditures and economic growth in Turkey is examined with the aid of data covering the years 1998 to 2013. As a result of the investigation, a unidirectional causality towards R & D in economic growth have been identified.

In the study conducted by Altıntaş and Mercan (2015), the effects of R & D expenditures on economic growth were examined by using data from the period of 1996-2011 for 21 OECD countries. It was determined that the one-unit increase in R & D expenditures increased the economic growth by 3.4 units.

In the study conducted by Dam and Yıldız (2016), TM-BRICS countries (Brazil, Russia, India, China, South Africa, Turkey and Mexico) for R & D and innovation impact on economic growth were examined using annual data for the 2000-2012 period. As a result of the study, the effect of R & D and innovation on economic growth was found to be positive and statistically significant.

By Özkan and Yılmaz (2017), R & D expenditures by high-tech product exports and per capita in the study in order to understand their impact on the falling income levels, panel data analysis with European Union members using the method in 12 countries and 1996 to 2015 period, data for Turkey were examined. As a result of the study, it is determined that R & D expenditures have a positive effect on high technology product export and economic growth.

In the study conducted by Taş et al. (2017), the impact of R & D expenditures on economic growth in Turkey by using data from the 2005-2015 period of industrial production index and R & D expenditures in the GDP has been examined. As a result of the examination of R & D investments in Turkey, it has been found that there is a causal relationship towards economic growth.

In the study conducted by Özçelik et al. (2018), the long-term relationship between R & D Expenditure and High Technology Exports has been examined for the selected 10 OECD Countries for the period 1996-2014, and as a result of the study, it has been determined that there is a relation of co-integration and bidirectional causality between R & D expenditures and high technology exports.

3. Definition and Importance of R & D

In recent years, the relations between R & D activities and export and economic growth have become one of the important issues in the field of economics. R & D activities which constitute the main source of technical developments are very important activities in terms of developing new products and techniques. Thanks to R & D activities, it is possible to increase the stock of information and thus to develop new production techniques and to produce new products (Özcan ve Arı, 2014, s. 40). In addition, R & D activities enable the production and marketing processes to be realized at a much lower cost and in a much more efficient manner through the use of scientific methods. In this context, R & D activities are defined as increasing the scientific and technical knowledge level at the end of a planned working process and using this knowledge in the production process. In the narrow sense, R & D activities can be defined as planned and productive works carried out to create new products and new production techniques in enterprises. In terms of enterprises, it is aimed to develop new products with R & D activities, to provide product variety, to increase the quality of the products produced and to decrease the production costs and to obtain the competitive advantage. In terms of the country's economy, R & D activities serve for the purpose of effective use of national resources, continuous increase of knowledge and production of national technologies (Ünal ve Seçilmiş, 2013, s. 13). It is possible to say that R & D activities, which have such a wide range of definitions and are mainly focused on increasing the production volume and quality, have an impact on many macro variables. The importance of R & D is also due to the impact on many macro variables. The developments that occur as a result of the networking activities, in fact, directly or indirectly affect the macro variables which are closely related to each other. It is possible to say that R & D activities have effects;

- ▶ On inflation,
- ▶ Export volume and export revenues,
- ▶ On import expenditures,
- ▶ On economic growth,
- ▶ Competitive power
- ▶ On Foreign Direct Investment,
- ▶ Product variety and product quality,
- ▶ On development level,
- ▶ On human capital,
- ▶ On technological dependence

It is not possible to distinguish these macro variables with close links between them. Therefore, the increase in R & D activities will have an impact on all of these macro variables as a whole. In addition, it is worth mentioning that the effects of R & D activities on specific trade and economic growth are felt directly and more intensely. The amount of expenditures made for R & D activities is directly affected by the production capacity and export volume

of the countries and thus it is highly effective on the formation of foreign trade balance (Göçer, 2013, p.220). For this reason, it is possible to talk about a very woolly and positive relationship between the amount of spending for R & D activities, export and import of high technology products, foreign trade balance and economic growth.

The Effects of R & D Expenditures on Exports

Increasing expenditures on R & D activities are extremely important in order to ensure sustainable export growth in a country. The new technologies that have produced thanks to R & D activities and the innovations achieved through these technologies are predominantly effecting exports. Since the 80s when the technology have begun to be used in the production process intensively, R & D activities and export have become a duo which integrate each other completely. The continuity of one country's export and the development of its foreign trade are depend on developing new technologies constantly and increasing the production capacity through these technologies (Yıldırım and Keskinoglu, 2012, p. 166). In time, the obstacles named as tariff or quota on international trade have a downward tendency and this condition have increased the impact and importance of export on economic growth more and more. For this reason, developing countries, which seek to increase the social welfare, are working on economic policies to increase exports. At the top of these economic policies, technological investments and the applications towards to increase R & D activities are in the first place.

In this process, the increases of investments towards R & D activities enable the developments of new technologies and new production techniques constantly. In the production process, the usage of new technologies make more rapid and more qualified production possible when it is compared to previous production techniques. The acceleration of production rate thanks to positive developments in technology cause the acceleration of production volume naturally as well. Moreover, it goes without saying that the bigger part of performed production with obtained production techniques as a result of R & D expenditures is towards manufacturing industry (Polat, 2011, s. 30). Generated accelerations in both production volume and production quality have two important results. The first one is on inflation indirectly and the other is in the competitive power of international market. R & D activities are effective on inflation with effecting output. Nowadays, R & D has become one of the most important factors to cause the accelerations in output and factor productivity (Altıntaş and Mercan, 2015, p. 353). For this reason, the obtained new technologies as a result of R & D activities allow more production than before, in other words, they allow the acceleration of output. While there is no change in demanded output, the increase of supplied output will cause the decrease in the prices of relevant goods. In the case that this process is spread out all over the country, the general level of prices, in other words, the decrease in inflation will be possible. Furthermore, hi-tech products, which have bought with high prices, can be produced in the country thanks to the increase of R & D investments and they can be bought in a cheap prices now depend on the expenditures of production and shipment. It is possible to say that investments towards R & D activities contribute to decrease inflation indirectly.

R & D activities are effective to gain the competitive power by supplying improvements in production quality each and every day. In this process, the positive developments in production technology allow to produce more qualified products in contrast with previous times depend on the increase in R & D activities. The improvements in production quality bring competitive power to exporters and enable to sell products in markets where export is not possible before. This process, however, also causes that national firms have to deal with a constant international competitive pressure. This pressure enforces the exporter firms to learn new production techniques and thanks to this, it also contributes firms to improve their productivity. In this context, it is possible to say that the increase

in R & D investments and the developments in production techniques will effect export volume positively by bringing competitive power to the firms (Yıldırım and Kesikoğlu, 2012, p. 175). As it is seen, the competitive pressure in international markets in exporting process cause the new production techniques to be learned and to effect R & D activities positively. In this situation, it is possible to say that both export and R & D activities are effecting each other positively.

Finally, it should be mentioned that R & D activities may contribute to decrease foreign trade deficits by minimizing imports. In the production process, while countries, that prioritize R & D, technology and scientific methods, can make their own production, the dependency of other countries to imports have increased (Çelik and İlkay, 2016, p. 962). Thanks to the new production techniques depend on the increase of R & D expenditures, the goods, which are required by domestic consumers, now can be produced in the country. Hence, the production of required goods in domestic soils will naturally decrease the demand of those goods from abroad and it will decrease the expenses of import, thus, this will decrease the foreign trade deficit. This process is not only valid for final products but also for intermediary goods as well. Thanks to the technology, which have developed after R & D investments, make the production of intermediary goods in the domestic soils possible and this will enable to reduce both production costs and the usage of imported input. Moreover, the possible production of imported intermediary goods will also contribute to decrease the dependency of countries to the imported inputs in time as well.

5. The Impact of R & D Expenditures on Growth

Nowadays, R & D activities has become an important factor to effect the acceleration of factor productivity, foreign trade performance and economic growth. The accumulation of knowledge in the country, the size of R & D activities, educated skilled labor and the level of technological development are important for the economic growth of one country. Technological accumulation of knowledge and the size of R & D activities especially effect the performance of economic growth in one country directly. The developed technological information as a result of the increase in R & D activities effect economic growth positively by spreading themselves to the nation-wide level (Erdoğan and Canbay, 2016, p. 29). Thanks to the technology which either have developed or have obtained by R & D activities, more outputs can be gained in contrast with previous condition by using fixed amount of real capital and human capital. For this reason, the usage of technology in production process increases the factor productivities and hence, effects economic growth positively. It is possible to say that R & D activities are the engine of economic growth and there is a positive-oriented relationship between R & D activities and economic growth. In this regard, it should be indicated that the follow of technological innovations is vitally important for a long-term economic growth and its sustainability. This condition is not only valid for developed countries but also developing and less-developed countries as well. R & D activities are not only effective on providing a long-term economic growth but also on socio-economic development and they effect economic growth positively with exteriorities which have created by R & D activities.

In the process of economic growth and its realization, R & D activities, which provide accumulation of knowledge, have an important part. Technical information and accumulations, which will be used in production process, are obtained as a result of R & D activities and they spread all over the economic process. This process is contributing economic development and growth considerably. Moreover, the export of the developed technologies as a result of R & D activities and hi-tech products make a huge contribution for increasing national product and the realization of economic growth (Kılıç, Bayar and Özekicioğlu, 2014, p. 116). In addition to this, improvements

and developments in the information and communication technologies increase the numbers of employed labor force and the productivity of labor force. This situation effects the level of output and the export volume, hence, economic growth and development in a positive way (Uçkan, 2006, p. 30). In order developing countries to reach a stable and sustainable speed of economic growth, the adoption of new production techniques rapidly and the application of these new techniques are vitally important especially. Only this way, the increase of production and export volume will be possible and economic growth can be realized. At the point of the realization of this process, R & D activities and the investments towards these activities come into prominence. Therefore, R & D investments, which provide accumulation of knowledge, have a great importance in the manner of economic growth.

The impact of the increase in R & D investments on competitive power should be mentioned as well. The competition among countries with the globalization phenomenon make the development of existing technological structure and the adoption of fluctuation obligatory. Therefore, if the countries did not pay their attention to R & D works, the realization of a sustainable economic growth would be impossible for them. In this process, due to the developments of global economic structure and increasing competitive environment, firms and countries focus on the innovations in production process more and more (Kutbay and Öz, 2017, p. 333). The desire of obtaining a competitive power in international markets has an important role for this tendency of firms and countries. Qualified products with new production techniques will gain competitive power for the firms. In the studies, which research the relationship between the development of R & D activities and growth, it is confirmed that technologically developed countries are quite successful for both production volume and production quality and they have a supremacy over the other countries in terms of competitive power in the production of goods and services. It can be seen that the countries, which did not give due consideration to technological investments necessarily, weaken their international competitive power and after for a length of time, they have to withdraw from economic markets as well (Göçer, 2013a, p. 115). Thus, the production of qualified products with a low cost and the development of new technologies are quite important for the competition in international markets (Özer and Çiftçi, 2009, pp. 43-44). In this regard, R & D activities should be prioritized for gaining the competitive power and the realization of economic growth. Depend on technological innovations and the usage of developed technology, the decrease of imported input dependency will be at stake with the possible production of intermediary goods, which have used in production process, in domestic soils. In this condition, thanks to the decrease of imported input dependency, the financial resources of country can be used for the finance of several investments in domestic soils instead of import and hence, the production volume will increase and economic growth might be realized.

Along with the traditional role of R & D activities, it is observed that they lead the innovative works as well. In recent studies, the necessity of enhancing investments towards R & D activities is emphasized for closing the gap between countries about per capita income and growth rates. In this direction, due to the positive relationship between the expenditure level towards R & D activities and economic growth, the development level of countries can be understood from observing the size of resources allocated for R & D activities (Güzel, 2009, p. 33). In contrast with other countries, the sum of expenditures have quite high level in total GDP rate (Meçik, 2014, p. 673). When the economic growth rates and the level of per capita incomes are compared, it can be seen that there are many differences among the countries. It is convenient to argue that the technological infrastructure of countries, their possession of natural resources, their quality of human capital and both political and economic stability have an important role for the basis of these differences (Göçer, 2013, p. 216). In order to close gap between developing countries and developed countries about the difference of economic growth, the enhancement of R & D expenditures and thanks to this, the development of new technologies are quite important.

Finally, the expenditures towards R & D activities have indirect contributions for both the increase of export volume and the growth of national economy. The first of these contributions is to attract foreign investors into the country. Thanks to R & D investments, the deficiencies of infrastructure in less developed countries can be made up. The remedy of infrastructural deficiencies will impel foreign investors into the relevant country and the numbers of foreign investments will be increased as well. Moreover, these direct foreign investments will bring new production techniques, physical capital and the skills of marketing together to the relevant country (Can and Kösekahyaoglu, 2016, p. 126). Thus, the first R & D investments will contribute to arise new R & D yields indirectly. Apart from these important matters, it is quite convenient to say that R & D expenditures have the qualities that reduce inflation, decrease import expenditures and increase the level of developments as well.

The Size of R & D Expenditures in Turkey

Globalization causes international deregulation on the one hand and puts businesses into a competition in point of price and quality on the other hand. Turkey get involved in this process in 1980s. In the period after 1980, when commercial deregulation attempts have become rapidly and export-oriented economic growth model has embraced, the export volume has increased substantially and the composition of exported products has changed as well in Turkish economy (Züngün and Dilber, 2010, p. 223). In the same period, the initiations to develop counter trade between countries also have caused to increase trade volume rapidly. In this process, countries, which have depended on imported inputs in their economic structure, have effected negatively because of the emergent deregulation process (Çelik and İlkay, 2016, p. 962). The “Customs Union” process which began in 1996 have led to quicken competition and economic mobility thoroughly in Turkey. These developments have effected the manufacturing firms in Turkey positively. Moreover, globalization process have encouraged national investors who have desired to do business operations for selling goods in international process after Customs Union process. These developments have started, naturally, a strong and effective economic development process by lending an impetus to economic investments (Köse and Yıldırım, 2015, p. 220). In order to provide the continuity to this process and to realize a sustainable export increase with quality, increasing expenditures towards R & D activities in country-wide level is extremely important. After recognizing this reality, it is possible to say that R & D activities have become more realizable condition on the basis of countries nowadays by boosting them in a macro level. (Duman and Aydın, 2018, p. 50). In this process, the possible competitive power which countries can obtain in international markets thanks to their potential of production and exportation has importance in order them to achieve their economic goals. Thus, hi-tech product export has become a wide topic among economists because it has effected both Turkey’s and other world countries’ economic performance deeply. Economists are researching the ways to increase the exports including hi-tech products since they have improved the competitive power of countries in global markets (Kızılkaya et al. 2017, p. 68). However, while R & D activities have prioritized by world countries such a high level and necessary investments for them have been made exceedingly in them as well, it is quite difficult to say that Turkish economy pays attention to R & D activities and the necessary investments have been made. It is possible to examine this situation in Table 1 by using data.

THE IMPACT OF R & D EXPENDITURES ON EXPORT AND ECONOMIC GROWTH

Ali KONAK

Table 1. R & D Expenditures and Data of Macro Variables

| Years | R & D Expenditures (TL) | Total Export (Thousan ABD Dolar) | GDP (Thousand ABD Dolar) | R & D Man Power | Patent Applications | Growth Rate (%) | R & D Growth Rate (%) | Export Change Rate (%) |
|-------|-------------------------|----------------------------------|--------------------------|-----------------|---------------------|-----------------|-----------------------|------------------------|
| 1990 | 1.275.680 | 12 959 288 | 150 676 291 | 36.376 | 486 | 9.266 | - | 11,5 |
| 1991 | 3.330.047 | 13 593 462 | 150 027 833 | 38.323 | 692 | 0.720 | 1.61 | 4,9 |
| 1992 | 5.356.814 | 14 714 629 | 158 459 130 | 39.817 | 675 | 5.036 | 0.61 | 8,2 |
| 1993 | 8.776.139 | 15 345 067 | 180 169 736 | 44.349 | 792 | 7.651 | 0.64 | 4,3 |
| 1994 | 13.991.270 | 18 105 872 | 130 690 172 | 46.643 | 1192 | -4.668 | 0.59 | 18,0 |
| 1995 | 29.509.395 | 21 637 041 | 169 485 941 | 51.193 | 1690 | 7.878 | 1.11 | 19,5 |
| 1996 | 66.709.069 | 23 224 465 | 181 475 555 | 58.315 | 902 | 7.380 | 1.26 | 7,3 |
| 1997 | 141.781.665 | 26 261 072 | 189 834 649 | 63.601 | 1531 | 7.578 | 1.13 | 13,1 |
| 1998 | 260.422.137 | 26 973 952 | 275 768 695 | 62.181 | 2483 | 2.308 | 0.84 | 2,7 |
| 1999 | 489.162.882 | 26 587 225 | 255 884 300 | 66.330 | 3020 | -3.389 | 0.88 | -1,4 |
| 2000 | 798.437.970 | 27 774 906 | 272 979 390 | 76.074 | 3433 | 6.640 | 0.63 | 4,5 |
| 2001 | 1.291.891.387 | 31 334 216 | 200 251 925 | 75.960 | 3214 | -5.962 | 0.62 | 12,8 |
| 2002 | 1.843.288.038 | 36 059 089 | 238 428 126 | 79.958 | 1874 | 6.430 | 0.43 | 15,1 |
| 2003 | 2.197.090.032 | 47 252 836 | 311 823 003 | 83.281 | 1152 | 5.608 | 0.19 | 31,0 |
| 2004 | 2.897.516.250 | 63 167 153 | 404 786 740 | 86.680 | 2262 | 9.644 | 0.32 | 33,7 |
| 2005 | 3.835.441.076 | 73 476 408 | 501 416 301 | 97.355 | 3461 | 9.010 | 0.32 | 16,3 |
| 2006 | 4.399.880.662 | 85 534 676 | 552 486 912 | 105.032 | 5165 | 7.110 | 0.15 | 16,4 |
| 2007 | 6.091.178.492 | 107 271 750 | 675 770 112 | 119.738 | 6189 | 5.030 | 0.38 | 25,4 |
| 2008 | 6.893.048.199 | 132 027 196 | 764 335 657 | 125.142 | 7137 | 0.845 | 0.13 | 23,1 |
| 2009 | 8.087.452.600 | 102 142 613 | 644 639 902 | 135.043 | 7241 | -4.704 | 0.17 | -22,6 |
| 2010 | 9.267.589.617 | 113 883 219 | 771 876 791 | 147.417 | 8343 | 8.487 | 0.15 | 11,5 |
| 2011 | 11.154.149.797 | 134 906 869 | 832,546 270 | 164.287 | 10241 | 11.113 | 0.20 | 18,5 |
| 2012 | 13.062.263.394 | 152 461 737 | 873 981 786 | 184.301 | 11599 | 4.790 | 0.17 | 13,0 |
| 2013 | 14.807.321.926 | 151 802 637 | 950 595 270 | 196.321 | 12055 | 8.491 | 0.13 | -0,4 |
| 2014 | 17.598.117.442 | 157 610 158 | 934 167 809 | 213.686 | 12375 | 5.167 | 0.19 | 3,8 |
| 2015 | 20.615.247.954 | 143 838 871 | 859 794 177 | 224.284 | 13958 | 6.086 | 0.17 | -8,7 |
| 2016 | 24.641.251.935 | 142 529 584 | 863 711 710 | 242.213 | 16778 | 3.184 | 0.20 | -0,9 |

Kaynak: TÜİK, HYPERLINK "<https://biruni.tuik.gov.tr/gosterge/?locale=tr>" <https://biruni.tuik.gov.tr/gosterge/?locale=tr> (Erişim Tarihi: 15.10.2018)

Worldbank, HYPERLINK "<http://databank.worldbank.org/data/reports.aspx?source=2&country=TUR>" <http://databank.worldbank.org/data/reports.aspx?source=2&country=TUR>

(Erişim: 15.10.2018)

When the table 1. is examined, it can be seen that the value of R & D expenditures is given in TL, the values of export and national product are given in American Dollar. Nevertheless, although currencies are different, it is thought that partaking data in table might give an idea about the relationship between the development of R & D expenditures by years and the several macro variables of R & D expenditures. Since data on R & D expenditures and data on the number of labor force in the R & D field for 2017 cannot be found, the assessments have been made by year 2016. When the data of Table 1 is examined, it is seen that R & D expenditures have constantly increased by period examined (1990-2016). The greatest increase of R & D expenditures in the period examined have realized in 2016. While the export expenditures are 20.6 billion TLs in 2015, they have increased to 24.6 billion dollars in 2016. Before 2016, it is seen that R & D expenditures have relatively high increases since 2014 compared with the other years. However, it is possible to say that these increases in R & D expenditures are absolutely not

in sufficient size since these increases have been realized at a proportionally lower rate than the increases in GDP. Similarly, it is seen that the number of labor force in R & D field has constantly increased as well by years in the period examined. In the period examined, the number of labor force in R & D field has increased mostly in 2012. While the number of R & D workers are 164 thousand in 2011, it has reached approximately 184 thousand by increasing 20 thousand person in 2012 compared to previous year. Following years, it is seen that the number of labor force in R & D field has continued to increase and it has reached 242 thousand persons by 2016. The increase of the number of employed labor force in R & D field has demonstrated that the importance of R & D in Turkey has increased more and more. Finally, when the developments of the number of patent applications, one of the indicators of the developments of R & D expenditures, are examined, it is seen that there is an up-and-down progress in the number of patent applications until 2003 but from 2003 to 2016, it have increased constantly. The highest increase in the number of patent applications has happened in 2016 just like the R & D expenditures and 16.778 patent applications have been made. As it can be seen from the data in the table, R & D expenditures and R & D activities in Turkey have increased by years but these increases are in a limited level. When it is considered that only Volkswagen firm has spended 13.2 billion dollars for R & D expenditures in 2016, it can be clearly understood that Turkey's 24.6 billion TL worth of R & D expenditures are how inadequate for an expenditure level to R & D. When the value of R & D expenditures in the sum of GNP is examined, Turkey is in one of the last places with her % 0,88 rate among 40 countries which have allocated the most highest shares in R & D expenditures in the world. Expectations about following years are (2015 = 0,86) and (2016 = 0,86) in the same direction (Kavas, 2018). These numbers reveal that how Turkey fall behind the world countries about R & D expenditures and R & D activities. This condition also explains indirectly why Turkey is depend on the imported intermediary goods as well.

Conclusion and Suggestions

In this study, which have examined the impact of R & D expenditures on export volume and economic growth, it has arisen that countries have to prefer high-yield products made with advanced technology and have to export these products into international markets in order to reach a sustainable and high economic growth rate. The usage of advanced technology have now become an obligation especially for the developing countries, which have embraced growth strategy based on export, to reach high growth rates. The adaptation of international competition by increasing factor productivity, having new technologies in order to gain competitive power in international markets and the effective usage of these technologies have great importance for developing countries. The advanced technologies that will be used in production process is only possible to gain with the investments in R & D field and the increase of information stock. It is aimed that both the development of current technologies and the increase of the quality of human capital with the R & D expenditures. Thanks to this, the increase of production volume and economic growth depend on the improvements on production quality will be realized. Moreover, countries developing production techniques for making R & D expenditures, can both reduce import expenses by producing required intermediary goods themselves in production process and can raise export expenses by producing more value-added products, under the condition of importing raw materials and intermediary goods which are not produced in the country. Thus, recovering foreign trade deficits will become possible under the condition of especially increasing exportation and this process will effect economic growth positively. It is possible to say that Turkey falls behind world countries about R & D activities. Countries, which have invested R & D activities by allocating high resources, have obtained the status of developed country by getting in return for these

investments in time. In spite of this, developing countries still cannot comprehend the importance of R & D in the increase of exports and economic growth. Turkey is one of those countries either. In Turkey, adequate financial resources could not be allocated from both firms' and state's budget. The resources, which provided by the state to the firms for R & D expenditures, are usually one-off. Since the transfer of resources to be used for R & D expenditures is not continuous and it is not used in accordance with its purpose in these sources, the desired results cannot be obtained in R & D activities. In Turkey, it is possible to say that the incomprehension of firms about the importance of R & D activities in the production process is effective for the low level of R & D investments.

Firstly, the studies, which aimed to create an R & D awareness on the basis of firms and society, should be made and precautions should be taken for the development of R & D activities in order to develop R & D activities, which is the reason of the difference of development among countries in terms of export expenses and economic growth. Within the scope of these precautions, both firms and the governments should allocate financial resources of high amount from their budgets for R & D expenditures. Moreover, training human capital with knowledge and skill, who both can produce new techniques and can use these new techniques in production process, should be prioritized. Besides this, the encouragement of foreign investors, who provide technology transfer to the country directly or indirectly, have importance for providing the continuity of economic growth and enhancing the technological development level of the country. Within this scope, tax deductions or tax exemptions should be introduced by the government directly for the encouragement of foreign investors. Furthermore, projects developed in the national basis and expected to yield high returns should be supported in order to develop R & D field. In addition to this, financial resources, which have allocated from both equity capital and different resources, should be used for the purpose of developing R & D activities in accordance with their objectives. In addition, in order to gain competitive power in international markets by providing quality increases and cost deductions during the production process, the search for raw materials and natural resources to be used in the production process should be accelerated. Thanks to these precautions taken by government and firms, the production of hi-tech products and the obtainment of competitive power in international markets will become possible in Turkey as well.

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MONETARY POLICY AND THE IMPORTANCE OF BANK LENDING CHANNEL IN TURKEY

Cumali ERDEMİL¹

1. Introduction

Many economists recognize that monetary policy may affect the real economy at least in the short term. However, there seems to be little agreement on exactly how the impact of the monetary policy will be demonstrated. The same studies on the changes in monetary policy activities by the changes in the output remain silent on how the monetary policies affect the output through which channels. In other words, these studies analyze the monetary transmission mechanism itself as a “black box”(Bernanke and Gertler 1995:27).

There is a traditional view, called IS-LM analysis, on how monetary policy works. In the traditional transmission channel, the effects of monetary policy on the real economy are analyzed on the basis of the interest channel (Taylor 1995). According to this view, monetary policy affects economic activities through the cost of using capital. Monetary policy maker uses leverage on short-term interest rates to influence the cost of using capital. Changes in the use of capital (changes in the rate of interest) also affect expenditures such as investment, inventory investment, housing and durable goods. These changes in total demand then affect the production level. However, the traditional approach described in this way has some fundamental shortcomings in the operation of the monetary transmission mechanism (Bernanke and Gertler 1995:27-28).

The first of these shortcomings is that the effect of the use of capital on the total demand elements is not sufficiently explanatory. The second deficiency of the traditional approach regarding the impact of monetary policy is related to the time dimension of the impact of monetary policy. The main reason for the low interest rate effect in spending equations is the fact that monetary policy will have an effect on short-term interest rates rather than long-term interest rates. However, it was seen that monetary policy had a greater impact on the demand of long-term assets such as housing and production equipment. Bernanke and Gertler (1995) found this result surprising. Because, according to current belief, long-term interest rates should affect the demand of long-term assets. According to the current approach, monetary policy was considered to have a weak effect on long-term interest rates. In that time, the monetary policy should not affect the demand of long-term assets.

2. Bank Lending Channel: The Theoretical Discussion

These shortcomings in the traditional literature have led many economists to explore whether incomplete information and other friction in the credit markets would help clarify the strength of monetary policy. The mechanisms described in this literature are generally referred to as the credit channel of the monetary transmission mechanism. According to the advocates of the existence of the credit channel, this channel is an effort to open the “black box” found in the monetary transmission mechanism. According to them, the credit channel is not seen as a separate alternative or separate channel to the traditional money / interest channel. On the contrary, it is seen as a set of factors that increase, multiply and enrich the traditional interest rate effects. In other words, in the view of the credit channel,

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the importance of interest is not diminished in the monetary transmission mechanism. In this view, the place of interest rate in the monetary transmission mechanism increases due to the presence of asymmetric information in the credit markets and explains the events better.

According to the credit channel theory, the direct effects of the monetary policy on interest rates are increasing due to the internal changes in the external financing premium. The external financing premium is the cost difference between externally acquired funds, the issuance of shares, or through debt securities, and internally generated funds such as undistributed profits (Bernanke and Gertler 1995:29).

The size of the external financing unit reflects the imperfections in credit markets. Why will the activities carried out by the Central Banks have an impact on the external financing premium in the credit markets?

Bernanke and Gertler (1995: 29) describe two possible relationships to explain this.

The first one is the balance sheet channel. This channel refers to the potential impact of the changes in monetary policy on the net worth of the borrower, cash flows and income.

The second relationship is the bank credit channel. The bank lending channel, more narrowly, focuses on the possible effects of monetary policy changes on credit supply through banks.

The balance sheet channel is very well established and offers a theoretical structure with a high power to explain events (Berk 1998, and Bernanke and Gertler 1995). However, the bank lending channel is highly controversial and the importance of this channel depends on the development of non-bank financial institutions and financial innovations. The monetary transmission mechanism may vary depending on such factors as formal interventions, pricing mechanism in the economy, structure of financial system, financial position of banking system, capital movements, maturity structure of financial contracts, financial resources and structure of households and firms.

It is claimed that the interest rate does not fully reflect the cost of capital due to the existence of asymmetric information in the financial markets (Kashyap and Stein (1995).

Bernanke and Blinder (1988) added a single assumption to the conventional IS-LM model. They assumed that besides “money” and “bonds” which appear in the money channel, there is a third asset called “bank loans” that is imperfectly substitutable with the other two assets (Bernanke, 1993). The point of departure of the credit view is the rejection of the assumption that bonds and bank loans are perfect substitutes. Based on the assumption of informational imperfections in financial markets, the credit channel assigns an active role to the supply of bank loans.

In the Bank Lending Channel, monetary policy actions are transmitted to real economic activities through bank loans. Two conditions must be satisfied for bank lending channel to operate: (Cecchetti, 1995; Kashyap and Stein, 1994; Kashyap, Stein and Wilcox, 1992; Juks, 2004; Thornton, 1994; Jimborean, 2009; İnan, 2001; Oliner and Rudebusch, 1995; Oliner and Rudebusch, 1996b).

1) Monetary policy must affect banks' credit supply. When central banks implement a contractionary policy through open market operations to narrow the aggregate demand, bank deposits are reduced. Reducing of bank reserves causes bank liabilities (deposits) to reduce, it must also reduce bank assets. This decrease in bank deposits, if there is no perfect substitution between bank loans and securities, and banks cannot compensate this decrease by deposits or through the increase in their capitals, bank loans will decrease (Bernanke 1993). Therefore, loans

and securities have to be imperfect substitutes in banks' balance sheets so that monetary policies may affect banks' loan supply.

2) There must be borrowers depending on bank loans. Banks play a special role in the financial system, because they are exceptionally appropriate to overcome informational problems in the credit market. Due to this special role of the banks, some borrowers will not be able to reach credit markets unless they receive loan from the banks. Therefore, the reduction of credit volume created by banking system has to have significant macroeconomic results. In order for this condition to be hold, there must not be a relation of perfect substitutes between bank loan and other financing means in firms' balance sheets. In other words, firms should not be indifferent between issuing securities and receiving loans to finance their investment project. The amount of external funds in the financial structure of firms and the share of bank loans in the overall external financing determines the importance of banks loans for firms . The amount of bank dependent borrowers is associated with the development level of financial markets of the countries. Namely, the countries where capital markets are less developed and the direct access to these markets is poor have more bank dependent borrowers . An important result that can be obtained from credit view is that the monetary policy has a larger effect on the expenditures of small firms which are more bank dependent, rather than the expenditures of large firms which can directly access to capital markets (Mishkin 2010, Juks 2004, Cecchetti 1999, Bernanke 1993).

In other words, for the functioning of the bank lending channel, the monetary authority should reduce the banks' credit supply and the banks should reduce the borrowing of the borrowers dependent on the bank.

Contractionary monetary policy, which decreases bank reserves and bank deposits, decreases the quantity of bank loans available. Due to the fact that most borrowers depend on bank loans in order to finance their activities, the fall in loans decreases the expenditures for investment and consumption.

3. Recent Empirical Studies of Bank Lending Channel

In empirical studies on whether the credit channel is valid or not, the discussions focus on revealing whether the contraction in economic activity after the monetary contraction is due to a contraction in credit supply or a contraction in credit demand.

If the decrease in the economic activities and the decrease in the demand for loans, the interest rate channel opinion will be valid. If the decrease in economic activities decreases due to the decrease in credit supply, the bank credit channel / balance sheet channel opinion will be valid.

In empirical studies, the factors affecting the bank lending channel are as follows. Monetary policy, bank regulation policy, liquid positions of banks, the share of liquid assets of banks, capital of banks, balance sheet positions of banks ... etc. Some studies in the literature analyzing the bank loans channel are presented below.

In the literature, pioneering work with macro data related to the bank credit channel belongs to Bernanke and Blinder (1992). Their work covers the period 1959-1978 in the US economy and is important in two respects. Firstly, the federal fund rate was used as a policy tool and many studies were applied after that.

Second, the findings of this study, the final movements in securities and loans, confirm the bank lending channel. Another result of the study is that the unemployment rate and the changes in the bank credits together react to

the change in monetary policy. This emphasizes the importance of bank loans on real economic activity and shows that it plays an important role in the monetary transmission mechanism.

The impact of the contractionary monetary policy on loans in their work is short in the short term, but this effect has increased over time. The reason for the delay in the response of the bank loans to the monetary policy shocks is due to the fact that the contracts regarding the loans granted previously were not terminated immediately and the new loan agreements were rejected. It has been suggested that the bank credit channel works due to the simultaneous response of bank loans and the unemployment rates used to represent the real sector production. However, since the reaction of securities stock to interest rates is faster than bank loans, the monetary policy is interpreted to operate through the bank lending channel as well as the interest channel.

Kashyap, Stein and Wilcox (1992) also concluded that the implementation of contractionary monetary policy in the work for the US economy has reduced the bank credit supply.

In the study, it was concluded that the contractionary monetary policy affected the composition of external financing sources of firms. In their study, when a contractionary monetary policy was implemented, it was found that the share of financing bills increased, while the share of bank loans decreased.

Holtemöller (2002), in his study covering the period 1975-1998 for the German economy, as a result of the tight monetary policy, the increase in short-term interest rates increased the external financing premiums and found that this had a negative impact on inflation and a strong negative impact on production. This result was interpreted as the bank lending channel is effective.

Kishan and Opiela (2000) used quarterly data for 1980Q1-1995Q4 period in USA. In their work, they emphasized the importance of the bank capital leverage ratio in terms of the functioning of the credit channel. They examined the effects of bank asset size and bank capital on lending power in the period when the tightening monetary policy was implemented. According to the results, it was found that the credit supply of the banks with low capital was affected against the contractionary monetary policy practices. Small-scale banks are less likely to access alternative sources of financing against narrowing policy practices. This result was interpreted as the bank's credit channel operating.

For Turkey, in recent years, it has made a lot of studies on the operation of the Bank Lending. The findings of some of these studies are presented below.

Çiçek (2005), the channels of monetary transmission mechanism in Turkey 1995: Q1-2003: Q2 period examined by quarterly data. Çiçek (2005) concluded that the monetary policy was not effective on bank credit supply due to the lack of interest rates of loans.

Öztürkler and Çermikli (2007), monetary policy during the period 1990-2006 in Turkey investigated the effects of shocks. In their study, they found a one-way relationship between the monetary policy shocks and the real loans extended by banks. In addition, they showed the existence of a two-way relationship between real credit and industrial production. These findings were interpreted to be an effective channel of bank loans in the period discussed in Turkey.

Örnek (2009) in his study investigating the existence of a bank lending channel, concluded that monetary policy did not play an active role on bank credit supply. According to the Örnek, despite the increase in interest rates, the positive reaction of real production after the second quarter reveals the expansionary effect of loans on production. In other words, bank loans are being used independently of the interest rates in Turkey. The fact that the share of bank loans in the real change in real production is at very low levels indicates that non-bank resources are utilized in financing real sector investments. On the other hand, although the monetary policy in the bank lending channel did not have any effect on bank loans, it was determined that the effect on inflation was high.

Adalı and Bari (2017), in their study for the period 2002Q1-2016Q4, found that the producer price index was very effective and the increase in Producer Price Index decreased total loans. Furthermore, real effective exchange creates upward positive impact on total credit. Reaction from industrial production index on total credit is effective in very short period. Graph indicated that positive shock from IPI on total credit negatively impact but partially. It can be observed that policy rates (PR) is obviously effective on total credit. It means that increase in policy rate leads credit to shrink. Moreover, it can be understood that total security (TSS) and total deposits (TD) is positively correlated to total credit. It is obviously proven that when banks obtain liquidity, liquidity and assets is used as credit.

Peker and Cambazoğlu (2011), effectiveness of the bank lending channel in Turkey, 1990: 01-2008: 11 period, investigated using monthly data. They explain the findings of their work as follows: When the overnight interest rates are selected as the monetary policy variable, it is difficult to say that the bank credit channel is working effectively. Because after the monetary policy shock, banks responded to the shrinking loan volume by decreasing the securities portfolio. In other words, monetary policy shock did not reduce total loans in absolute terms. However, in the bank lending channel theory, the effective functioning of the credit channel is possible by the decrease in the credit supply. In empirical findings, after the monetary policy shock, the fact that industrial production has reacted with the same direction in the beginning period of industrial production is correct in terms of theoretical expectations. After this period, however, the fluctuation of industrial production, regardless of bank loans, makes the validity of the dependency principle doubtful. When M2 money supply was preferred as a monetary policy variable, important findings were found that the bank lending channel was working effectively.

Yiğitbaş (2013) the functioning of the bank lending channel in Turkey 1990: 1-2012: 4 period were analyzed using quarterly data. Yiğitbaş's findings can be summarized as follows: Bank loans react more rapidly to interest-based shocks, while industrial production results in a certain delay in response to bank loans and monetary shocks. In addition, one-way relationship between monetary policy shocks and bank loans was determined. A two-way causality relationship was determined between bank loans and industrial production. These results indicate that the implementation of monetary policy in Turkey affect the availability of credit. These reasons indicate that the bank lending channel is functional.

Karahan and Uslu (2016) investigated the bank lending channel of monetary transmission mechanism is valid for Turkey Economy. In their study, monthly data were used for the period of 2002-2014. Their findings can be summarized as follows: According to empirical analysis results based on impulse-response functions, bank credit channel is operating in Turkish economy. There was a decrease in bank loans because of a positive shock implemented on overnight money market rate. In other words, banks responded to the decrease in deposits against contractionary monetary policy, by reducing the loans instead of selling the securities in their portfolios. The response of industrial production index to the shock implemented on money rates was examined in order to assess the influence of monetary policy on real economic activity.

Their analysis results suggest that bank lending channel is an effective channel in monetary transmission mechanism for Turkish economy.

4. Structure of Turkish Financial System and Conditions of Banking Lending Channels²

To analyze the presence of just expressed conditions for the Turkish economy, and to make empirical analysis, one can use two indicators in Turkey. First, the banking system in Turkey can be viewed on the importance of the financial system. The second is the size of bank loans in borrowing of borrowers who apply to external financing.

The position of banking sector in financial market has great importance on monetary policy actions creating real effects through banks' loan supply. The fact that banks have a great share in financial sector, along with central bank changing banks' loan supply, enable it to have an effect on total expenditures. By 2017, banks compose 82% of size of assets of financial sector in Turkey. Based on this indicator, we can say that the banking sector is a dominant factor in determining the credit volume in the financial system.

The response of the banking system to the need for liquidity should be considered which assets are very important in the bank balance sheets for the operation of the credit channel (İnan 2001).

In this context, the share of banks in the financial system as well as the structure of asset size of the banking sector is very important for the central bank to affect the banks' credit resources. It is necessary that credit item in banks' balance sheets needs to be affected in accordance with monetary policy actions in order for bank lending channel to operate properly.

In other words, banks should not be able to divulge the impact of the decrease in deposits by increasing the issuance of securities after the tightening of monetary policy. For this reason, the share of loans in bank balance sheets should be higher and the share of securities should be low. If the share of securities in bank balance sheets is low, bank loans and securities will not be the perfect substitutes.

Table 1 demonstrated the structure of assets, for the selected years, in the Turkish Banking system.

it can be observed that, the share of loans within bank assets increased from 45% in 2006 to 65% in 2017. In the same period, the share of financial assets decreased from 35% to 12%.

In other words, the share of loans in bank assets increased. The percentage of loans in asset items has risen and the percentage of securities has fallen. It can be observed that loans have an important share in asset items in recent years.

Table 1: Structure of Assets in Turkish Banking (Percentage)

| Years | Liquid Assets | Financial Assets | Loans | Other* |
|-------|---------------|------------------|-------|--------|
| 2006 | 15 | 35 | 45 | 5 |
| 2009 | 13 | 35 | 48 | 4 |
| 2014 | 14 | 16 | 63 | 7 |
| 2017 | 15 | 12 | 65 | 8 |

* Fixed Assets, Rediscounts and Other Assets

Source: The Banks Association of Turkey

2 A similar study was conducted by Uslu and Karahan (2016) for the period of 2002-2014. In this study, some information in some tables of the study were used.

For the credit channel to function, not only the banks shares in total finance system but also the total deposits in banks' sources need to be high (İnan, 2001). The fact that the supply of bank loans are affected by the monetary policy actions requires the percentage of deposits in liabilities of banks' balance sheets to be high and the percentage of non-deposit sources to be low. Otherwise, the effects on the asset items may be limited, since there will be compensation for deposits changing as a result of monetary policy actions (Uslu and Karahan 2016:208)

Table 2 demonstrates the percentages of deposit and non-deposit sources in liabilities of banks' balance sheets in Turkey between 2006-2017. In Table 2, it can be observed that the access of banks to non-deposit sources has increased over the years in Turkish banking sector.

Table 2: Deposits and Non-Deposits Sources in Turkish Banking Sector

| Years | Deposits (% Share) | Non-Deposits Source (% Share) |
|-------|-----------------------|----------------------------------|
| 2006 | 65 | 18 |
| 2009 | 64 | 17 |
| 2014 | 52 | 28 |
| 2017 | 53 | 28 |

**Source: The Banks Association of Turkey*

The share of deposits within the resources of the banking sector decreased from 65% in 2006 to 53% in 2017. In the same period, the share of non-deposit resources increased from 18% to 28%. Although the share of bank deposits in total resources has decreased in the period covered, it still remains the source of funding with a share of 53% in bank resources. Despite the fact that the development of deposits and non-deposit is considered to weaken that power of monetary policy, it significant that deposits are dominant over non-deposit sources and they have increased just as the non-deposit sources over the years. In general, it is possible to say that monetary policy has the power to affect banks' loan supply for the effectiveness of bank lending channel in Turkey.

For the effectiveness of the bank lending channel, it is also necessary that borrowers are affected by the changing loan supply. In other words, it is necessary that the production and expenditures must be responsive towards the accessibility of bank loans. For this, bank loans and securities must not be perfect substitutes in the balance sheets of the private sector.

In other words, the share of bank loans in external financing is high and the share of securities issued should be low. Table 3 shows the change in the external financing structure of the private sector. Table 3 shows that the share of bank loans in external financing of the private sector increased from 80.6% to 87.7% in 2006. In the same period, the securities sector of the private sector decreased from 19.4% to 12.3%. For the private sector, it can be said that bank loans are the dominant external financing source at a high rate of 87.7%. Thereby, private sector in Turkey needs the intermediation of banks in order to meet their financing requirements and, accordingly, they are not irresponsible between issuing securities and providing bank loans. In other words, the resources obtained through the issuance of securities in the external financing required by the private sector are very low. This demonstrates that there are no alternative sources for substituting bank loans for the private sector. In brief, it is possible to say

that the private sector in Turkey depends on bank loans to finance their investment projects and, therefore, the changes in loan conditions could be real effects.

Table 3: Private Sector External Financing Types

| Years | Securities Stocks (% Share) | Bank Leans (% Share) |
|-------|--------------------------------|-------------------------|
| 2006 | 19.4 | 80.6 |
| 2009 | 19.5 | 80.5 |
| 2014 | 12.3 | 87.7 |

*Source: Uslu and Karahan (2016)

5. Empirical Analysis

5.1 Method and Data Selection

Comprehensive economic program implemented after the 2001 crisis (strong economy transition program) Turkey has been a major turning point for the economy.

The program has greatly reduced the fragility of the economy with practices aimed at eliminating major problems such as restructuring the banking and public sector and country risk.

One of the basic pillars of the structural process has changed the CBRT law. CBRT's objective is to ensure price stability. Moreover, vehicle independence was ensured by giving the CBRT the authority to directly select the monetary policy and monetary policy instruments it would use. Since 2002, the CBRT introduced the implicit inflation targeting regime, which focuses on price stability instead of the exchange rate. It has started to use short-term interest rates as a policy tool. Since 2006, the CBRT has started to implement an open inflation targeting regime. Thus, after many years, interest and inflation have decreased to single digit levels. As a result of the reforms and policies implemented, financial dominance decreased, financial markets began to gain depth and the reliability of policies and institutions increased. Thus, the operability of monetary transmission mechanism is strengthened.

The study covers the period starting from 2006 when the open inflation targeting regime was implemented.

In this study, the bank lending channel of monetary transmission was tested for Turkey during the period of 2006:Q1-2018:Q1, by using the VAR method. Sims (1980) states that, if there is a simultaneous relationship between the variables used in the economic model, all variables used in the model should be considered endogenous. This means that each equation's reduced form will consist of the same set of explanatory variables. Therefore, the researcher is not concerned with whether the variables included in the model are endogenous (internal) or exogenous (external) and this facilitates prediction (Asteriou and Hall, 2007). In addition, this method allows the possibility of differentiating the external (exogenous) monetary effect with the internal (endogenous) reaction carried out by the monetary authorities in line with the developments in the economy (Smets ve Wouters, 1999:490). Greene (1993) states that VAR model is more suitable and effective than other structural models to investigate the dynamic relationship between variables. Thus, in order to investigate the effects of a monetary shock on basic

economic variables, the VAR model has recently become a widely preferred econometric method. The series used in our analysis are presented in Table 4.

Table 4: The Series in VAR Model.

| Variables | Process | Abbreviation |
|---|------------------------------|--------------|
| Industrial Production Index | Reel+Log+Seasonal Adjustment | LSUE_SA |
| Overnight Money Market Interest Rate (monetary policy indicator) | - | BPPBFO |
| Produces Price Index | Log | LUFÉ |
| Real Exchange Rate | Log | LRKUR |
| Banking Sector External Debt Stock | Log | LBSTDBS |
| Total Volume of Credit | Real+Log | LRBSKRE |
| Total volume of deposits | Real+Log | LRBSTMEV |
| Total Security stocks | Real+Log | LRBSTMKIY |

In the empirical analysis, while total credit (BSKRE) and total security stocks (BSTMKIY) are used as a representative of asset side of bank's balance sheet, total deposit (BSTMEV) and external debt (BSTBS) is used as a liability side of bank's balance sheet. Industrial production index (SUE), producer price index (UFE) and real exchange rate (KUR) is used as a representative of economic activity, general price level and open economy respectively. After Bernanke and Blinder (1992) used short term interest rate as a measure of monetary policy shock, most studies in the literature did the same choice. In this regard, the indicator of monetary policy is used overnight money market rate (BPPBFO) in the empirical analysis.

Industrial production index series was seasonally adjusted. In addition, the producer price index, total volume of deposits and total security stocks were deflated by the producer price index and made real magnitudes.

All series except for money market interest rate measured in natural logarithms and natural logarithms of UFE, RKUR, SUE, RBSKRE, RBSTMEV and RBSTMKIY were denoted as LUFÉ, LRKUR, LSUE_SA, LRBSKRE, LRBSTMEV and LRBSTMKIY respectively.

5.2 Unit Root Tests and Optimal Lag Criteria

All variables must be stationary in VAR model. Otherwise, it must be first differenced of the series. So, we firstly analyzed stationary properties of the series by employing ADF (Automatic Dickey-Fuller), test in the empirical analysis. The results of unit root tests are presented in Table 5

Table 5: ADF Unit Root Test Results for Levels and Differences of Series

| LEVEL | | | FIRST DIFFERENCES | | |
|-----------|---------------------|---------------------|-------------------|----------------------|---------------------|
| Series | ADF Test Statistics | Test Critical Value | Series | ADF Tests Statistics | Test Critical Value |
| LSUE_SA | -0.048475 | -3.574446 | D(LSUE_SA) | -5.917170 | 3.577723 |
| BPPBFO | -2.029570 | -3.581152 | D(BPPBFO) | -5.501668 | -3.581152 |
| LUFÉ | 0.325462 | -3.574446 | D(LUFÉ) | -5.363186 | -3.577723 |
| LRKUR | -1.441273 | 3.574446 | D(LRKUR) | -5.623750 | -3.581152 |
| LBSTDBS | -1.279568 | -3.577723 | D(LBSTDBS) | -5.578710 | -3.577723 |
| LRBSKRE | -2.246082 | -3.574446 | D(LRBSKRE) | -6.720408 | -3.577723 |
| LRBSTMEV | -1.124998 | -3.574446 | D(LRBSTMEV) | -7.647285 | -3.577723 |
| LRBSTMKIY | -1.663503 | -3.577723 | D(LRBSTMKIY) | -5.242110 | -3.577723 |

Test critical values have a 1% accuracy level.

Table 5 shows that all of the variables become stationary by taking the first differences.

In the VAR model, the most appropriate delay in the model is another process that needs to be done

is the process of determining the optimal lag. For this, more than one criterion is used in the literature Johansen (1995) and Enders (1995). Among these are the Akaike information criterion (AIC), the Schwarz Information criterion (SC) and the final prediction error (FPE).

VAR model optimal lag criteria tests are presented in Table 6.

Table 6 represents that the optimal lag length is four periods according to AIC and FPE. Therefore, the optimal delay lag is taken as 4.

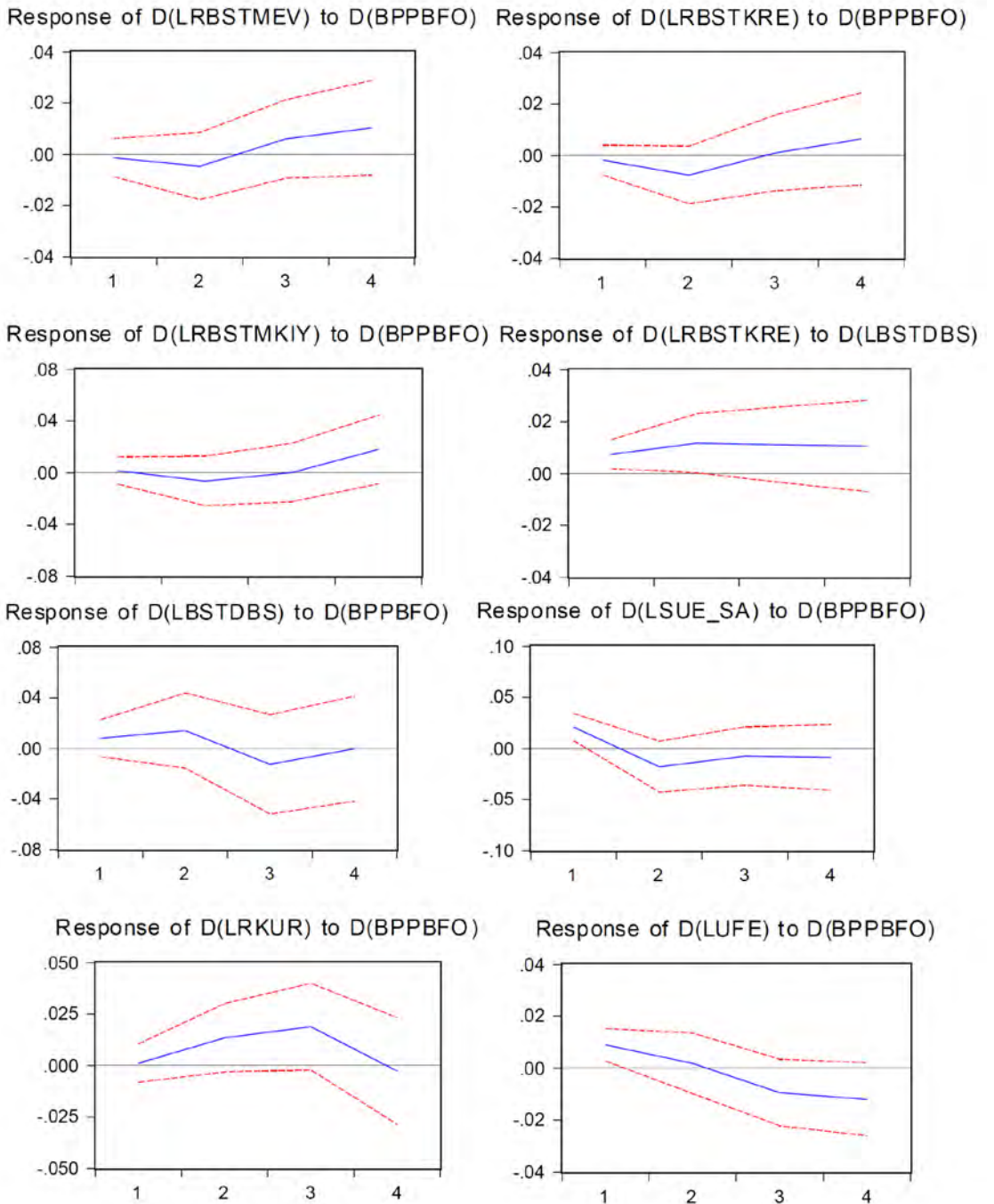
Table 6: Optimal Lag Criteria

| Lag | LogL | LR | FPE | AIC | SC | HQ |
|-----|----------|-----------|-----------|------------|------------|------------|
| 0 | 616.1824 | NA | 1.36e-22 | -27.64466 | -27.32026* | -27.52435 |
| 1 | 694.1908 | 124.1042* | 7.55e-23 | -28.28140 | -25.36182 | -27.19868 |
| 2 | 751.1606 | 69.91750 | 1.39e-22 | -27.96185 | -22.44708 | -25.91670 |
| 3 | 842.0534 | 78.49836 | 9.96e-23 | -29.18425 | -21.07429 | -26.17669 |
| 4 | 969.5494 | 63.74799 | 5.77e-23* | -32.07043* | -21.36529 | -28.10045* |

5.3 Impulse-Response Functions

Dynamic relations between variables in VAR model were analyzed with impulse-response functions. Responses by other variables in the system to a shock of standard deviation 1 in overnight money market rate representing monetary policy, provides information regarding the effectiveness of bank lending channel. Figure 1 displays the effect of a shock of standard deviation 1 in overnight rate on some other variables (Uslu ve Karahan 2016:212).

*Figure 1: Variables' response to overnight interest rate shock
Response to Generalized One S.D. Innovations – 2 S.E.*



After a positive shock implemented on overnight rate (overnight money market rate), the change in banks' balance sheets is compatible with the process of bank lending channel. In consequence of the shock implemented on money rate it is seen that deposits and loans decrease. However, banks are not able to compensate for this decrease through the issuance of securities. When faced with a contractionary monetary policy, the decline in loans is in line with the decline in deposits.

In order for loans to play an exclusive role in banks' balance sheets, banks need to reduce their loan's supply rather than selling securities in their portfolios against their decreasing deposits after contractionary monetary policy. The reaction of securities to overnight rate shock was neutral. In other words, after the contractionary monetary policy, banks were not able to compensate for the decrease in loans through the issuance of securities. This result indicates that loans and securities aren't perfect substitutes and therefore, monetary policy provides the condition of affecting the loan supply.

In order to analyze the reflection of monetary policy to real economy, response of industrial production index against the monetary shock was examined. As one can see from the impulse-response functions, response of industrial production index against the positive overnight rate shock was powerful and negative. The simultaneous movement of bank loans and industrial production index against the monetary shock indicate that the borrowers are bank-dependent. However, it is observed that the reaction of the shock reversed after the 2nd quarter and followed straight after the third quarter.

After the money rate shock, prices fell at the beginning and the effect was lost in the second quarter.

After the positive shock applied to interest rates, the real exchange rate increased until the third quarter and the effect began to decrease after the third quarter. In other words, after the contractionary monetary policy, domestic currency started to rise after the third quarter. Therefore, the determination of the exchange rate in Turkey's economy, it is possible to say that the effect of other factors such as international developments and expectations.

6. Conclusion

The contraction in economic activity after contractionary monetary policy continues to be discussed intensively. According to the advocates of the interest channel, interest rates increase after the tightening monetary policy. The rise in interest rates reduces credit demand. The decline in credit demand narrows the loans and thus the economic activities. According to the advocates of interest channel theory, the decrease in economic activities is the result of a decrease in the loan demand due to the increasing interest rates.

According to the advocates of the credit channel, deposits after the narrowing monetary policy decrease. Banks reduce this decrease in deposits by bringing down their balance sheets. Thus, banks' credit supply decreases. The decrease in credit supply reduces the expenditures of bank-dependent borrowers and decreases economic activities. Thus, according to the advocates of the credit channel, the decline in economic activities following the contractionary monetary policy is due to the decline in credit supply in addition to the demand for loans. According to them, the credit channel is not seen as a separate alternative or separate channel to the traditional money / interest channel. On the contrary, it is seen as a set of factors that increase, multiply and enrich the traditional interest rate effects. In other words, in the view of the credit channel, the importance of interest is not diminished in the monetary

transmission mechanism. In this view, the place of interest rate in the monetary transmission mechanism increases due to the presence of asymmetric information in the credit markets and explains the events better.

Two conditions must be met for the Bank Lending Channel View to be valid. First, Central Banks should be able to influence banks' loans. In other words, banks should not be able to compensate for the decrease in loans after the tightening monetary policy by increasing the issuance of securities or their capital. Secondly, the reduction in the credit supply of banks should be able to affect the expenditures of bank-dependent borrowers. In other words, borrowers from banks should not be able to compensate for the decrease in monetary policy-stimulated loans.

In the literature, pioneering work with macro data related to the bank credit channel belongs to Bernanke and Blinder (1992). Bernanke and Blinder focus on the balance sheet sizes of the banking sector. They have shown how the bank's balance sheet size is affected by the monetary policy narrowing the validity of the bank lending channel.

In this study, the 2006Q1-2018Q1 period after 2006, when open inflation targeting was applied, was discussed. In this study, it is tried to explain how the banking sector balance sheet is affected by the interest rate shock after the narrowing monetary policy. In the period covered, it was found that bank deposits and bank loans decreased as a result of the interest rate shock after the contractionary monetary policy. The reaction of securities to overnight rate shock was neutral. In other words, after the contractionary monetary policy, banks were not able to compensate for the decrease in loans through the issuance of securities. This result indicates that loans and securities aren't perfect substitutes and therefore, monetary policy provides the condition of affecting the loan supply. In addition to the result, response of industrial production index against the positive overnight rate shock was powerful and negative. It found that the results of the bank lending channel, can be interpreted as valid in Turkey in the period considered.

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22

THE EFFECTS OF TOURISM SECTOR ON BALANCE OF PAYMENTS IN TURKEY

E. Kaan CENGİZ¹

Introduction

In the 21st century, the most important component of the globalization in the world has been the globalization of capital and goods. Throughout the process, the flow of capital from developed countries to developing countries for high revenues and changing production circumstances have also affected international human mobility. This mobility started with capital flows to capital markets of other countries for profit. In the following period, classical production has been replaced by international production through direct capital investments. The mobility of capital owners and the capital between countries for production were followed by another element of production, mobility of labor.

The classical definition of tourism comes from the Latin word “tornus”, or turning. In English, the terms touring and tour are derived from the word tornus. In Turkish, the words of tourist and tourism mean travelers and travel, respectively (Ömer and Akat,1997: 2-3). Ogilvy defined the concept of tourist as the person who leaves his/her residence for a maximum of one year and who spends money in the places visited temporarily. In 1936, Norval defined tourist as the person who goes to a foreign country with a different purpose than permanent residence and income and spends the money he/she earned elsewhere in this country where he stays temporarily. (Kozak, Kozak and Kozak,2015:6-7). Although tourism is defined in its narrow sense as the activities of the economic actors who want to have fun and to spend time for the holidays, with globalization, it has become a rapidly increasing activity and industry in all countries.

Tourism is an activity that intersects with the traditional sectors of the economy. It requires inputs of economic, social, cultural and environmental quality. Therefore, it is defined in a versatile manner. The fact that tourism does not have the usual formal production function and the absence of a physically measurable output makes it difficult to define it as an industry. The structure of the tourism industry varies in each country. Even the main components of the tourism industry, such as accommodation or transportation, may differ between countries (Lickorish and Jenkins;1997:1).

Since 1960, the continuous growth of international tourism has increased the interest of the countries in tourism. Especially; the continuous increase in the demand for tourism, the solution of the foreign exchange shortage by increasing the foreign exchange supply of tourism, the fact that the tourism activities of the economic agents are affected less from the economic restrictions, tariffs, quotas or embargoes, the low cost of investment or development in the tourism sector, have increased the interest of countries in tourism (Manisalı and Yarcın, 1987:9)

1.1. Characteristics of Tourism

Conceptually, tourism is a set of events and relationships; and these events and relationships cannot be determined with single definition (Bulut, 2000: 73). Changes of location in tourism are short-term and temporary. In other

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words, the traveler intends to return in a few days, weeks or months. And it is accepted that there is no work towards gaining a profit during the visits of tourists and there is no intention to find a job or start a business (Burkart and Medlik,1981:42-43).

Tourism sector is one of the sub-sectors of industry of services. One of the most important distinguishing characteristics of tourism is that the goods and services produced in tourism are offered in the location where they are produced and that leisure time is required for their consumption. One of the constraints of the sector is that it takes time to create the necessary supply for increasing demand (Ürger, 1992: 13). Therefore, products cannot be packaged or displaced in the tourism sector. Tourism is a unified product. The specific goods or services the product consists of, who produces them, and for which prices they are going to be sold change depending on location, time and visitor. The compound or mixed characteristic of the product requires cooperation and coordination between all the parts that make it up, e.g. from production to marketing (Burkart & Medlik,1981:95).

Types of tourism are grouped under various titles. However, the following are the main six titles used; (Ceken; 2016: 18-22 and Kozak et al.,2015:21-47).

Types of tourism in terms of purpose are sea-sun tourism, hunting tourism, river tourism, health-thermal tourism, congress tourism, plateau tourism, cave tourism, golf tourism, cultural tourism, faith tourism, mountain and winter sports tourism, agro (agriculture) tourism, adventure tourism, gastronomy tourism and eco tourism. Types of tourism according to the origin of tourist are domestic tourism and foreign tourism. Types of tourism according to the age of participants in tourism activity are youth tourism, adult (middle) age tourism and third age tourism. Types of tourism by number of participants in tourism activity are individual, group and mass tourism. Types of tourism according to physical-social environmental changes are slow tourism, heritage tourism, urban/city tourism, diaspora tourism, halal tourism, voluntary tourism and dark tourism. Types of tourism according to the socio-economic status of the participants in tourism activity are: social tourism and luxury tourism.

1.2. Impacts of Tourism on Economy

Foreign tourism revenues are very important for developing countries. Because, tourism revenues have very important advantages compared with the economic assistance received from foreign countries. Tourism revenues are far from political and economic constraints and cannot be used as a means of pressure. On the other hand, tourism has a superiority than agricultural product and raw material export. First of all, prices of tourism goods and services are under the control of developing countries when compared with the prices of traditional export products. In addition, tourism revenues provide an opportunity of diversification for the developing country and it eliminates fluctuations in foreign currency revenues. Generally, tourism requires less foreign input (foreign currency output) for each unit of foreign currency it generates, when compared with other industries. Therefore, a larger portion of the tourism based foreign currencies can be used in the development of manufacturing industries or in paying off the foreign debts (Hepaktan and Çınar, 2010: 144). In addition to the fact that the tourism sector has an enlarging effect on the economy of any country, the employment in the sector and the foreign exchange revenue increase the importance of tourism sector. The effects of tourism on the economy are in two main forms: monetary and real. Economic effects of tourism with monetary characteristics are the effect of tourism on the balance of foreign payments, the effect of tourism on income, the effect of tourism investments, the effect of tourism on state income and expenditure. Economic effects of tourism on real characteristics are the effect of tourism on employment, the effect of tourism on other economic sectors, the effect of tourism on infrastructure and superstructure, the

effect of tourism as removing the inter-regional imbalance (Ünlüönen, Tayfun and Kılıçlar, 2015: 141-179). In the study, the effects of tourism on the balance of payments are emphasized.

1.3. Tourism Economy in the World

According to the following table.1, which is published in the 2018 report of the World Tourism Organization, international tourism mobility has increased by 4.2 times between 2005 and 2017. During this period, tourism mobility in developed countries increased with an annual average of 3.7 times, whereas tourism mobility in developing countries increased by 4.8 times. According to the data from regions, mobility in the European Region reached to 671 million people with an annual increase of 3.3 % and it reached to 323 million with an annual increase of 6.4 % in the Asia-Pacific Region. In the same period, international tourist mobility in the African Region reached 63 million people in 2017 with an annual increase of 5 %. According to the World Tourism Organization's 2017 annual report, the number of international tourists increased by 7 % compared with 2016 and increased by 84 million tourists, reaching to 1,323 million people in 2017. Thus, international tourism grew about 4% per year above the average for eight years. Between 2008 and 2017, 393 million people traveled for international tourism (2017 Annual Report; World Tourism Organization; p.12-14). According to the data in the table, tourism growth in 2017 is above average in Europe and Africa. In 2017, it is seen that 51 % of the international tourist mobility is conducted by Europe and 25 % is conducted by Asia-Pacific region. With its geopolitical location, Turkey is in the middle of these two regions.

Table.1: International Tourist Movements in the World

| Region | 1995 | 2000 | 2005 | 2010 | 2015 | 2016 | 2017 | Δ2016 - 17 (%) | Δ2005 - 17 (%) |
|----------------------|------|------|------|------|-------|-------|-------|----------------|----------------|
| World | 532 | 680 | 809 | 952 | 1.195 | 1.239 | 1.323 | 6,8 | 4,2 |
| Developed Countries | 342 | 430 | 469 | 515 | 655 | 686 | 716 | 5,9 | 3,7 |
| Developing Countries | 189 | 250 | 339 | 437 | 540 | 554 | 597 | 7,8 | 4,8 |
| Europe | 309 | 393 | 453 | 488 | 605 | 620 | 671 | 8,3 | 3,3 |
| Asia Pacific | 82 | 110 | 154 | 208 | 284 | 306 | 323 | 5,6 | 6,4 |
| America | 109 | 128 | 133 | 150 | 194 | 201 | 209 | 4,0 | 3,8 |
| Africa | 19 | 26 | 35 | 50 | 54 | 58 | 63 | 8,6 | 5,0 |
| Middle East | 13 | 22 | 34 | 55 | 58 | 56 | 58 | 4,6 | 4,7 |

Note: The data in the tables are million people.

Source: World Tourism Organization; Tourism Highlights 2018;5-9 ve World Tourism Organization; 2017 Annual Report; p.12.

The table.2 below shows the top ten countries in 2017 in terms of inter-country tourist flows. According to the table, the country that attracted the most tourists in the world is France with 86.9 million people. Spain has the second and the USA has the third place. Turkey raised two steps above, compared to the 2016, and reached to eight place in the table with 37.6 million tourists.

Table.2: International Tourist Flows in the World in 2017

| 2017 Ranking | 2016 Ranking | Country | Tourist Flows (million) | Δ2016 - 17 (%) |
|--------------|--------------|----------------|-------------------------|----------------|
| 1 | 1 | France | 86,9 | 5,1 |
| 2 | 3 | Spain | 81,8 | 8,6 |
| 3 | 2 | USA | 75,9 | -3,8 |
| 4 | 4 | China | 60,7 | 2,5 |
| 5 | 5 | Italy | 58,3 | 11,2 |
| 6 | 8 | Mexico | 39,3 | 12,0 |
| 7 | 6 | United Kingdom | 37,7 | 5,1 |
| 8 | 10 | Turkey | 37,6 | 24,1 |
| 9 | 7 | Germany | 37,5 | 5,2 |
| 10 | 9 | Thailand | 35,4 | 8,6 |

Source: World Tourism Organization; Tourism Highlights 2018;5-9

The table.3 below shows the top ten countries in 2017 in terms of international tourism revenues in the world. According to the table, although USA has the third place in terms of number of tourists arriving into the country, it is in the first place with 210.7 billion USD of tourism income. On the other hand, Turkey with 37.6 million tourists and eighth place in 2017, was not able to be among the top ten countries in terms of tourism revenues. This indicates that the income per tourist in Turkey is at very low levels.

Table.3: International Tourism Revenues in 2017

| 2017 Ranking | 2016 Ranking | Country | Tourism Expenditures (billion \$) | Δ2016 - 17 (%) |
|--------------|--------------|----------------|-----------------------------------|----------------|
| 1 | 1 | USA | 210,7 | 1,9 |
| 2 | 2 | Spain | 68,0 | 10,1 |
| 3 | 3 | France | 60,7 | 9,0 |
| 4 | 4 | Thailand | 57,5 | 13,1 |
| 5 | 5 | United Kingdom | 51,2 | 12,1 |
| 6 | 7 | Italy | 44,2 | 7,7 |
| 7 | 9 | Australia | 41,7 | 9,3 |
| 8 | 8 | Germany | 39,8 | 4,2 |
| 9 | 12 | Macau (China) | 35,6 | 17,6 |
| 10 | 11 | Japan | 34,1 | 14,4 |

Source: World Tourism Organization; Tourism Highlights 2018;5-9

As can be seen in Table 4 below, China ranked first among the countries with the highest tourism expenditure in the world in 2017 with 257.7 billion USD, which is followed by USA with 135 billion USD, Germany with 84 billion USD, United Kingdom with 63 billion USD and France with 41 billion USD. Another important data is that the tourism expenditures of USA have increased by 9 % in 2017, when compared with previous year.

Table.4: Tourism Expenditure in the World 2017 Top 10 Countries

| 2017 Ranking | 2016 Ranking | Country | Tourism Expenditure (billion \$) |
|--------------|--------------|--------------------|----------------------------------|
| 1 | 1 | China | 257,7 |
| 2 | 2 | USA | 135,0 |
| 3 | 3 | Germany | 89,1 |
| 4 | 4 | United Kingdom | 71,4 |
| 5 | 5 | France | 41,4 |
| 6 | 6 | Australia | 34,2 |
| 7 | 7 | Canada | 31,8 |
| 8 | 11 | Russian Federation | 31,1 |
| 9 | 8 | South Korea | 30,6 |
| 10 | 9 | Italy | 27,7 |

Source: World Tourism Organization; Tourism Highlights 2018;14.

1.4. Contributions of Tourism to Turkish Economy

Impacts of tourism on Turkish economy is realized in three different ways. These are the impact on national income, impact on income and expenses, and the impact of foreign tourist inflows. The following table.5 shows the tourism revenues, average expenditure per tourist and the share of tourism revenues in GDP between the years of 2003 and 2018. The number of visitors in the period of 2003-2017 increased from 16.4 million people to 37.9 million people. In the same period, tourism revenues increased to 26.2 billion USD from 13.8 billion USD. During this period, the decline experienced in 2006 and the coup attempt in 2016 have caused some security problems and the number of visitors has decreased. However, an average annual growth rate of 8.71 % is experienced in the number of visitors. The same trend was not valid in tourism revenues. There have been decreases in tourism revenues in 2006 and again after 2016. Regardless of the number of visitors, revenues decreased by 1.38 % in 2009 and by 0.5 % in 2010. Considering the whole period of 2003-2017, an annual average growth rate of 5.98 % was observed in tourism revenues. In addition, the last column in the table shows the share of tourism revenues in GDP. This share was 4.4 % in 2003, and then gradually decreased to 3.1 % in 2017.

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Table 5: Distribution of Tourism Revenues by Years

| Years | Gelen Ziyaretçi Sayısı | Çıkan Ziyaretçi Sayısı | Tourism Revenues (1000 \$) | Average Spending (\$) | Share of Tourism Revenues in GDP (%) |
|----------|------------------------|------------------------|----------------------------|-----------------------|--------------------------------------|
| 2003 | 16.463.623 | 16.302.053 | 13.854.866 | 850 | 4,4 |
| 2004 | 20.753.734 | 20.262.640 | 17.076.607 | 843 | 4,2 |
| 2005 | 25.045.142 | 24.124.501 | 20.322.111 | 842 | 4,1 |
| 2006 | 23.924.023 | 23.148.669 | 18.593.951 | 803 | 3,4 |
| 2007 | 27.239.630 | 27.214.988 | 20.942.500 | 770 | 3,1 |
| 2008 | 31.137.774 | 30.979.979 | 25.415.067 | 820 | 3,3 |
| 2009 | 31.759.816 | 32.006.149 | 25.064.482 | 783 | 3,9 |
| 2010 | 32.997.308 | 33.027.943 | 24.930.997 | 755 | 3,2 |
| 2011 | 36.769.039 | 36.151.328 | 28.115.692 | 778 | 3,4 |
| 2012 | 37.715.225 | 36.463.921 | 29.007.003 | 795 | 3,3 |
| 2013 | 39.860.771 | 39.226.226 | 32.308.991 | 824 | 3,4 |
| 2014 | 41.627.246 | 41.415.070 | 34.305.903 | 828 | 3,7 |
| 2015 | 41.114.069 | 41.617.530 | 31.464.777 | 756 | 3,7 |
| 2016 | 30.906.680 | 31.365.330 | 22.107.440 | 705 | 2,6 |
| 2017 | 37.969.824 | 38.620.346 | 26.283.656 | 681 | 3,1 |
| 2018 (*) | 18.917.033 | 17.190.169 | 11.469.828 | 667 | |

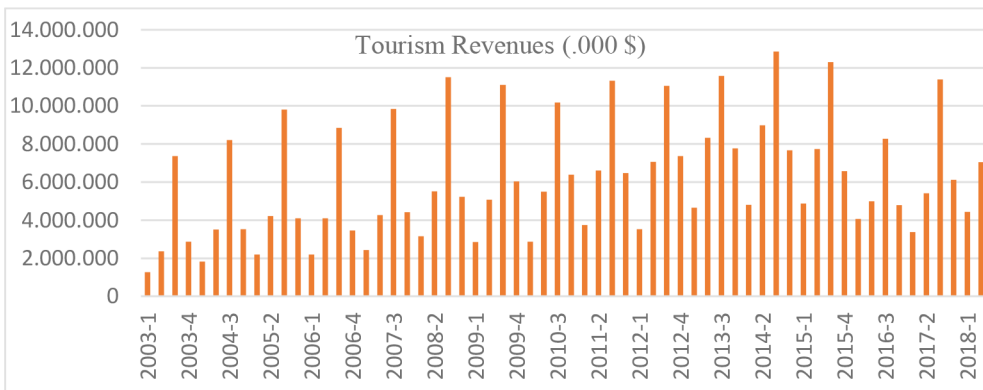
(*): Ocak-Haziran

Source: Turkish Statistical Institute, Central Bank of Turkey (CBT), Culture and Tourism Ministry

Note: "Outbound Foreign Visitors Survey" is the result of revenue.

Turkey's tourism revenues are given in the graphic.

Graphic 1: Tourism Revenues in Turkey between 2003-2018 years Quarterly Basis



Source: CBT, EVDS.

1 as quarterly periods. One of the highlights of the Chart 1 is that tourism revenues increased seasonally in third quarter, the period of summer. This is mainly because the summer vacation in Turkey (sea, sun, sand) is the main component of tourism. Looking at the chart based on years, it is seen that tourism revenues increased regularly until 2014 but then we see a decrease and stagnation. This is because of the security-related events and the impact of the July 15 coup attempt.

Impact of Tourism on Balance of Payments

The balance of payments is defined as the flow-based accounting records formed by systematic dematerialization of the changes in the economic transactions, financial transactions, transfers and country reserves of residents with foreigners in the rest of the world for a given accounting period (IMF, 1961; 13). Balance of payments is defined as the recording of the transactions of the residents of a country with the rest of the world (Dornbusch, Fischer and Startz, 2004: 331). Each pair of economic transactions is recorded by a double entry accounting system. Therefore, both sides of the balance of payments statements (receivables and payables) are equal. In addition, the balance of payments always shows the equilibrium (Fieleke, 1996: 3). Any equilibrium or disequilibrium in a country's balance of payments indicates the improvement or deterioration of the country's international ability to pay. Therefore, the balance of payments equilibrium is an indicator of a country's international economic and financial power. However, the balance of payments statement is also an indicator of the success of the policies as a result of the financial and economic policies applied due to the recording of the realized transactions (Seyidoğlu, 2013, 327-328).

Balance of payments statement consists of goods and services account, primary income account, secondary income account, capital account and financial account (IMF, 2009; 9).

In many countries with tourism revenues, the size of the current account deficit depends on the income of the tourism sector. Turkey may increase overall tourism income of the year or by the tourism supply, so it will be able to pay off the current account deficit (Sarıçay; 2012; 8).

Foreign exchange movements caused by international tourism affect the balance of payments of countries due to the demand for foreign exchange by the countries that send the tourists and the foreign exchange supply of the tourist receiving countries. Tourism can be defined as invisible exports, additional exports, or factories without chimney and it has been accepted as an export form that increases foreign exchange supply. However, in order to speak about the net foreign exchange yield of tourism (Olalı and Timur, 1986: 39; Öztaş and Karabulut, 2006: 60):

- 1) Foreign exchange expenses for foreign currency gains and foreign exchange income ratio should be below 1,
- 2) Regarding the country where the tourism sector is located, the earnings of the sector should be higher than the opportunity cost in terms of foreign exchange.
- 3) The amount of foreign currency earned in local currency should be greater than 1, which means that the net foreign currency gains are higher than total national currency expenditure,

The effect of tourism on the balance of payments is divided into two: its effect on foreign exchange supply and its effect on foreign exchange demand. The foreign tourism statement is shown in the attached table. According to this table, when the foreign tourism balance of a country is arranged annually, one of the following three cases applies:

equivalent balance sheet of foreign tourism, active foreign tourism balance sheet, passive foreign tourism balance sheet (Çeken; 2014: 126-127). If the amount of foreign currency entered into the country or left the country as a result of international tourism mobilities is equal, this is called as equivalent foreign tourism balance sheet. In this case, tourism has no effect on the balance of payments statement. If the amount of foreign currency entered into the country as a result of international tourism mobility within a year is more than the amount of foreign currency left the country, this is called as active foreign tourism balance sheet. In this case, surplus in tourism currencies is used to pay off the imbalances in the balance of payments. If the amount of foreign currency entered into the country as a result of international tourism mobility within a year is less than the amount of foreign currency left the country, this is called as passive foreign tourism balance sheet. In cases where the foreign currency expenditures of a country as a result of tourism increases the imbalances in the balance of payments statement, the lack of foreign currency in the country make things worse (Hepaktan and Çınar,2010:146).

1.5. Balance of Payments Equilibrium Between 2003-2018 in Turkey

The countries which are IMF members have agreed to realize the 2009 dated Balance of Payments and International Investment Position Sixth Handbook in 2014. Therefore, Turkey has started to publish its statistics from 2014 onwards in accordance with this new book. Following the changes, the item, which was published under the tourism item in the old publications in the balance of payments tables, was differentiated from the tourism statistics published by TURKSTAT with the changes made in the tourism statistics of the World Tourism Organization. In the new tables, tourism has was published under the travel item (TCMB, 2014: 3-5).

Table 6: Distribution of Tourism Revenues and Expenses to Foreign Trade Items by Years

| Years | Export (million\$) | Import (million\$) | Goods Balance Net (X-M) (million\$) | Tourism Revenues (million\$) | Tourism Expenses (million\$) | Tourism Balance (million\$) | Tourism Revenues / Export(%) | Tourism Expenses / Import(%) | Tourism Balance / Goods Balance Net(%) |
|-------|-----------------------|-----------------------|--|------------------------------------|------------------------------------|-----------------------------------|------------------------------------|------------------------------------|---|
| 2003 | 52.472 | 65.883 | -13.411 | 13.855 | 2.425 | 11.430 | 26,4 | 3,7 | 85,2 |
| 2004 | 68.833 | 91.271 | -22.438 | 17.077 | 2.954 | 14.122 | 24,8 | 3,2 | 62,9 |
| 2005 | 78.509 | 111.445 | -32.936 | 20.322 | 3.395 | 16.928 | 25,9 | 3,0 | 51,4 |
| 2006 | 93.778 | 134.672 | -40.894 | 18.594 | 3.271 | 15.323 | 19,8 | 2,4 | 37,5 |
| 2007 | 115.379 | 162.210 | -46.831 | 20.943 | 4.043 | 16.899 | 18,2 | 2,5 | 36,1 |
| 2008 | 140.906 | 193.823 | -52.917 | 25.415 | 4.266 | 21.149 | 18,0 | 2,2 | 40,0 |
| 2009 | 109.732 | 134.494 | -24.762 | 25.064 | 5.090 | 19.974 | 22,8 | 3,8 | 80,7 |
| 2010 | 120.992 | 177.317 | -56.325 | 24.931 | 5.875 | 19.056 | 20,6 | 3,3 | 33,8 |
| 2011 | 142.392 | 231.552 | -89.160 | 28.116 | 5.531 | 22.584 | 19,7 | 2,4 | 25,3 |
| 2012 | 161.948 | 227.315 | -65.367 | 29.007 | 4.593 | 24.414 | 17,9 | 2,0 | 37,3 |
| 2013 | 161.789 | 241.706 | -79.917 | 32.309 | 5.254 | 27.055 | 20,0 | 2,2 | 33,9 |
| 2014 | 168.926 | 232.519 | -63.593 | 34.306 | 5.470 | 28.835 | 20,3 | 2,4 | 45,3 |
| 2015 | 151.970 | 200.098 | -48.128 | 31.465 | 5.698 | 25.766 | 20,7 | 2,8 | 53,5 |
| 2016 | 150.161 | 191.053 | -40.892 | 22.107 | 5.050 | 17.058 | 14,7 | 2,6 | 41,7 |
| 2017 | 166.159 | 225.114 | -58.955 | 26.284 | 5.137 | 21.146 | 15,8 | 2,3 | 35,9 |
| 2018* | 85.029 | 111.065 | -26.036 | 11.470 | 2.729 | 8.741 | 13,5 | 2,5 | 33,6 |

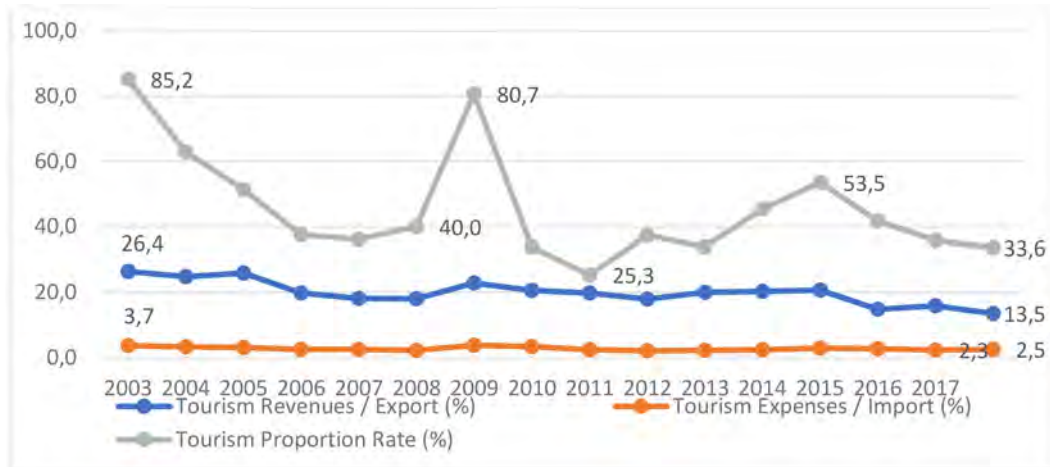
Source: Turkish Statistical Institute, Outbound Visitors and Citizens Login Surveys. *2018 first 6 months datas.

Table 6 above indicates that Turkey had a deficit between 2003-2018 in terms of international goods trade, including the years of crisis. The balance of goods, which was -13.4 billion \$ in 2003, increased to -89.1 billion \$. Again, while the deterioration in the goods trade balance continued during the 2003-2018 period, it is noteworthy that net tourism income was \$ 25 billion and in a horizontal trend. In this case, Turkey has balanced the negative status of goods trade from the services account, finance account or use of reserves in balance of payments statement.

THE EFFECTS OF TOURISM SECTOR ON BALANCE OF PAYMENTS IN TURKEY

E. Kaan CENGİZ

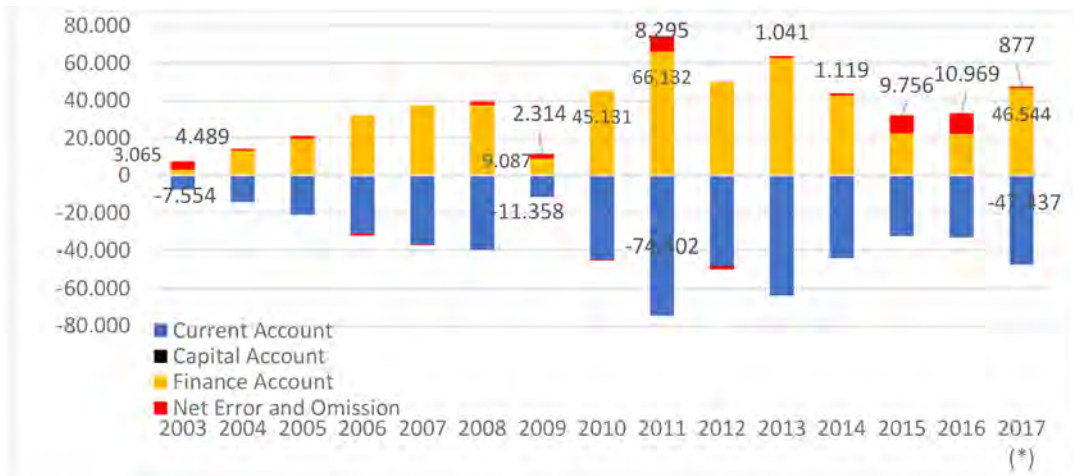
Graphic.2: Distribution of Tourism Revenues and Expenses to Foreign Trade Items by Years



Kaynak: Grafik verileri tablodan alınmıştır.

As seen in Chart 2 above, the ratio of tourism revenues to the balance of goods in the period of 2003-2018 decreased from 85.2 % to 33.6 %. In the same period, the ratio of tourism revenues to export revenues declined from 26.4 % to 13.5 %.

Graphic.3: Main Items Turkey's Balance of Payments



Source: CBT, Current Account Balance Sheet 2018.

Chart 3 above indicates the Main Items of the Balance of Payments of Turkey between 2003-2018. In the 2003-2017 period, Turkey always had a Current account deficit. In the same period, Turkey paid off this deficit with finance account. However, the increase in the net errors and omissions record of \$ 8.2 billion in 2001, \$ 9.6 billion in 2015 and \$ 11 billion in 2016 led to questioning whether there is a problem in the statistical records or not.

Literatür

Literature review indicates numerous studies on tourism. However, it can be seen that studies examine the effects of empirical studies on economic growth, tourism and export-based growth, and studies examine the effects of tourism on the current account deficit are some of the main topics.

The study of Kulendran and Wilson (2000) first researches international trade and international tourism flows with time series techniques. In this study, the data between Australia and its four major trade and tourism partners, New Zealand, USA, UK and Japan, were used and 3 different hypotheses were tested. These are; business travels lead international trade; international trade leads international tourism; and international tourism except the business travels leads international trade. As a result of the study where Co-integration and Granger causality approaches were used, it has been concluded that there is a long-term, strong relationship between international tourism and international trade.

In their study, Shan and Wilson (2001) investigated the causality relationship between international trade flows and international tourism, using Toda Yamato VAR and Granger causality tests for China. At the end of the study, in the context of tourism demand function, two-way Granger causality was revealed between international trade and international tourism flows.

In their study, Gündüz and Khatami (2005) have studies whether tourism has a contribution on economic growth in Turkey or not and they revealed that tourism had a positive impact on growth and hypothesis on tourism based growth is valid for Turkey.

In his study, Ongan (2008) applied co-integration test between current account incomes ($X+TR$) and current account expenses ($M+TE$) of Turkey between 1980-2005 on a quarterly based structure by including the export (X), tourism revenues (TR), import (M) and tourism expenses (TE) date in the model and tried to explain the contribution of tourism on the sustainability of current transactions deficit. As a result of the study, a co-integration relation between current account revenues and current account expenditures could not be determined. Moreover, despite the significant contribution of net tourism revenues to the current account balance in the 1980-2005 period, current account deficits were unsustainable. Also, considering the changes in the capital account and the changes in the exchange rate regime and structural breaks in the current period, the current account deficit was unsustainable in the long term.

In their study, Kara et. al. (2012) have established three separate models by using data from tourism incomes, real production index, real foreign exchange rate and current transactions deficit. In the first model, the relation between tourism revenues and growth was measured, whereas in the second model the relation between tourism revenues and current account balance was measured and in the third model, the relation between real exchange rate and tourism revenues was measured. As a result of the three models used; one way relation was found between growth and tourism revenues, two way relation was found between tourism revenues and current transactions balance and one way relation was found between foreign exchange and tourism revenues. It has been revealed that tourism revenues have a positive impact on the current deficit of Turkey.

In their study, Aslantürk and Atan (2012), by using the data in the period of 1987-2009 and the co-integration and Granger causality methods, have examined the relation between growth, tourism and foreign exchange revenues. As a result of the study, it is found that there is causality from tourism revenues to economic growth.

In their study, Lorde et.al. (2013), have taken into account the current account deficits of the Barbados economy and its dependence on tourism, which is the driving force of its economy and an important source of foreign exchange and they examined the contribution of tourism revenues to the sustainability of the current account deficits of Barbados. Import, export, tourism revenues and tourism expenditures are used as model variables and KPSS and HEGY unit root tests and Johansen co-integration test were performed. Using the inter-state budget approach, it was indicated that the current account deficit was weakly sustainable due to Barbados's non-high tourism revenues.

Cihangir et.al (2014) have examined the net tourism revenues and the effects of these revenues on the balance of payments and the current account deficit through the VAR method. Then, the direction and degree of the relation between the variables and the effect-response analyzes were tested by Granger causality method. As a result of the analyzes, it was found that tourism revenues have positive effects on current account deficit (current account). It has been concluded that if Turkey increases its tourism revenues, its current deficit will be paid off.

Şit (2016) examined the effect of net tourism revenues on the current account deficit. Co-integration, vector error correction method and causality tests were used in the study. As a result of the study, a long-term and negative relation was found between the current account deficit and net tourism revenues. In addition, one-way relation between net tourism revenues and current account deficit was found and it was concluded that net tourism revenues had a decreasing effect on current account deficit.

1.6. Method and Findings

In this study, foreign trade goods balance, travel balance, real effective exchange rate data of the balance of payments statements of the Central Bank of Turkey were used. Quarterly data was used between 2003: Q1-2018:Q2 and mobile averages were applied for seasonality adjustment. First, the ADF stability test, which was developed by Dickey-Fuller (1979 and 1981), was used to measure the time series stability. Unlike the SDF, the ADF test takes an optimal delay of the dependent variable to resolve autocorrelation. The following 3 models test stationary, fixed, constant-trend models in steady-trend models in the consecutive order (Dickey and Fuller; 1979: and Dickey and Fuller;1981:).

$$\Delta Y_t = \alpha_1 Y_{t-1} + \sum_{i=1}^q \beta_i \Delta Y_{t-i} + e_t$$

$$\Delta Y_t = \alpha_0 + \alpha_1 Y_{t-1} + \sum_{i=1}^q \beta_i \Delta Y_{t-i} + e_t$$

$$\Delta Y_t = \alpha_0 + \alpha_1 Y_{t-1} + \alpha_2 T + \sum_{i=1}^q \beta_i \Delta Y_{t-i} + e_t$$

Then, co-integration tests were conducted to examine the relation between the variables. It can be applied to non-stationary series at the level of co-integration tests. Eanger Granger Co-integration test is applied when the independent variable is single. In case of presence of more than one independent variable, the vector autoregressive approach developed by Johansen (1988 and 1991) and Johansen and Juselius (1990) is used. The method of Johansen (1988) is indicated as follows:

$$X_t = \pi_1 X_{t-1} + \dots + \pi_k X_{t-k} + e_t \quad t=1,2,3,$$

However, in this study, the model is indicated as follows because the variables are stable.

$$\Delta X_t = \Gamma_1 \Delta X_{t-1} + \dots + \Gamma_{k-1} \Delta X_{t-k} + \Pi X_{t-k} + e_t$$

$$\Gamma_i = -I + \Pi_1 + \dots + \Pi_i \quad i=1,2,3,\dots,k$$

Here, x is the vector of the variables expressed by values from the past. Thus, the variables using the VAR model can be expressed by values from the past. First, the stationarity states of the series were tested. At this stage, the delayed values of the variables are expressed as the VAR model. Here, π shows the coefficients matrix. The rank of the coefficients matrix indicates how many co-integrated vectors are in the system of equations. In the co-integration test, the Johansen approach is based on the maximum likelihood test. In addition, Johansen Co-integration test takes internal variables.

Co-integration tests have two advantages. These are, allowing the distinction between short- and long-term effects and also providing the required correction speed to reach long-term values (Kızılgöl; 2006: 8).

1.7. Unit Root Analysis and Results

Stability of variables was tested by ADF unit root test. The following table.7 shows the ADF unit root test results. According to the ADF unit root test results, the series difference is stable.

Table.7: ADF Unit Root Test Results for MTDENGE, SEYDENGSA and REDK Variables

| Variable | | ADF Value | Variable | | ADF Value |
|------------------------|--------------------------|-----------|-------------------|--------------------------|-----------|
| mtdenge (4) | Without Intercept-Trend | -0.503499 | redk (2) | Without Intercept-Trend | -0.894360 |
| | With Intercept | -2.767493 | | With Intercept | -5.952477 |
| | With Intercept and Trend | -3.278277 | | With Intercept and Trend | -6.116993 |
| Δ mtdenge (4) | Without Intercept-Trend | -3.881783 | Δ redk (1) | Without Intercept-Trend | -8.658807 |
| | With Intercept | -3.90131 | | With Intercept | -8.585700 |
| | With Intercept and Trend | -3.911406 | | With Intercept and Trend | -8.509705 |
| seydengsa (4) | Without Intercept-Trend | 0.240378 | | | |
| | With Intercept | -2.031582 | | | |
| | With Intercept and Trend | -2.503638 | | | |
| Δ seydengsa (3) | Without Intercept-Trend | -3.052113 | | | |
| | With Intercept | -3.113820 | | | |
| | With Intercept and Trend | -3.041801 | | | |

Noet: Δ , expresses the difference of variables. Values in parentheses are the delay lengths selected according to Schwarz method.

1.8. Johansen Cointegration Analysis

Since the series were stationarity and the number of independent variables was more than one, Johansen (1988) co-integration test was performed. As shown in Table 8 below, the appropriate delay number is set to 5 and VAR

(5) model is created. In the analyzes conducted with level values, Johansen co-integration test is performed by taking a lack of VAR delay number. For this reason, model 4 is set up as delayed in the co-integration test.

Table.8: Selection of the Number of Delays Suitable for VAR Model

| p | LogL | LR | FPE | AIC | SIC | HQ |
|---|-----------|-----------|-----------|-----------|-----------|-----------|
| 0 | -1485.237 | NA | 1.74e+20 | 55.11990 | 55.23040 | 55.16251 |
| 1 | -1442.703 | 78.76616 | 5.03e+19 | 53.87791 | 54.31990* | 54.04837* |
| 2 | -1433.665 | 15.73282 | 5.04e+19 | 53.87650 | 54.64999 | 54.17481 |
| 3 | -1425.857 | 12.72337 | 5.32e+19 | 53.92066 | 55.02566 | 54.34682 |
| 4 | -1414.023 | 17.97082 | 4.86e+19 | 53.81569 | 55.25217 | 54.36968 |
| 5 | -1396.330 | 24.90152* | 3.62e+19* | 53.49372* | 55.26170 | 54.17556 |
| 6 | -1389.921 | 8.308337 | 4.14e+19 | 53.58967 | 55.68915 | 54.39936 |
| 7 | -1381.321 | 10.19201 | 4.45e+19 | 53.60450 | 56.03548 | 54.54203 |
| 8 | -1372.721 | 9.237259 | 4.88e+19 | 53.61931 | 56.38179 | 54.68469 |

The results of the Johansen co-integration test are shown in the table.9 below. According to the Pantula principle, the most suitable model was considered as model 1 as it had no cutting and trend. Trace and Maximum Eigenvalue statistics show that at the level of 1 % significance $r = 0$ the hypothesis of the absence of the co-integrated relation will be rejected. In this case, it is concluded that there is a long term relation between foreign trade balance and net travel revenues and real effective exchange rate at 1 % significance level.

Table.9: Johansen Cointegration Analysis Test Results

| | Eigenvalue | Trace Statistics | Critical Value (%) | p-value |
|---|------------|----------------------|--------------------|---------|
| $r=0$ | 0.324565 | 28.89768 | 24.27596 | 0.0122 |
| $r \leq 1$ | 0.108243 | 6.530973 | 12.32090 | 0.3743 |
| | | | | |
| | Eigenvalue | Max-Eigen Statistics | Critical Value (%) | p-value |
| $r=0$ | 0.324565 | 22.36671 | 17.79730 | 0.0096 |
| $r \leq 1$ | 0.108243 | 6.530028 | 11.22480 | 0.2933 |
| Normalized Cointegration Equation | | | | |
| Foreign Trade Balance = 4.727695 * travel balance - 0.702727 * real effective exchange rate index | | | | |

Note: Optimal lag length is 4, taking into account the Akaike criteria. (53.99200)

According to the results of the Johansen Co-integration Test, the normalized co-integration equation is added under the table above. According to the results, the tourism revenues indicated in the balance of payments statement affect the foreign trade balance by 4,72 multipliers and pay off the goods balance in the commercial direction. The increases in the real effective exchange rate index, namely the appreciation of the Turkish Lira, distorted the foreign trade balance by a factor of -0.70 in the opposite direction, as stated in the literature.

Although the variables show deviations in the short term, they reach to an equilibrium in the long term. However, as a result of taking the difference values of non-stationarity variables, negativities occur due to loss of values. Vector error correction models eliminate these problems by showing the deviations from the long term relation. In the error correction models, a delayed state of the error terms is added to the model set with stationarity variables. These error terms should also be static at level values. The results of the error correction model established in Johansen co-integration test results in Table 9 above are provided in the following Table 10. The coefficient of Resid2 error residual value was -0.32. This value between -1 and 0 indicates that the error correction model is operating.

Table.10: Vector Error Correction Model Results

| Variables | D(seydengsa) | D(redk) | Resid2 |
|-------------------------|--------------|-----------|-----------|
| Coefficients (CointEq1) | -0.752762 | -0.151210 | -0.324884 |
| Standard error | 0.518782 | 0.102553 | 0.098260 |
| T Statistical Value | -1.451017 | -1.474459 | -3.306377 |

1.9. VAR Granger Causality / Wald Test Results

According to table11, the results of the VAR Granger Causality/Wald Test, the balance of foreign trade goods reached the conclusion that the balance of travel is the cause of the granger.

Table.11: VAR Granger Causality/Wald Test Results

| | Chi-Square | df | p-value |
|-------------------------------|------------|----|---------|
| Dependent Variable: MTDENGE | | | |
| SEYDENGSA | 8.767.981 | 5 | 0.1187 |
| REDK | 9.615.546 | 5 | 0.0869 |
| ALL | 1.624.044 | 10 | 0.0930 |
| | Chi-Square | df | p-value |
| Dependent Variable: SEYDENGSA | | | |
| MTDENGE | 1.203.271 | 5 | 0.0343 |
| REDK | 7.613.380 | 5 | 0.1789 |
| ALL | 1.784.747 | 10 | 0.0576 |
| | Chi-Square | df | p-value |
| Dependent Variable: REDK | | | |
| MTDENGE | 5.979.963 | 5 | 0.3082 |
| SEYDENGSA | 2.304.344 | 5 | 0.8056 |
| ALL | 7.361.188 | 10 | 0.6910 |

Conclusion

According to the Johansen co-integration test, there is a long-term relation between the balance of goods trade and the net travel balance and the real effective exchange rate. As can be seen in the theory, the net travel balance

has a corrective effect on the balance of foreign trade goods; and the rise in the real exchange rate index impairs the foreign trade balance due to the 0.70 multiplier effect. According to the results of the error correction model, the error correction coefficient was between -1 and 0 and -0.32 and the probability value was 0.0016. This result shows that error correction works in the deviations from long term relation.

In addition, it was observed that the increase in the tourism revenues in the mentioned period decreased when compared with the previous years. While the ratio of tourism to export increased to 25 % in 2003, this ratio decreased to 15.8 % in 2017. The data indicates that tourism revenues increased more slowly than export revenues. It was observed that the balance of foreign trade goods, which was at a deficit ratio of 13.4 Billion USD, declined during the period and increased to 89.1 billion USD in 2011. It is seen that the import figures, which increased faster than exports and increased to 231.1 billion USD was the main reason behind this. The ratio of net tourism revenues to foreign trade goods balance decreased from 85.2 % in 2003 to 33.6 % in 2017. This indicates that tourism has been decreasing proportionally in terms of paying off the current account deficit over the years.

Given the seasonal net tourism revenues of Turkey's tourism revenues, the first quarter of the year as in the 3rd quarter and the lowest level of the year seems to be at the highest level. This indicates that in the Turkish tourism sector, sun-sea tourism is still predominant. In addition, although Turkey has various tourism opportunities in terms of winter tourism, it could not reach to sufficient levels of income.

It is seen that in the period between 2003-2017, the share of foreigners in Turkey's tourism revenues has increased to 81 % from 73 %. However, the average spending of foreign tourists in the same period declined from 710 USD to 629 USD. This made Turkey a cheaper tourism center for tourists. In order to increase revenues, attempts should be made on luxury tourism. It is observed that the average expenditures of the tourists who are citizens of Turkey but arriving from abroad have decreased rapidly between 2003 and 2017.

When the geopolitical position of Turkey in the world is considered; being neighbor to the biggest source of international tourism revenue Europe and Russia; and being located next to the Asia-Pacific market, which is also the second largest international tourism resource is a very important opportunity. According to the data described and compared, it is seen that Turkish tourism sector has shifted to social and group tourism sector and revenues could not be increased.

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TCMB EVDS Sistemi, HYPERLINK "<http://www.tcmb.gov.tr>" www.tcmb.gov.tr

Annex 1: Tourism Foreign Trade Balance Sheet

| active (foreign exchange inputs) | Value | passive (foreign exchange outcomes) | Value |
|---|--------------|--|--------------|
| accommodation expenses of tourists | | accommodation expenses of citizens abroad | |
| payments made by tourists to transport services | | payments made by foreign citizens to foreign transport enterprises | |
| payments made by tourists for food and drink | | eating and drinking expenses of citizens abroad | |
| export of tourist goods | | import of touristic consumer goods | |
| capital from abroad for tourist purpose. | | capital to abroad for tourist purpose | |
| profit transfers from tourism investments in foreign countries | | transfers of foreign tourism investors to their own countries | |
| rent income of tourism facilities rented to foreigners | | rent payments of tourism facilities rented in foreign countries | |
| education payments and other expenses of foreign tourism personnel trained in the country | | training and other expenses of tourism personnel trained abroad | |
| advertising and promotion expenses for foreign tourists | | tourism advertising and promotion expenses in foreign countries | |
| commissions received from foreign tourism enterprises | | commission payments to foreign tourism enterprises | |
| all expenses incurred by national tourism and promotion offices of foreign countries | | all expenses of national tourism and promotion offices in foreign countries | |
| expenses of foreign travel agencies | | expenses of travel agencies in foreign countries | |
| commissions and premiums of foreigners to national banks and insurance companies | | various commission and premium payments made by the citizens to foreign banks and tourism insurance companies. | |
| payments made by foreigners for guidance services | | payments made by citizens for guidance services in foreign countries | |
| expenses of foreigners at entertainment venues | | the spending of citizens abroad at entertainment places | |
| entrance fees paid by tourists for parks, museums and similar places | | entrance fees paid by citizens for parking, museums and similar places abroad | |
| sales of handicrafts and souvenirs | | purchases of souvenirs and memorabilia | |
| other currency inputs | | other currency outputs | |

Source : Kozak vd, 2015.

23

ENVIRONMENTAL KUZNETS CURVE (EKC): IS IT VALID FOR TURKEY?¹

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Introduction

With the development of technology after the industrial revolution, the energy become one of the essential inputs for the development of economies. Since this need met by the fossil fuels which are efficient but cause great damage to the environment, these fuels, which formed in million years, burned in 50-100 years and the quality of the environment deteriorated worldwide. Particularly after the Second World War, the increasing environmental problems started to affect the economies and the economists were interested in the relation between environment and economy. In the report titled “The Limits to Growth (LTG)” published by Club of Rome (1972), it was argued that the current state of natural resources and economic growth were unsustainable, and therefore, economic growth should be reduced in order to protect the environment (Saatçi and Dumrul, 2011: 66; Bo, 2011: 1322).

In the study by Russian economist Simon Kuznets (1955), the relationship between income distribution and economic growth was examined. It was suggested that as economic growth increased, inequality in income distribution would increase but inequality in income distribution would start to decrease after a certain turning point. As a result of this study, the “inverse U” type relation between income distribution and economic growth revealed and ever since, this relation has been called as Kuznets Curve among the economists (Stern et al. 1996: 1152; Bo, 2011: 1323; Jošić et al. 2016: 32; Dinda, 2004: 433; Kuznets, 1955). The environmental problems continued to increase until the 1990s, and caused economic growth, environment and energy issues to come into prominence both in the international arena and in the economic community. In the studies inspired by the work of Simon Kuznets, it was concluded that there was a similar relationship between the growth distribution and the growth of the economy in terms of environmental factors and growth. The emergence of this hypothesis led to the opening of a new page in the economic community. After this date, when the economists considered the relationship between the income and the environment, the Environmental Kuznets Curve (EKC) hypothesis first came to mind. According to this hypothesis, as the income level increased, some indicators showing the quality of the local environment deteriorated, but it tended to recover again after the income in the country exceeding a certain level (Ho and Wang, 2014: 16).

Grossman and Krueger (1991), Shafik and Bandyopadhyay (1992) and Panayotou (1992) are the first economists that studied Kuznets Curve’s adaptation to environmental factors and economic growth (Panayotou, 2003: 12; Koçak, 2014: 63; Jošić et al. 2016: 33; Benavides et al. 2017: 259; Dinda, 2004: 433).

Grossman and Krueger (1991) reported that economic growth tends to alleviate pollution problems when the per capita income reaches about 4000-5000 Dollars. They also stated if Mexico, with a per capita income of \$5000, continue to increase the per capita income, it would enter critical period of environmental problems (Grossman and

1 This study is a part of the thesis “Çevresel Sorunlar Bağlamında Yeşil Büyüme ve Cari Açık İlişkisi: Türkiye Üzerine Bir Uygulama” prepared by Dr. Hacı Ahmet Karadaş, approved by research committee of faculty of Economics and Administrative Sciences, Kırıkkale University

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ENVIRONMENTAL KUZNETS CURVE (EKC): IS IT VALID FOR TURKEY?

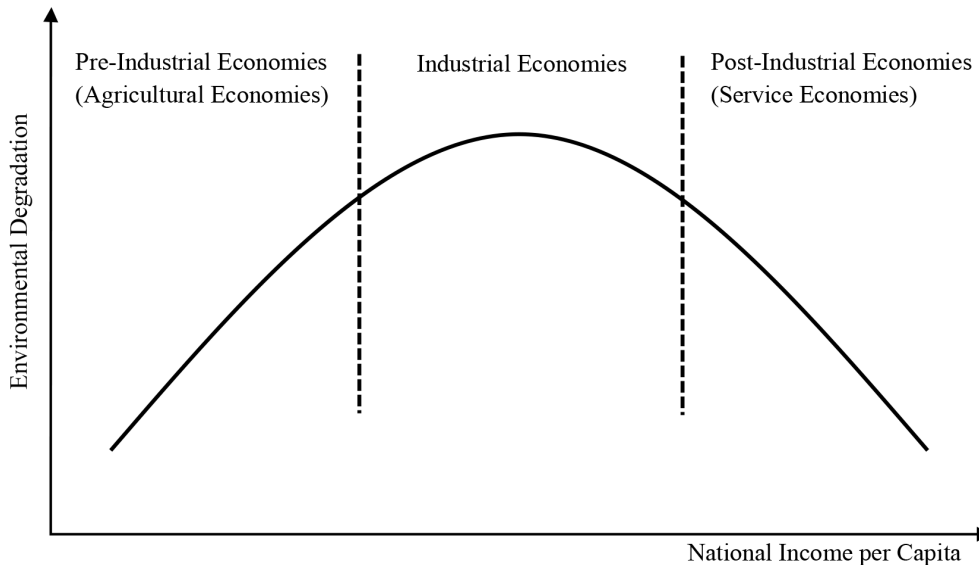
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Krueger, 1991: 35-36). Although the study by Grossman and Krueger (1991) was the first study to describe the inverted-U relationship between the environmental pollution level and per capita income, Panayotou (1993) was the first economist to call this relationship as Environmental Kuznets Curve (EKC) (Dinda, 2004: 433; Bo, 2011: 1323).

In the World Development Report, Shafik and Bandyopadhyay (1992) gave the definition of the EKC as “The more economic activities mean more environmental pollution based on the assumption that technology, preference and environmental investment are constant but people will pay more attention to environment issues and resolve it with increasing income, consequently, environmental pollution level will decrease” (Bo, 2011: 1323). In other words, as economic growth increases, environmental problems will increase first, and the increase in income will reduce environmental problems after crossing a certain level.

The first stage of economic development is called the agricultural economy, where most of the activities are based on agriculture without significant environmental impact. Current developed countries have experienced a process based on agriculture and farming in the past. Industrial revolution and rapid development led to environmental degradation due to excessive use of natural resources, increased emissions of harmful gases, excessive use of soil, destruction of forests, emergence of dirty industries and other similar reasons. In recent years, however, there has been a significant shift from an industrial economy to a service-based economy. At this stage of economic development, many advanced economies have reached and passed the turning point that represents the per capita income level after which environmental degradation was reduced. In addition to shifting dirty industries to third world countries, the main reasons for this decrease were technological progress, innovations and reduction in general industrial production. Consumer preferences at this level outweigh the environmental quality rather than the additional income (Jošić et al. 2016: 34). Figure 1 shows these three stages of economic development. In the figure, the horizontal axis shows the per capita income level and the vertical axis shows the degree of degradation of the environmental indicator.

Figure 1. Stages of Economic Development



Sources of the EKC and the EKC Model

The first reason for the emergence of EKC is the income elasticity of demand for environmental quality. As income increases, people pay more attention to quality of life. They want to have better environmental prosperity and consume healthier products. When people reach high living standards, they begin to value environmental activities. As a result, the government implements stricter environmental protection policies to improve environmental quality (Dinda, 2004: 435; Bo, 2011: 1323).

The second reason is the emergence of scale, technological and structural effects. According to Grossman and Krueger (1991), economic growth affects environmental quality through three different channels. The first one is the scale effect. Increased output level requires more input and thus, more natural resources are used in the production process. The use of more resources means more waste and greenhouse gas emissions, which cause the environmental quality to decrease as a by-product. Therefore, in this stage, economic growth leads to a scale effect that has a negative impact on the environment. As income continues to grow, the structure of the economy begins to change, and activities that generate less pollution occur gradually. The environmental quality tends to deteriorate at the stage of transition from rural to urban or from agriculture to industry, but it begins to improve during the transition from the energy intensive industry to services and knowledge-based technology-intensive industries. The last effect in the growth process is the technological effect. Since a rich country can make more R&D investments, technological progress occurs through economic growth and replaces the old and dirty technologies with renewed and cleaner technologies that improve the quality of the environment (Dinda, 2004: 435; Bo, 2011: 1323; Kocak, 2014: 63). Therefore, according to the EKC, economic growth firstly causes pollution of the environment due to the scale effect, but in time it helps the environmental quality to improve due to structural and technological effects (see Chart.1).

The third reason for the emergence of EKC comes from international trade. International trade is an important factor of the EKC. However, free foreign trade may have adverse effects on the environment. Since the increased trade volume (especially exports) is related to the economic growth, the quality of the environment may decrease due to the scale effect. In addition, foreign trade can help to improve the environmental quality by providing structural impact and/or technological effects. For example, environmental regulations that support innovations that reduce pollution as income increases may be tightened through trade (Dinda, 2004: 436; Bo, 2011: 1323).

The EKC model has been used in various studies in the economic literature. These studies show similar characteristics depending on the data and methods used. The equation (1) is used to find a wide variety of relationships between pollution level, environmental pressure and income (Dinda, 2004: 439; Jošić et al. 2016: 34).

$$y_{it} = \alpha_i + \beta_1 x_{it} + \beta_2 x_{it}^2 + \beta_3 x_{it}^3 + \beta_4 z_{it} + \varepsilon_{it} \quad (1)$$

Where, y represents the selected environmental indicator, x represents income, and z represents the other explanatory variables that have an impact on environmental degradation. In addition, i country, t time, α is constant and β_k is the coefficients of the descriptive variable k . According to the state of the β_k coefficients obtained by the equation (1), seven different type of the relationship between environment and economic growth can be as follows:

- i. If $\beta_1 = \beta_2 = \beta_3 = 0$, there is no relation between x and y .
- ii. If $\beta_1 > 0$ and $\beta_2 = \beta_3 = 0$, there is a linear or monotone increasing relationship between x and y .
- iii. If $\beta_1 < 0$ and $\beta_2 = \beta_3 = 0$, there is a monotone decreasing relationship between x and y .

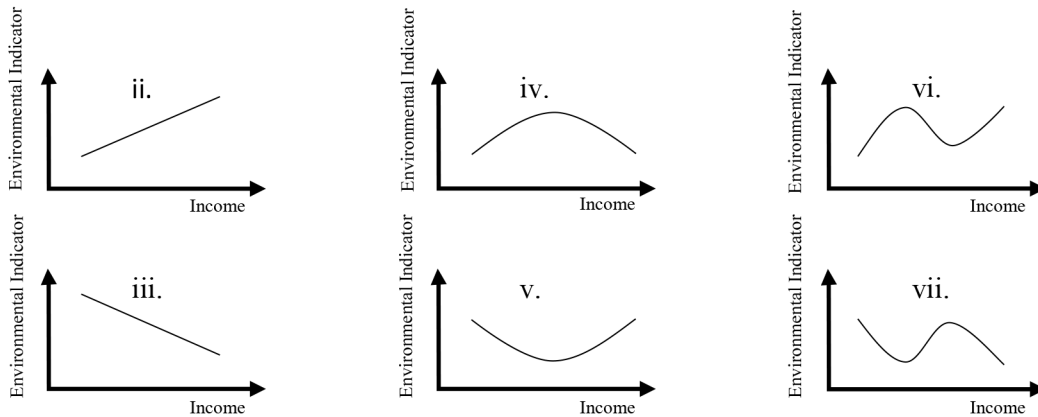
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- iv. If $\beta_1 > 0, \beta_2 < 0$ and $\beta_3 = 0$, there is an “inverse-U” shaped relationship between x and y , i.e. the EKC relation.
- v. If $\beta_1 < 0, \beta_2 > 0$ and $\beta_3 = 0$, there is a “U” shaped relationship between x and y .
- vi. If $\beta_1 > 0, \beta_2 < 0$ and $\beta_3 > 0$, there is a cubic polynomial or “N” shaped relationship between x and y .
- vii. If $\beta_1 > 0, \beta_2 < 0$ and $\beta_3 < 0$, there is a “reverse N” shaped relationship between x and y .

The graphical appearance of the possible results according to the β coefficients is given in figure 2. Similar to figure 1, the horizontal axis shows the per capita income level and the vertical axis indicate the degree of degradation of the environmental indicator.

Figure 2. Graphical View of the Possible Results of the EKC in a Cubic Model



In the literature, many studies have examined the validity of the EKC using this equation. They have used a wide variety of pollution factors, such as carbon dioxide (CO_2), sulfur dioxide (SO_2), nitrogen oxide etc., as an indicator of environmental pollution.

EKC: Literature

Following the foundation of the relationship between the income distribution and economic growth in the form of “Inverse U” by Simon Kuznets in 1955, it was understood that similar relationship exists between environmental quality and economic growth. After this date, many studies examining the validity of EKC contributed to the literature.

The first study that adapted the Kuznets curve to the relationship between environmental quality and economic growth was the study by Grossman and Krueger (1991). In this study, the relationship between air quality and economic growth in 42 members of NAFTA (North American Free Trade Agreement) was analyzed with the help of cross-sectional analysis. Sulfur dioxide (SO_2) and particulate matter (PM) values are used as air quality indicators. As a result of the study, the existence of a “Inverse U” type relation between environmental pollution and economic growth was determined.

Shafik and Bandyopadhyay (1992) investigated the relationship between economic growth and environmental quality and used 10 different environmental degradation indicators for the period of 1960-1990. As a result of the study, they found that income had a significant effect on all of the environmental indicators, but this effect was not a simple effect. They stated that, as income increased, all other indicators, except for the clear water access indicator, were initially degraded, but the problems were solved at high income level. As countries approach to middle income level, many of the indicators improved. Although the results of the analysis indicated that some environmental problems could be solved by economic growth, it did not occur automatically. In order to achieve this, it was necessary to implement policies and investments that reduced environmental degradation.

Panayotou (1993) used the cross-sectional data of deforestation and air pollution of developed and developing countries in his study, examining the inverse-U-shaped relationship between environmental degradation and economic growth. In this study, environmental degradation was observed when per capita income was under \$1000, and environmental factors and economic growth in economies with a per capita income of \$1000-3000 were experiencing a structural change. When the per capita income level exceeded \$10000, he has come to the conclusion that the economy underwent a second structural transformation by moving from heavy industry to services and information / technology intensive industry.

Grossman and Krueger (1995) studied the relationship between per capita income and environmental indicators and used pollution indicators in urban air pollution and pollution in river basins. As a result of the study, they did not get a result that the environmental quality was worsening with economic growth. On the contrary, they found that environmental quality improved after the economic growth exceeded a certain turning point. They found that the turning points differed for the pollutants but in most cases the per capita income level was less than \$8000.

Dam et al. (2014) examined the relationship between Turkey's economic growth, energy consumption and greenhouse gas emissions in Turkey. They applied Dynamic Least Squares (Dynamic OLS) method to a cubic equation formed from the variables per capita CO₂ emissions, per capita GDP and per capita energy consumption for the period 1960 to 2010. In conclusion, they have determined an "N" shaped relationship between greenhouse gas emissions and economic growth in Turkey.

Erataş and Uysal (2014) examined the relationship between income levels and environmental pollution in the BRICT (Brazil, Russia, India, China and Turkey) countries in 1992-2010 period. They applied cointegration test to the panel data of CO₂ emissions per capita, per capita income, and population density. In conclusion, there was an "N" shaped relationship between environmental pollution and economic growth in BRICT countries and the calculated threshold value was \$ 3200.

Erden and Koyuncu (2014) examined the relationship between economic development, environmental pollution and human health in Turkey for the period of 1980-2012. They applied VAR analysis to per capita GDP, per capita CO₂ emissions and total health spending variables. According to the Granger causality test results, economic growth leads to an increase in CO₂ emissions and thus health expenditures.

Kocak (2014) examined the presence of EKC in Turkey. He applied the ARDL test to CO₂ emissions, GDP and energy consumption variables for the period 1960-2010. In conclusion, no evidence found to support the EKC hypothesis, but the results showed that energy consumption increased CO₂ emissions in the long run.

Lebe (2016) tested the validity of EKC in Turkey for the period 1960-2010. He implemented the ARDL model and Granger causality test using per capita CO₂ emissions, per capita real GDP, per capita energy consumption, financial development and trade openness. In conclusion, it was found that EKC was valid for Turkey. In addition, it was concluded that the financial development and trade openness increased CO₂ emissions.

Jošić et al. (2016) applied a co-integration test to CO₂ emissions, GDP per capita, trade-openness and population density variables, in the study examining the existence of EKC in Croatia in period 1990-2013. As a result of their analysis using quadratic and cubic models, they did not find the presence of EKC in Croatia. They have shown that the CO₂ emission-income curve they draw on the analytical plane was not in the form of a normal EKC due to structural breaks in GDP.

Zambrano-Monserrate (2016) examined the relationship between environmental degradation, economic growth, fossil fuel use and trade gap in Iceland. ARDL model applied to per capita CO₂ emissions, per capita GDP, trade openness and energy consumption obtained from fossil fuels variables in the period of 1960-2010. The results of the study, it was found that EKC was valid in Iceland and that fossil fuel consumption had a positive effect on CO₂ emissions in the long-term. It has come to the conclusion that environmental pollution would begin to decrease after a certain point with the increase of economic growth. And it was also mentioned that it was necessary to increase the efficiency and implement environmental policies by using the advantages of economic growth.

Benavides et al. (2017) examined the existence of EKC in Austria in the period of 1970-2012. ARDL test was applied to the CH₄ (methane gas) emission, GDP, electricity production from renewable energy sources (excluding hydraulic energy) and trade openness variables. As a result of the study, it was determined that there was an inverse-U-shaped relationship between CH₄ and GDP.

Data Set and Econometrical Analysis

In this part of the study, the relationship between air pollution and economic growth in Turkey for the period of 1960-2016 was analyzed. To this end, CO₂ emissions per capita, which is the most prominent among the factors causing air pollution in Turkey and income as main variables, energy use and net energy imports were chosen as explanatory variables. In order to examine the relationship between the variables, the selected cubic equation adapted to the variables is as follows:

$$LNC_t = \alpha + \beta_1 LNG + \beta_2 LNG^2 + \beta_3 LNG^3 + \beta_4 LNEI_t + \beta_5 LNEU_t + \varepsilon_t \quad (2)$$

Where; *LNC*, the natural logarithm of per capita CO₂ emissions in metric tons, *LNG*, the natural logarithm of per capita income in dollar, *LNEI*, the natural logarithm of net energy imports (percentage of energy use), and *LNEU*, the natural logarithm of per capita energy use (kilograms of oil equivalent (kgoe)). The constant of the equation is α , the error term is ε_t , and the coefficients are shown by β_k ($k = 1, 2, \dots, 5$). The data of the series used are annual and obtained from World Bank statistical database.

Unit Root Tests

In econometric analysis, it is necessary to examine the stationarity of the data before starting the analysis since a false regression problem may arise if the series are non-stationary. There are various unit root tests to examine stationarity of the series. The one that used most commonly is ADF (Augmented Dickey Fuller) test. The ADF unit root test results are presented in table 1.

Table 1. ADF Unit Root Test Results

| Variables | t- statistics | Probability |
|------------------------|---------------|-------------|
| LNC I (0) | -2.899868 | 0.0519 |
| LNC I (1) | -7.247448* | 0.0000 |
| LNG I (0) | 0.209104 | 0.9709 |
| LNG I (1) | -7.351278* | 0.0000 |
| LNG ² I (0) | 0.487461 | 0.9848 |
| LNG ² I (1) | -7.255092* | 0.0000 |
| LNG ³ I (0) | 0.759525 | 0.9924 |
| LNG ³ I (1) | -7.219896* | 0.0000 |
| LNEI I (0) | -3.648618* | 0.0083 |
| LNEU I (0) | -2.521269 | 0.3172 |
| LNEU I (1) | -7.211687* | 0.0000 |

* indicates the significance at 1%.

As a result of the unit root test, it was observed that the energy import variable is stationary at level while others are stationary at first difference. Therefore, ARDL (Autoregressive Distributed Lag) test was used to examine the relationship between the variables.

Co-integration Test

In econometric analyzes, there are various co-integration tests to examine the relationship between series. Conventional OLS is used for stationary series. Engle-Granger (1987) or Johansen (1991) methods are used for the series stationary at first difference. If all variables have different order of integration (i.e., not all variables are I (1)), then Engle-Granger and Johansen co-integration tests cannot be used. For the series with different order of integration, the ARDL boundary test approach, developed by Pesaran and Shin (1999) and Pesaran et al. (2001), can be applied to examine the co-integration relationship between the variables (Türkay and Demirbaş, 2012: 9-10). The advantage of the ARDL boundary test approach over other co-integration tests is that it can be applied to the series have different order of integration. That is, if some of the variables are stationary (I (0)), and the rest of them are integrated at first difference (I (1)), ARDL can be applied.

The equation of the boundary test of the ARDL approach is as follows:

$$\Delta Y_t = \alpha_0 + \beta_1 Y_{t-1} + \sum_{i=1}^n \beta_{i+1} X_{i;(t-1)} + \sum_{j=1}^p \theta_j \Delta Y_{(t-j)} + \sum_{k=1}^q \delta_k \Delta X_{1;(t-k)} + \dots + \sum_{l=1}^r \gamma_l \Delta X_{n;(t-l)} + u_t \quad (3)$$

Where, Δ is the first difference operator, Y is the dependent variable, X_i 's are the independent variables, β_i ($i = 1, 2, \dots, n$), θ_j ($j = 1, 2, \dots, p$), δ_k ($k = 1, 2, \dots, q$) and γ_l ($l = 1, 2, \dots, r$) are the variable coefficients and u_t is the error term. The null hypothesis (H_0) of equation (3) is that there is no co-integration between variables.

In ARDL approach, firstly, the result of boundary test was examined, and it was determined whether there was co-integration between variables. After determining the existence of co-integration, long-term and short-term coefficients could be examined, and the direction and degree of the relation could be determined.

If the value of the F-statistic calculated at the boundary test was greater than the upper limit of the significance level, the null hypothesis that there was no long-term relationship between the variables was rejected. That is, there was a long-term relationship between the variables. However, the null hypothesis cannot be rejected if the F-statistic value was less than the lower limit. That is, there was no long-term relationship between variables. If the calculated F statistic falls between the upper and lower limit values, no definitive decision could be made with the boundary test.

Bounds Test

The equation of the boundary test applied to the variables in order to examine the long-term relationship between the series used in the study is as follows:

$$\begin{aligned}
 LNC_t = & \alpha_0 + \beta_1 LNG_{t-1} + \beta_2 LNG_{t-1}^2 + \beta_3 LNG_{t-1}^3 \\
 & + \beta_4 LNEI_{t-1} + \beta_5 LNEK_{t-1} + \beta_6 Trend + \sum_{j=1}^p \theta_j \Delta(LNG)_{(t-j)} \\
 & + \sum_{k=1}^q \delta_k \Delta(LNG^2)_{(t-k)} + \dots + \sum_{l=1}^r \gamma_l \Delta(LNEK)_{(t-l)} + u_t
 \end{aligned}
 \tag{4}$$

The results of the boundary test are given in Table 2.

Table 2 . ARDL Bounds Test Results

| | |
|--|-------------------|
| Null Hypothesis: No long-run relationships exist | |
| F-statistic | Degree of Freedom |
| 4.870090 | 5 |
| Critical Value Bounds at significance level %2.5 | |
| I (0) | I (1) |
| 3.49 | 4.67 |

As seen in the table, the value of the F statistic is greater than the upper limit value of 2.5% significance level, therefore the H₀ hypothesis can be rejected. That is to say, there is a long-term relationship between the variables at significance level of 2.5%. So, the long-term coefficients of ARDL can be examined to determine the direction and degree of the relation.

ARDL Approach and Long-Term Relationship Estimation

The lag lengths for the ARDL model were automatically determined according to the model selection criteria by the Eviews 9 software that was used to conduct the analysis. Since the annual data were used in the analysis, the maximum number of lags was chosen as 4 and according to Schwarz Criterion (SIC), ARDL (1, 0, 0, 0, 1, 3) was determined. The results of the estimated model are given in Table 3.

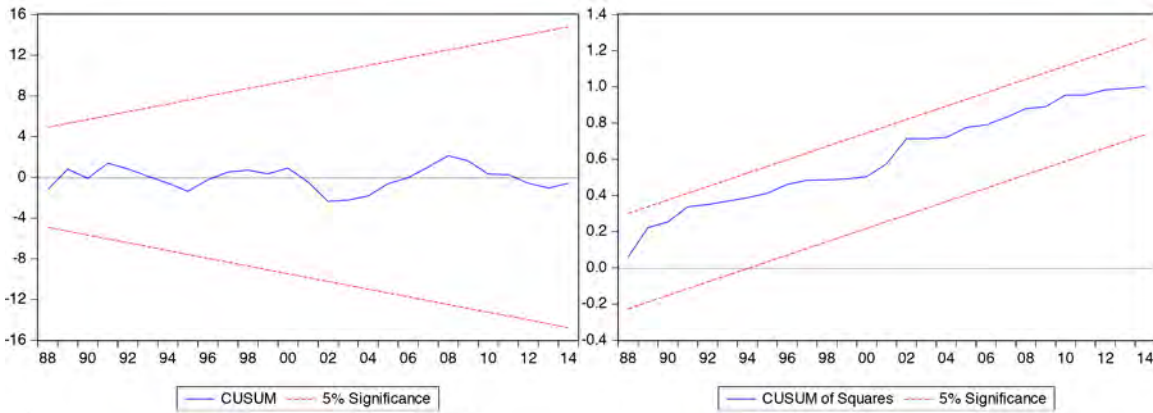
Table 3. ARDL (1, 0, 0, 0, 1, 3) Test Results

| Dependent Variable: LNC | | | | |
|---|--------------|------------|-------------|-------------|
| Variable | Coefficient | Std. Error | t-Statistic | Probability |
| ECM | -0.735825* | 0.142466 | -5.164932 | 0.0000 |
| Long Run Equation | | | | |
| Variable | Coefficient | Std. Error | t-Statistic | Probability |
| LNG | 113.119068* | 23.678201 | 4.777351 | 0.0000 |
| LNG ² | -12.319645* | 2.679337 | -4.598020 | 0.0000 |
| LNG ³ | 0.446733* | 0.100846 | 4.429846 | 0.0001 |
| LNEI | -0.117236** | 0.047449 | -2.470755 | 0.0178 |
| LNEU | 0.936658* | 0.170565 | 5.491515 | 0.0000 |
| C | -351.052626* | 69.546286 | -5.047755 | 0.0000 |
| TREND | 0.006501** | 0.002528 | 2.570948 | 0.0140 |
| $R^2 = 0.998810 \bar{R}^2 = 0.998483 F = 3052.626[0.000]$ | | | | |
| $\chi_{BG}^2 = 0.674313[0.7138]$ | | | | |
| $\chi_{BPG}^2 = 5.993435[0.8738]$ | | | | |

*, ** show significance level of 1% and 5%, respectively.

The coefficient of error (ECM) was found negative and significant (-0.73) according to the results of the model (table 3). This means that there existed a long-term relationship between the variables and if there was a deviation from this balance for any reason, it would return to the long-term equilibrium again in about 1.5-2 period. The test results of the model given in the table were evaluated in order to check whether these coefficients were valid before interpreting the long-term coefficients obtained from the analysis. According to test results, it was seen that there were no problems such as auto-correlation and heteroscedasticity. In addition to these, Cusum and Cusumq test results are examined in Figure 3.

Figure 3. Cusum and Cusumsq Test Results

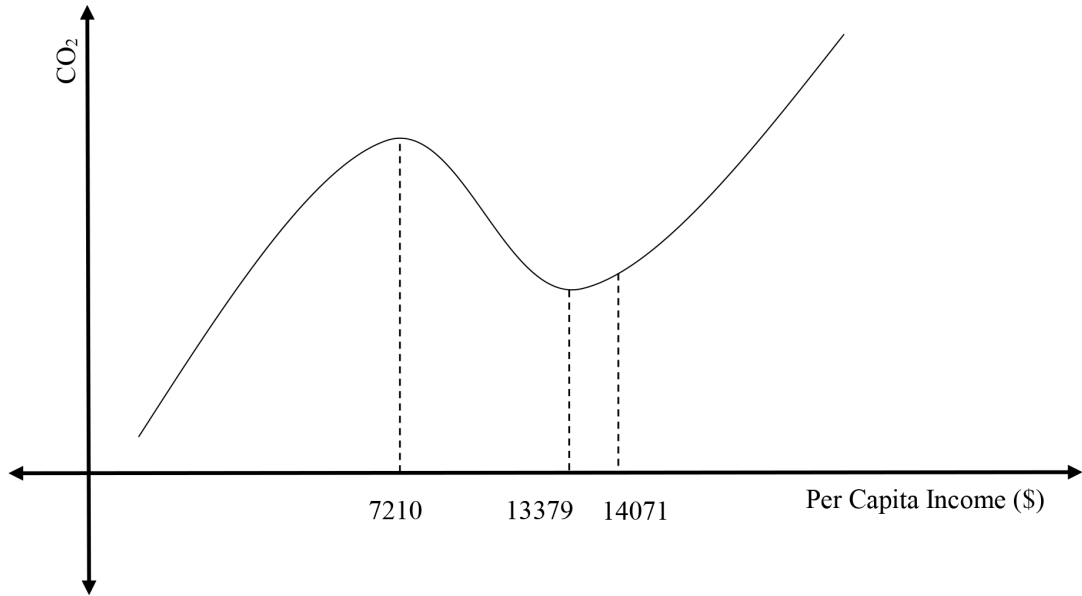


As shown in Figure 3, the plot of Cusum and Cusumsq statistics stay within the critical bounds indicating stability of the model. Therefore, the long-term coefficients of ARDL obtained with the model established in the analysis were stable and could be interpreted.

Evaluation of the Findings

According to the long-term coefficients, it was seen that the coefficients of all variables were statistically significant. Since the coefficient of energy imports was negative, it was concluded that the use of imported energy in the long term would lead to a decrease in CO₂ emissions. This was due to the fact that the energy used from domestic sources in the country was mostly made of coal with high CO₂ emissions compared to other fossil fuels, and in recent years, the energy import has been shifted to natural gas which emits less CO₂ than coal. The coefficient of energy use found positive in accordance with the theoretical framework. In other words, increased energy use in the long term would lead to an increase in CO₂ emissions. Since only 10-15% of the use of energy in Turkey from renewable energy sources, increase in CO₂ emissions was expected unless the share of renewable energy was increased. According to the coefficients of per capita income, it was observed that the EKC hypothesis (“inverse U” curve) was not valid, but vi. case ($\beta_1 > 0$, $\beta_2 < 0$ and $\beta_3 > 0$) given in graph 2 was valid, i.e., there was an “N” shaped relation between carbon dioxide emission and growth. Thus, as income increases, CO₂ emissions will increase to a certain point (real income per capita of \$ 7210), which will begin to decrease later, and if income continues to increase, it will start to rise again after a certain point (real income per capita \$ 13379). The graphical representation of the relationship between CO₂ emissions and per capita national income generated by the coefficients obtained as a result of the analysis is as follows (See figure 4). In figure 4, the vertical axis shows the CO₂ emissions, whereas the horizontal axis shows per capita income.

Figure 4 . Graph of the relation between CO₂ emissions and per capita income in Turkey



Since the per capita national income was 14071 dollars in Turkey in 2016, it was observed that both of the turning points were exceeded. Therefore, it is obvious that further economic growth will bring environmental degradation if the current economic system continues. Thus, the adoption of green growth approach based on renewable energy sources by changing the current understanding of the economic growth in Turkey has become imperative.

Conclusion

In this study, by giving information and emergence reasons of the Environmental Kuznets Curve, the concept comes to mind by the mention of the relationship between the environment and income in economics, the relationship between CO₂ emissions to economic growth in 1960-2016 period in Turkey was examined. According to the ARDL model, it has reached the conclusion that there was an “N” shaped a relation between CO₂ emissions and economic growth in Turkey. The turning points of “N” shaped curve obtained as a result of the EKC was determined as 7210 and 13379. Since the per capita national income was 14071 dollars in 2016, it was seen that both of the turning points were exceeded and the increase in per capita national income would increase CO₂ emissions. In addition, it was determined that the increase in energy use would have a negative impact on the quality of the environment. As a result, it is of great importance in terms of environmental sustainability, Turkey should quit the current understanding of the economic growth and adopt a greener approach. In this context, the energy, which is the necessity of economic growth, needs to be obtained with the help of more environmentally friendly methods, i.e. renewable energy sources.

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RELATIONSHIP BETWEEN FOREIGN DIRECT INVESTMENT AND GENDER EQUALITY: PANEL DATA ANALYSIS FOR SELECTED AFRICAN COUNTRIES

Havanur ERGÜN TATAR¹

Introduction

With the developing world, gender inequality has become an extremely important factor for sustainable development. The impact of foreign investments on wages and employment through multinational corporations also has an advantage to support women to become economically strong.

Foreign direct investments by multinational companies mainly in textiles, apparel, call centers, hotel, catering and tourism, electronic and selected agricultural subcategories offer new business opportunities for women. Through the business opportunities created, women are encouraged to enter the official labor market.

The impact of foreign direct investments on gender inequality is not always positive. If employment for women is limited to low-wage industries or illicit work, the situation leads to a decrease in employment and increase in gender inequality.

Main objective of this study is to analyze the relationship between foreign direct investment and gender equality in selected African countries. In this perspective according to data availability, selected group of developing countries have been used. In the study, by using the ratio of foreign direct investments to national income (FDI/GDP), women participation in labor force, women labor force to men force, commercial transparency, birth rate, growth rate and urbanization metrics, the data between 1990-2014 periods are analyzed with dynamic and static panel data analysis method to run predictions.

In the first part of the three chaptered study, theoretical explanations are defined for gender inequality and foreign direct investment relationship. In the second chapter, the empirical studies on the relationship between gender inequality and foreign direct investment have been addressed. The last chapter is providing empirical analyzes with data and method.

Theoretical Framework

Foreign direct investments have an extreme importance for countries. In this context, countries are constantly in competition to attract more foreign direct investment. Especially, foreign direct investments are vital for developing countries who have budget deficit and shortage in savings. The incentive policies implemented in these countries (tax exemption or exception, subsidies) are focused in making the country more attractive for foreign direct investments (Sedmihradsky and Klazar, 2002).

Institutional and political factors affecting market conditions have a direct impact on foreign direct investments. The presence of effective institutions, superiority of law, control of corruption, intellectual property rights and

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the effectiveness of the government are the most important factors attracting foreign direct investment to the host country (Acemoglu and Simon, 2005). Economies where intellectual property rights are immature, corruption is not under control and contracts are poorly ruled, bring additional costs for foreign direct investments (Shleifer and Vishny, 1993).

The most important factors determining the scale of investment opportunities is equality and stability. In particular, the increase in gender equality in a country is an attractive factor for foreign direct investment. Reaching higher employment and education levels of women contributes to the rise of human capital and income in the country (Klasen and Lamanna, 2009).

The increase of social and political rights of women in countries contributes to the increase of social welfare and transparency in the country (Hunt, 2007:110-120). Neoclassical hypothesis assumes a negative relationship between gender wage deficit and competitiveness of the country in attracting the FDI (Becker, 2010). Increasing the political status of women contributes to increase of the confidence to the state (Blanton and Blanton, 2015:64).

The economic impact of gender equality on foreign direct investments is not always positive. Achieving education on gender equality, political and economic rights are indirectly effective at the point of attracting foreign direct investments to the country. In low-skilled industries such as textiles and clothing, the female workforce is massively employed. The wages of women in these sectors are under average. In this case, the wage difference span increases between men and women. This increase in wage difference brings a cost opportunity in terms of future foreign investors (Berik, Rodgers, and Seguino, 2009). At this point, the reduction of economic rights of women is adopted as a short-term strategy for the expansion of exports and investments in terms of competitiveness (Seguino, 2000a, 2000b, 2010). This applies to semi-industrialised countries such as Taiwan, Hong Kong, Korea, Singapore and Taiwan have experienced rapid industrialization since 1960. With the acceleration of industrialization, women have experienced a significant increase in the labour force participation rate. In order to attract companies in the electronics industry, export-based growth strategy has been adopted. Low wage and unskilled women's labor has created the movement point of this strategy. So gender inequality has been adopted as a strategy for Asian Tigers (UNCTAD, 2014:12).

In developing countries, traditional arguments reveal the existence of the opposite relationship between the rights and welfare of women and foreign direct investments (Blanton and Blanton, 2015:64). But some made empirical studies show that multinational companies support skilled employees (Kucera, 2002). Thus, decrease in gender inequality and increase in the productivity of women's labor force are achieved. When it comes to empirical literature, it is not possible to say anything clear about it. Because, trade liberalisation and foreign direct investments have both positive and negative effects for gender inequality (UNCTAD, 2014:12).

Empirical Literature

Even there are not enough studies which examine the relationship between foreign direct investment and gender equality in the domestic literature, there are many studies in foreign literature.

In the study of Braunstein, (2002), foreign direct investment, gender and women autonomy were examined by using data between the years 1975-1999 for 20 semi-developed industrial countries. In the research, a strong relationship between women autonomy, liberalization and openness were revealed.

In the study of Siegmann (2006) for Indonesia, the impact of foreign direct investments on the labor market was investigated. By using regression analysis of gender data in rural areas, it was concluded that foreign direct investments had an indirect impact on the expansion of the wage difference.

In the study of Vacaflores Rivero (2007), the impact of foreign direct investments on employment was researched by using data between the years 1980-2002 for 17 countries. According to the study, in which GMM prediction method was preferred, it was concluded that foreign direct investments contributed positively to the employment of men and women. Another achieved result was that the women contribution to the employment rate was much higher comparing to men contribution.

In the study of Vijaya, Ramya M. and Linda Kaltani (2007), which they investigated the relationship between foreign direct investment and wages, 19 country were analyzed by using data between the years of 1987 and 2001. It was concluded that there was a negative-directional relationship between foreign direct investment and wages.

In the study of Timmerman (2014), the data between the years 1990-2009 for 43 countries were used to investigate the impact of foreign direct investments on gender. As a result of the work in which the OLS method was preferred, it was concluded that foreign direct investments in women's productivity had a significant impact.

In the study of Jönsson, Lina (2015), which the data between the years of 1990-2013 for 24 countries were analyzed, the impact of foreign direct investments on gender equality was examined. Results showed that there was a positive directional relation between gender equality and foreign direct investments.

Ouedraogo, R. and Marlet E. (2017), analyzed foreign direct investment and empowerment of women in 94 countries by using the data between the years 1990-2015. It was concluded that FDI inputs increased the welfare of women and reduced gender inequality.

Econometric Analysis

In this section, by giving information about the data and method, the results of the analysis will be explained.

Methods and Data

To analyze the relationship between the gender equality and foreign direct investments, four different models are created. Due to the four different models created, gender equality and foreign direct investment relations are tried to be explained. The models are as follows:

$$RFDI_{it} = \alpha_i + \beta_1 FDI/GDP_{it} + \beta_2 Openness_{it} + \beta_3 Fertility_{it} + \beta_4 GDP_{it} + \beta_5 Urban_{it} + \varepsilon_{it} \quad (1)$$

$$FLFP_{it} = \alpha_i + \beta_1 FDI/GDP_{it} + \beta_2 Openness_{it} + \beta_3 Fertility_{it} + \beta_4 GDP_{it} + \beta_5 Urban_{it} + \varepsilon_{it} \quad (2)$$

Many studies have been analyzed to create the model. The studies that are applied in the creation of the model and determining the variables are as follows:

FDI/GDP: In the study of Hoai, Mai and Bui (2016), the relationship between the foreign direct investment and gender inequality was analyzed by using data from the years 1992-2011. As a result of the analysis, it was concluded

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that the openness was an effective variable on foreign direct investments. Therefore, in the model foreign capital was created as a descriptive variable.

Openness: In the study of Lim and McNelis (2014), covering 42 countries, the relationship between income inequality, trade and financial openness was researched by using data from the years 1992-2007. As a result, it was concluded that the financial openness was an effective variable on income inequality. Therefore, in the model openness was created as a descriptive variable.

Fertility: In the study of Macan and Deluna (2013), they investigated the impact of income inequality and labour efficiency on fertility in the Philippines. In the study, the OLS prediction method was preferred and the data from the years 1985-2009 was used. As a result of the study, a negative correlation between income inequality-labor efficiency and fertility was concluded. For that reason, fertility was shown between descriptive variables in the model created.

Growth: In the study of Sowoto and Zhai (2016), 225 countries were examined to analyze the relationship between income inequality and growth for the year 2011. As a result of the study, in which simple and multi linear regression models were used, the positive relationship between income inequality and growth was revealed. Growth was shown between descriptive variables in the model created.

Urbanization: In the study of Chen and others (2016), they analyzed the relationship between income inequality and urbanisation for the years 1978-2014 in China. As a result of the study in which VAR analysis was utilized, it was revealed that urbanisation was an important variable affecting growth. In the model created for this, urbanization was shown in descriptive variables.

Time and section dimensions of variables used in the model are $t = 25$ and $i = 17$ ($t=1, \dots, T$; $i = 1, \dots, N$) in sequence.

To analyze gender equality and foreign direct investment relations, selected African countries are discussed. The African countries used in the study are as follows: Benin, Botswana, Cameroon, Congo Rep., Congo Dem. Rep., Ivory Coast, Gabon, Ghana, Kenya, Mauritius, Mozambique, Nigeria, Senegal, South Africa, Sudanese, Togo and Zimbabwe.

In the model the expected signs for the analyzed variables are as follows:

Table 1: Expected mark for variables.

| Variables | Expected marks |
|------------------|-----------------------|
| FDI/GDP | (+)(-) |
| Openness | (+)(-) |
| Fertility | (+) |
| Growth | (+) |
| Urbanization | (+) |

In the study the data of mentioned sampling countries was used for the years of 1990-2014. Interpolation² method is utilized to complete the missing data. Data is obtained from the database of The World Bank World Development Indicators.

² Interpolation is a concept to predict unknown values through known values.

Hausman Test Results Used in Model Selection

Hausman test allows to make choice between the fixed effects and the random effects. The rejection of hypothesis, signifies that the constant effects model is more appropriate (Baltagi, 2001: 20).

Hausman test results belonging to the African countries group are shown in table 2.

Table 2: Hausman Test Results of African Countries Group

| Model | Hausman Test | | Model Selection |
|-----------|---|--|---------------------|
| | H_0 : The random effects model is appropriate. H_1 : The fixed effects model is appropriate. | | |
| | Chi-Square statistic (Probability Value) | | |
| 1st Model | 543.73 (0.000) | | Fixed effects model |
| 2nd Model | 26.07 (0.000) | | Fixed effects model |

Note: The test statistics and probability values (values in parentheses) are given. Accordingly, the symbol * 5%, ** 10% significance level, indicates that the free hypothesis was rejected.

In the study, foreign direct investment and gender equality in the African countries group is researched and in order to decide between incidental effects and fixed effects Hausman test is utilized. In 1st and 2nd models random effects model is preferred where the impact of economical rights, political rights and education on foreign direct investments are investigated according to the results of the Hausman test. In 3rd model fixed effect model is preferred where the effect of life expectancy on foreign direct investments is investigated.

Fixed Effects and Random Effects Prediction Results

Fixed effects model is the preferred method to control the excluded variables in cases where the excluded variables are not changed by time. In fixed effects model “n” pieces of different cutting coefficient is available. This coefficient is represented by variable series of indicators. The variable series of indicators covers the effects of all excluded variables that are constant over time.

In the fixed effects model, whereas each horizontal section has its own value, the constant in the random effects model is expresses the average value of all horizontal sections. The random effects model is as follows (Gujarati, 2004):

$$Y_{it} = X_{it}\beta_i + v_{it} + u_{it} \quad (3)$$

Here, if no relationship is presumed between u_{it} and x_{it} , the model of random effects emerges. Because of the random dispersal of the horizontal sections in the accidental effects model, the characteristics cannot be observed (Gujarati, 2004).

In this study, static and dynamic panel data methods are preferred. The prediction results of fixed effects and random effects in the African countries group are shown in Table 3.

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Table 3: Prediction Results of Fixed Effects and Random Effects Models in African Countries Group

| | 1st Model | 2nd Model |
|------------------------|----------------------|----------------------|
| FDI/GDP | -0087 (0078) *** | -0139 (0.000) * |
| Openness | -0085 (0.004) ** | -0.072 (0.001) * |
| Fertility | -24,646 (0.000) * | -12,963 (0.000) * |
| Growth | -0307 (0211) | 0.078 (0.673) |
| Urbanization | 0.197 (0.021) ** | 0.057 (0.372) |
| R ² | 0.43 | 0.25 |
| F (5,274) | 41.42 (0.000) | 18.56 0.(000) |
| Number of observations | 296 | 296 |

Note: * indicates that the statistic is meaningful at the importance level of 1%, ** indicates that the statistic is meaningful at the importance level of at least 5%, *** indicates that the statistic is meaningful at the importance level of at least 10%.

According to the African countries group forecast results, in the 1st model, the foreign direct investment variable at 10% importance level, and the openness variable at 5% importance level are statistically meaningful. Theoretically, the increase in foreign direct investment and openness has resulted in increasing gender inequality. The growth variable is statistically meaningless. Finally, the fertility variable at the significance level of 10%, and the urbanization variable at the significance level of 5% are statistically meaningful.

The foreign direct investment variable in model 2 at 1% importance level and the openness variable at 1% importance level are statistically meaningful. Theoretically, the increase in foreign direct investment and openness has resulted in increasing gender inequality. Fertility variable at 1% importance level is statistically meaningful whereas growth and urbanization variables are statistically meaningless.

Arellano and Bover /Blundell and Bond's Two-Stage System Generalized Moments Prediction Results

According to the analysis results by using the dynamic panel data method, the foreign direct investment variable in the 1st model at importance level of 10% and the openness variable at importance level of 1% are statistically meaningful. Theoretically, the increase in foreign direct investment and openness has resulted in increasing gender inequality. Fertility and growth variables are statistically meaningless. Finally, the urbanization variable is meaningful both theoretically and statistically at the importance level of 10%.

In the 2nd model, foreign direct investment and openness variables are statistically meaningful at the importance level of 1%. Theoretically, the increase in foreign direct investment and openness has resulted in increasing gender inequality. With the results achieved as in the study of Siegmann, (2006, 2007), it has been concluded that the foreign direct investments have an indirect impact on the expansion of the wage difference.

The variables of fertility and urbanization are statistically meaningless. Finally, the growth variable is meaningful at the importance level of 10%.

According to two-stage SGMM prediction results, the Wald test made to examine the meaningfulness of the models is meaningful for all models. Selecting the correct tool variables is very important for the effectiveness of the model. One of the tests developed for this purpose is Sargan. In the Sargan test at zero hypothesis, it is assumed that the conditions of the moment are valid. According to the test results, the tool variables used in the model are valid. According to AR (1) and AR (2) test results where the existence of autocorrelation is tested GMM estimators are consistent. In dynamic panel data models the presence of first degree autocorrelation is a common occurrence. At this point, the second degree of autocorrelation is required to be tested. The second degree of autocorrelation is not encountered in all models.

Table 4: Arellano and Bover/ Blundell and Bond's Two-Stage System Generalized Moments Prediction Results

| | 1st Model | 2nd Model |
|-------------------------------|-----------------------|----------------------|
| Rate (-1) | 0.790 (0.000) | 1.070 (0.000) |
| FDI/GDP | -0.024 (0.105) *** | -0.170 (0.000) * |
| Openness | -0.011 (0.001) * | -0.011 (0.001) * |
| Birth Rate | 19.958 (0.23) | 8.841 (0.308) |
| Growth | -0.076 (0.34) | 0.119 (0.100) *** |
| Urbanization | 0.765 (0.100) *** | 0.242 (0.226) |
| Wald Statistics | 7759.14 (0.000) | 1165.70 (0.000) |
| Sargan Test | 12.441 (1.000) | 10.269 (1.000) |
| AR (1) test | -0.025 (0.980) | -4.198 (0.000) |
| AR (2) test | 1.017 (0.308) | -1.380 (0.167) |
| Number of observations | 288 | 288 |

Note: * indicates that the statistic is meaningful at the importance level of 1%, ** indicates that the statistic is meaningful at the importance level of at least 5%, *** indicates that the statistic is meaningful at the importance level of at least 10%.

Conclusion

In this study, where the relationship between gender equality and foreign direct investment is examined, is performed on selected African countries group. By using the ratio of foreign direct investments to national income (FDI/

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GDP), women participation in labor force, women labor rate to men labor rate, commercial transparency, fertility, growth and urbanization variables, predictions are made with dynamic and static panel data analysis method. With initial Hausman test, in sequence fixed effects, random effects and Arellano and Bover/ Blundell and Bond's two-stage system generalized moments prediction results are examined. Finally, the regression prediction is redone by correcting deviations from the assumptions.

According to the prediction results, foreign direct investment and openness variables are statistically meaningful in both models. Theoretically, the increase in foreign direct investment and openness has resulted in increasing gender inequality. This is a expected fact in terms of low-developed and developing countries, because the wages of women in those countries are under average. This fact offers a cost advantage for the foreign investor, increasing the wage difference between the men and women. Finally, increase in foreign direct investments causes increase in gender inequality.

Investing in gender equality is extremely important to increase the women's economic powers and to make women become more productive. By directing women to non-agricultural employment sections, registered employment opportunities should be increased. The national policies for strengthening women should be adopted. By adhering to the working standards of the International Labour Organisation (ILO), the sectors in which women work must be protected intensively.

African Governments should organize educational programs to encourage women to entrepreneurship. Policies that give priority to human capital must be adopted. Social insurance system and business legislation should be regulated to support gender equality.

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SECTION **3.**

MONEY, TAXES AND FINANCE

THE EFFECTS OF CYBER ATTACKS ON TURKISH BANKING SECTOR¹

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1. Introduction

Financial markets can be defined as the markets that enable transfer of savings from funder to borrower through various methods, tools and institutions (Canbaş &Doğukanlı, 2007; Perry, Keown, Scott Jr. & Martin, 1993). Banks are the institutions that play the most fundamental role to fulfill this function of financial markets. Nowadays, banking sector is one of the strategic sectors for the economy. At this point, electronic banking applications have gained prominence and these have significant impact on bank performance and customer satisfaction. Banks face with many different risks while performing electronic banking activities. One of the most critical of these risks is Cyber-attack.

1.1. Cyber-Attack

Cyber-attacks are an attempt that will cause negative impacts on operations of individuals, legal entities or institutions by blocking, destroying or altering their information systems. Similar attacks waged against a nation or nations' information systems is called cyber warfare (Alkan, 2012). In Table 1, countries with highest rate of cybercrime is listed:

Table 1. *The Countries Have Most Cyber Crimes (2014)*

| | Country | Rate | | Country | Rate |
|----|---------|------|----|-------------|------|
| 1 | ABD | %23 | 11 | India | %3 |
| 2 | China | %9 | 12 | Russia | %2 |
| 3 | Germany | %6 | 13 | Canada | %2 |
| 4 | England | %5 | 14 | South Korea | %2 |
| 5 | Brazil | %4 | 15 | Taiwan | %2 |
| 6 | Spain | %4 | 16 | Japan | %2 |
| 7 | Italy | %3 | 17 | Mexica | %2 |
| 8 | France | %3 | 18 | Argentina | %1 |
| 9 | Turkey | %3 | 19 | Australian | %1 |
| 10 | Poland | %3 | 20 | Others | %19 |

Source: *Symantec*

Cyber-attacks that cause approximately \$ 500 billion economic losses annually in the world are carried out in several ways. The most common cyber-attacks are (Ulaşanoğlu, Yılmaz &Tekin, 2010);

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Denial of Service/ Distributed Denial of Service (Dos, DDos)

Malware

Phishing

Spam

Man-in-the-Middle Attacks

In its simplest form, a Denial of Service (Dos) attack is an attack against any system component that attempts to force that system component to limit, or even halt, normal services. In this method, flooding the targeted web site or server in a short period of time with superfluous requests in an attempt to overload systems results in decrease in system performance or a system crash. This situation results in both losses of prestige and economic loss due to customer dissatisfaction caused by failure of customers' transactions (Roebuck, 2005).

Malware software is the general name of any software created with the intention to gain access or damage to computer systems beyond owners' knowledge (Ulaşanoğlu et al., 2010).

Phishing is the attempts carried out to obtain information used for financial transactions by individuals or institutions. Stealing information such as bank account information, credit card numbers, passwords, internet banking login information of individuals or institutions is targeted with these attacks (Yüksel Mermod, 2011) These attacks can be conducted randomly, also specific individual or groups can be the target of the attempts. This type of attempts is called spear-phishing attack.

In the context of cyber-attacks financial institutions are exposed to various attacks. Especially as result of Dos/DDos attacks, it is encountered with problems such as slowdown or crash of internet based services. In table 2, there is information about DDos attacks targeted various field of areas in the world. As it is seen, it is understood that 57% of financial institutions were exposed to this type of attack.

Table 2. *DDos Attacks by Industries (2015)*

| Industries | Attack Rate |
|------------------------|--------------------|
| Financial Institutions | %57 |
| Cloud Servers | %55 |
| Public Institutions | %55 |
| E-Trade Business | %42 |
| Media | %32 |
| Education | %25 |
| Healthy | %20 |
| Retail | %20 |
| Social Networks | %10 |

Source: *Arbor Networks*

In table 3, for 2015, distribution of industries targeted in spear-phishing attacks, another frequently used cyber-attack tool, is displayed. The financial sector is also seen to be affected more than other sectors from this attack type.

Table 3. Spear-Phishing Attacks by Industries (2015)

| Industries | Attack Rate to Institution |
|---------------------------------|----------------------------|
| Financial & insurance | %35 |
| Service industry | %22 |
| Manufacturing sector | %13 |
| Transportation & Public Service | %14 |
| Wholesale Trade | %9 |
| Retail Trade | %3 |
| Other | %5 |

Source: Symantec

Banks, one of the important institutions in the financial sector, are also frequently been the target of cyber threats. Attacks conducted may have consequences such as inefficient use of internet and mobile banking, system crash of internet or mobile banking, failure of the operation of the RPS devices, and delays experienced in the credit card or payment system. In this context, cyber-attacks may cause customer attrition and loss of reputation of the bank which leads to economic losses.

In October 2015, malware attacks made to ATM's via remote access in East European countries caused a significant level of financial losses to the sector. In November 2015, disruptions in transactions occurred as a result of DDoS attacks targeted Russian banking sector and serious customer complaints were received. In the same period, an attack that disclosed customer information was made by hacking Azerbaijan Central Bank's systems (HAVELSAN, 2016). In December 2015, in Turkey, cyber-attacks (DDoS) targeting financial sector had been conducted for a few days. In consequence of these attacks focused on creating artificial internet traffic internet, while systems of some banks crashed, mobile banking applications of some banks had been out of order (HYPERLINK "http://www.fortuneturkey.com" http://www.fortuneturkey.com, 2016). It is not very easy to determine the extent of the economic loss these attacks caused. However, it can be said that attacks caused customer dissatisfaction, loss of reputation and trust. These experienced problems have led banks to take more serious measures by reviewing their cyber security systems.

2. Method

2.1. Research Objective

In this study, initially, it is tried to seek the effects of cyber-attacks which was made between 15-25 December 2015 on Turkey's financial sector. Also it was aimed to determine the effects of potential powerful attacks On Turkish Banking Sector.

In this context, hypotheses of the study are

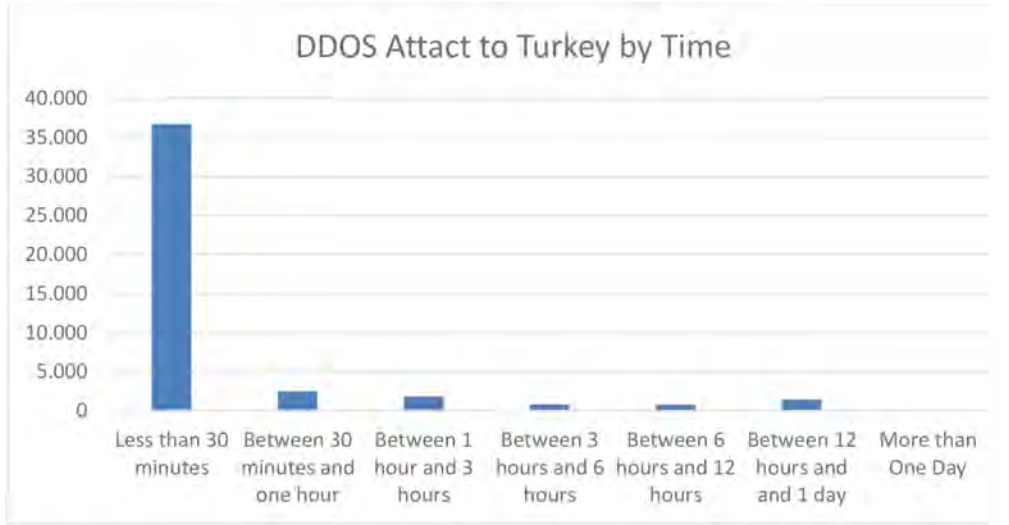
H₁: Cyber-attacks conducted in December 2015 affected our financial system negatively.

H₂: Potential high amount of attacks affects the performance of banking.

2.2. Research Sample and Method of Analysis

Cyber-attacks can begin and end within a very short time. This attacks can last a day, an hour even a minute and also can be conducted in different ways as stated above. DDos attacks targeted Turkey is shown in the graph below. As seen from the graph, a significant portion of attacks last less than 30 minutes.

Graph 1. DDOS Attacks by Time



Source: Arbor Network, DDOS report, 2015

On the other hand, this type of attacks should be assessed with their volume. A one day long little volume attack has less effect than a very high volume attack lasts very short time. For a better understanding of the subject, information about cyber-attacks targeted Turkey between 17 and 19 December 2015 is given in the following table.

Table 4. The Volume and Duration of Cyber Attacks to Turkey Between 17-19 December

| | | | | | | | | | | | | | |
|----------------|--------------------|-------|-------|-------|-------|------|------|------|------|-------|------|-----|------|
| 17 December | Duration (hour) | 0.26 | 11 | 0.73 | 0.75 | 1 | 0.2 | 0.2 | 0.75 | 0.183 | 0.12 | 0.1 | 0.13 |
| | Volume (BPS) | 74213 | 10112 | 9584 | 9570 | 7229 | 4708 | 4431 | 3917 | 3117 | 1040 | 572 | 570 |
| 18 December | Duration (hour) | 4 | 0.71 | 13 | 1 | 1 | 0.73 | | | | | | |
| | Volume (BPS) | 43369 | 32132 | 26797 | 7828 | 7229 | 3620 | | | | | | |
| 19 December | Duration (hour) | 24 | 0.71 | 15 | 20 | | | | | | | | |
| | Volume (BPS) | 36840 | 32132 | 27444 | 21058 | | | | | | | | |

Source: <http://www.digitalattackmap.com>

As seen from the table the while the volume of a cyber-attack on 17th December 2015 lasted 0.26 hours (16 minutes) was 74213 BPS, the volume of a cyber-attack on 19th December 2015 lasted for 24 hours was 36840 BPS. Therefore, it can be said that the volume of attack is very effective as well as the number of attacks.

Therefore, while creating sample in order to determine the effects of attacks there is a need for the data collected in the same time period. In Turkey, in terms of banking activities, the nearest data about the subject for this short time period are the electronic funds transfer (EFT) and Retail Payment System (RPS) transactions data published daily by the Central Bank of Turkey (CBT).

In December 2012 CBT made an update and payment systems were separated into 2 different systems EFT and RPS. According to this, RPS is a system for transactions of customers under a determined low value and the number of transactions made by this new system is equals to 98% of former EFT system (<http://www.tcmb.gov.tr>).

Accordingly, both of the two systems may be effected by an attack that will be targeted banking system.

Data used for measuring banking performance such as credit volume, credit card usage volume, credit card revenue are published weekly and the profitability is published monthly.

In order to determine the effects of the December 2015 attacks, the daily transaction amount by EFT and RPS devices in 2015 has been determined as sample of the research.

In order to determine the effect of possible attack, it has been tried to determine the average data of first quartile of 2016. On the other hand, the quantities of cyber-attacks targeted Turkey and other countries was obtained from Arbor Network web site.

Firstly, in order to test H1 hypothesis, the relationship between amount of EFT and RPS transactions during the dates of attacks conducted, 15-25 December 2015, and the dates without attacks was examined by linear regression analysis.

In terms of examining Hypothesis 2, it will be tried to determine the changes in profits of banks due to a possible decrease in daily credit card transaction volume caused by cyber-attack

Two models were established to examine first hypothesis. The models and variables are listed below.

$$Y_{1t} = \beta_0 + \beta_1 X_{1t} + e_t \quad (1)$$

$$Y_{2t} = \alpha_0 + \alpha_1 X_{1t} + e_t \quad (2)$$

Y_{1t} = Daily EFT amount (EFT)

Y_{2t} = Daily RPS transactions amount (RPS)

X_{1t} = Attacks variable (the dates attack performed, 15-25 December 2015 is coded "1" other dates are coded with "0")

2.3. Pretests of the Research

In order not to obtain erroneous results from in time-series analyses performed in statistics and econometrics, some pretests must be conducted on the data set. Initially the series will be used in the analysis must be stationary. Non-stationarity series cause erroneous results. In this context, stationary analysis results of daily EFT volume and daily RPS transactions volume given below.

Table 5. *Stability Test Results*

| | | without Trend – Z (t) | With Trend – Z (t) |
|------------------------------|-------------|-----------------------|--------------------|
| AugmentedDickey-Fuller (ADF) | EFT Amounts | -11.723** | -13.458** |
| | RPS Amounts | -8.663** | -4.008** |
| Phillips-Perron (PP) | EFT Amounts | -11.834** | -13.471** |
| | RPS Amounts | -8.350** | -8.420** |

* $P < 0.05$ ** $P < 0.01$

According to test results above, it is determined that both EFT and RPS transactions volume data are stationary.

On the other hand, Breusch-Pagan / Cook-Weisberg test was used in order to detect the heteroscedasticity in the models. According to the analysis results established to test the model with EFT amounts $F = 0.32$ ($P > F = 0.57$) and according to the analysis results established to test the model with RPS transactions amounts $F = 0.98$ ($P > F = 0.32$) results were obtained. Accordingly, there is no heteroscedasticity in both of the two models.

Additionally, Breusch – Godfrey LM test was performed in order to check any auto-correlation problem in the models.

Table 6. *Breusch – Godfrey LM Autocorrelation Test Results*

| | First-Order | | Second-Order | | Third-Order | |
|------------------|------------------|-------|------------------|-------|------------------|-------|
| | Chi ² | Prob | Chi ² | Prob | Chi ² | Prob |
| The Model of EFT | 1.590 | 0.21 | 6.658 | 0.036 | 6.799 | 0.078 |
| The Model of RPS | 15.798 | 0.001 | 25.740 | 0.001 | 25.770 | 0.001 |

According to these results, in the first model, there is 2nd order autocorrelation problem and in the second model there is 1st order autocorrelation problem.

If there is even one of the heteroscedasticity and autocorrelation problem is determined by performed pretests, estimator cannot be effective (Tatoğlu, 2012: 231). For this reason, robust standard error method was used during the analyses.

3. Findings

3.1. Effect of Attacks between 15 and 25 December on Banking Transactions

The results of analysis performed in order to determine the effect of cyber-attacks targeted Turkey conducted between 15 and 25 December 2015 on EFT and RPS transactions are shown below.

Table 7. Results of Analyze

| Dependent Variable | EFT Amount | RPS Amount |
|--|-------------------|-------------------|
| Independent Variable: Cyber Attacks | -1403.54 (0,334) | 2.46e+08 (0.237) |
| Constant | 16939.11 (0,000) | 3.94e+09 (0.000) |
| R square | 0.006 | 0.003 |
| Prob> F | 0.94 (0.330) | 1.40 (0.240) |

According to analysis results above, there is no significant correlation in both of the two models. Based on these results H_1 hypothesis is rejected, and it can be said that the cyber-attacks mentioned in public which were conducted between 15 and 25 December 2015 don't have any negative effect on EFT and RPS transactions.

There may be a number of reasons why negative effect is not outcome.

Short duration of attacks,

The density of attacks is not big enough to affect system,

Various measures have been taken against attacks,

Being exposed to less attacks than other countries.

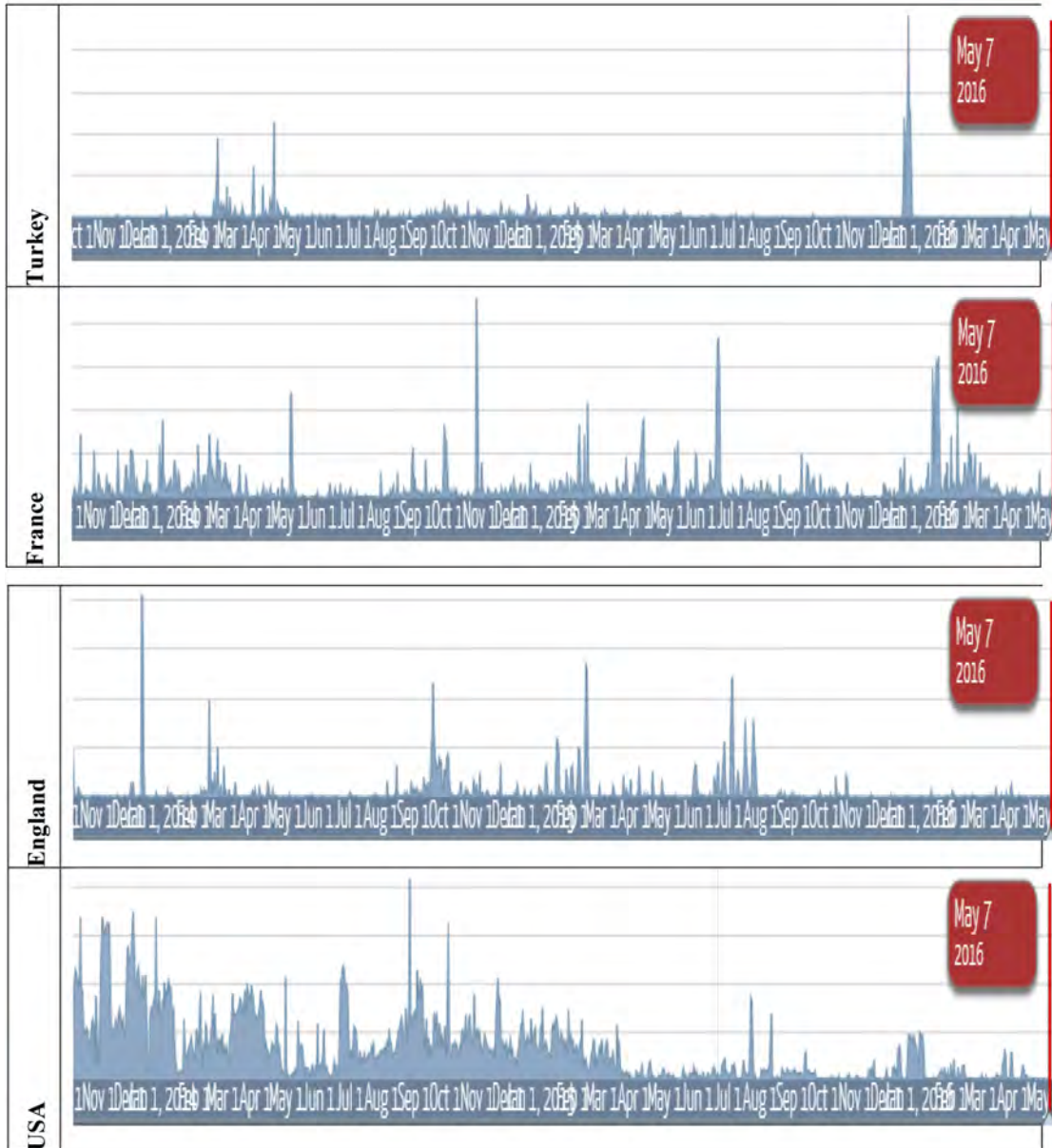
Short duration of attacks: When we check the durations of attacks sometimes it lasts 3 hours, sometimes 45 minutes. In this instance, even if there is some impact during the intense attack, later system runs functions as before and effect of the attack in the data shown daily.

The density of attacks is not big enough to affect system: Even if the attacks last for long time, it is very difficult to reach a large volume to affect the system. Therefore, there may not occur too many failures in transactions during the attack.

Various measures have been taken against attacks: Financial institutions are signing contracts with cyber security companies to carry out their protection function against cyber-attacks, and this solution can have an impact on decreasing the effects of attacks conducted.

Having less attacks than other countries: The graphs of DDOS attacks targeted Turkey and some other countries conducted after June 2013 are given below.

Graph 2. DDOS Attacks Bandwidth to Various Countries



Source: <http://www.digitalattackmap.com>

According to graphs above, it is seen that the amount of DDOS type cyber-attacks are very less than others. It is seen that the highest amount of DDOS attacks were conducted between 15 and 25 December 2015 which is after the outbreak of crisis between two countries due to Russian plane crash. However, even in this period the attacks targeted to Turkey are not reach a high level compared to other countries.

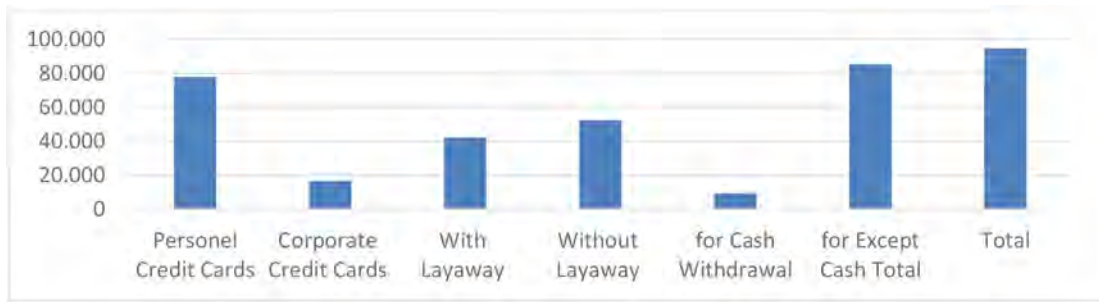
3.2. Impacts of Possible Effective Cyber Attacks on Financial Markets

Until now, there was no significant effects of cyber-attacks on payment systems in Turkey, but this situation cannot be an indicator for the effects of probable attacks and attacks will be weak same as before. Additionally, because the former attacks didn't have significant effect, it is not possible to say attacks will never have significant effects. It can be considered that financial markets will be much more affected from probable attacks in high volume and duration.

This effect can affect a wide area and many connected sectors. Because it is very hard to work on all of the sectors, the scope of the study was limited. In this context, it is tried to determine the effect of high volume effective attacks on profits of banks in case of decrease in volume of credit card transactions.

Credit card transactions volume in March 2016 data taken from BRSA are given on Graph 3 below.

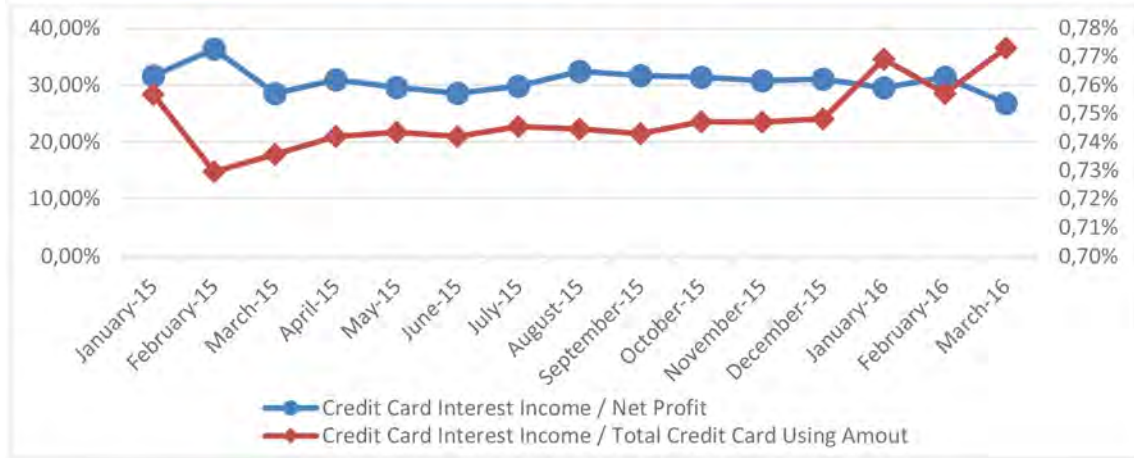
Graph 3. *The Amounts of Credit Card Usage at March 2016 (Million TL)*



Source: BRSA

Additionally, the graphs above demonstrate the ratios of credit card interest income to total net profit and total credit card usage amount. Accordingly, the worth of interest income is 0.75% of the credit card transactions and the interest income earned is equal to 30.68% of net income.

Graph 4. The Ratios of Credit Card Interest Income to Total Net Profit and Total Credit Card Usage Amount (%)



Source: Created using with BRSA' data

As a result of this situation, it is concluded that, the ratio of credit card revenues to net profit is 0.23% on average. On the other hand, according to the information obtained from Interbank Card Center, the ratio of cash withdrawal with credit cards is approximately around 10%. Accordingly, credit cards are used generally for shopping. Total volume of credit card usage for shopping for first half is 292.07 Billion TL. Therefore, the impact of credit cards, which are used for shopping, on profits of bank can be calculated as follows:

Credit Card Usage Volume for Shopping x 0.75% x 30.68% = Effect on Net Profit

According to calculations made, average daily credit card usage for shopping in first half of 2016 is 1.60 Billion Turkish Lira.

Accordingly, average daily profits of banks earned by the use of credit cards and the effects of a probable attack on profits of banks in the cases of 10%, 20% and 50% decrease in credit card usage are given on Table 8 below.

Table 8. The Effects on Banking Sector of Cyber Attack to Credit Card Usage

| Credit Card Usage | Effect to Net Profit (Million TL) | Decrease (Million TL) |
|--|-----------------------------------|-----------------------|
| No Cyber Attack | 36.93 | |
| % 1 decrease because of Cyber Attacks | 36.56 | 0.37 |
| % 10 decrease because of Cyber Attacks | 33.23 | 3.69 |
| % 20 decrease because of Cyber Attacks | 29.54 | 7.39 |

According to the results obtained cyber-attacks targeting banking sector even if only reduce their use of credit cards, have major impacts on the sector. Accordingly, it can be said that 1%, 10% and 20% decrease in credit card usage cause 370.000 TL, 3.692.686 TL and 7.385.371 TL worth decrease in profits of banks, respectively.

Additionally, according to Interbank Card Center data, 5 areas which credit cards mostly used were determined. These are supermarkets and shopping, fuel and gas stations, clothing and accessories, electrical and electronic goods and food. Accordingly, it can be said that the effects likely to increase exponentially because shopping activities in these areas will also be damaged during probable disruption.

4. Discussion and Conclusion

The widespread use of computers and internet-based technologies also causes increase of cyber-attacks. In recent years the phenomenon of cyber security has become a constant subject of debate because of targeted cyber-attacks, the abuse of the security vulnerabilities, private data hacked and economic loss caused by this situation (STM, 2016).

In this study, it is aimed to make a contribution for the examination of this problem for Turkey and it is found that the cyber-attacks conducted between 15 and 25 December 2015 have no significant effects on payment systems. It can be said that this situation is related to many factors. The first one of these is the preventive measures that were taken by institutions against a probable attack.

Cybersecurity can be defined as the collection of tools, policies, security concepts, security safeguards, guidelines, risk management approaches, actions, training, best practices, assurance and technologies that can be used to protect the cyber environment and organization and user's assets. (International Telecommunication Union, 2008). In interviews about this subject with cyber security firms such as ARP, it has been identified that many financial institutions have contracts with companies for the cyber security.

It can be said that the second reason of failure to determine the effect of the attacks is the size of attacks which are not large enough to have effect on system. The philosophy behind DDos is flooding the bandwidth or resources of a system in order to stop system. Attacks which made with this philosophy may not be large enough to lock the system.

Additionally, even if a large volume attack is conducted, it is very hard to continue an attack for a long time. Therefore, it can be said that even if attacks were effective for a few hours, the effects of the attacks could not reach a level to have effect on daily data.

In order to calculate the effects of an attack just continued for a few hours, the data set of this time interval is needed and in available resources, there is no data set about this situation. At the same time this situation is also the constraint of the study.

On the other hand, until now there was no severe effects of the attacks and preventive measures for cyber-attacks are taken by financial institutions but within this context these experiences cannot be indicator of probable attacks will never have severe effects. In the current situation, considering the low amount of cyber-attacks were targeted Turkey, it can be said that, in the future, much more systematic cyber-attacks with different technological tools may be effective. It is determined that only a 10% decrease in credit card usage caused by probable attacks results in 3.69 million TL decrease in profit per day. In addition to this situation, loss may occur due to interruption of payments and collections could be much bigger in real sector which works in conjunction with financial sector

In order to overcome these drawbacks, new cyber security policies are being developed, and intercountry cooperation is gaining importance. Many countries, including Turkey, are faced with the threat of cyber-attacks (STM, 2016)

Therefore, it can be said that the studies and measures taken for cyber security in Turkey should be much more extended and increased. It can be said that this study will contribute to the literature in the field of measuring the effects of cyber-attacks on performance of banks. From this point forth, studies can be conducted to examine the effects of tendencies of individuals not to use electronic banking services such internet, mobile banking or credit card to the sector.

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26

CRYPTO MONEY AND TAXATION IN TERMS OF TURKISH TAX LEGISLATION

Taha Emre ÇİFTÇİ¹, Samet EVÇİ²

Introduction

Money is defined as anything generally regarded as a means of exchange in economies (Orell ve Chlupaty, 2016). The money also is a technological solution to solve the problem that society has on barter (Sahoo, 2017). The problem with exchange, such as barter trade, is to find the people who produce the goods you need and the people who need your products. Money has solved this problem as a tool of purchase and sale of goods and also has become a common medium of exchange instead of the exchange of goods (Tan and Low, 2017).

The money used as an unit of account and store of value in addition to the medium of exchange has changed formally from past to present. In the past commodities with a certain value were used, then banknotes began to be used. Nowadays, virtual currencies in digital format have begun to use instead of banknotes. According to the money matrix published by the European Central Bank in 2012, the money format is divided into physical and digital (European Central Bank, 2012). Physical and digital money formats are classified as regulated and unregulated. Physically regulated currencies include banknotes and coins, while unregulated physical currencies include various currencies. Digital regulated currencies comprise e-money and commercial bank deposits, while unregulated digital currencies include virtual money (European Central Bank, 2012). Crypto currencies are in the category of virtual currencies which are unregulated in the digital format according to the monetary matrix of the European Central Bank Gültekin and Bulut, 2016).

Crypto currencies among the digital currencies based on cryptography are shown as Recent Developing Payment Systems in recent times. The new system has been adopted by individuals and companies who want to trade online quickly and efficiently without having to provide credit cards or banking information (Ahamad, Nair and Varghese, 2013). In this context, crypto currency market reached a market cap of approximately \$ 600billion USD by the end of 2017. There are nearly 800 crypto currencies traded on the market (HYPERLINK “<http://www.coindesk.com>” www.coindesk.com). Among these currencies, Bitcoin is the leading crypto currency with the highest awareness in terms of market capitalization, transaction volume and number of users (Gültekin and Bulut, 2016). Bitcoin was conceptualized in an article written in 2008 by Satoshi Nakamoto pseudonymity. The increase in the price of Bitcoin from below \$ 0.01USD to over \$ 250USD in the first four years has attracted attention of market players and has become an alternative investment instrument (Ahamad, Nair and Varghese, 2013). At the end of 2017, the market cap of Bitcoin in crypto currency market reached 38.70%. Bitcoin is followed by Ripple with a market cap of 14.52% and Ethereum with 11.92% respectively (HYPERLINK “<http://www.coindesk.com>” www.coindesk.com).

The fact that crypto currencies are not subject to any regulatory agency or state authority is influential in the widespread and popularization of these currencies. These features also separate the crypto currencies from the physical currencies (Sontakke and Ghaisas, 2017). Crypto currencies based on systems called blockchain are transferred

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by entrusting to a group of computers regardless of which government they live under (Peck, 2017). This system eliminates the transactions and contracts applied in the regulated currencies transfers, reduces the transaction costs in online payments and allows transactions to be carried out without banking information (Prentis, 2015). The fact that crypto currencies are not subject to any regulation has some advantages to the investor and brings with it certain problems. One of these problems is how to crypto currencies transactions and their profits will be taxed. Therefore, this paper focuses on the taxation of crypto currencies transactions in terms of Turkish tax legislation.

Crypto money is not yet a legal tool of change accepted by many states. It is not possible to take tax from medium of exchange not defined by law. However, the fact that the center of the crypto money does not exist and the use of it increases day by day, reveals the necessity of organizing taxation of the states. This arrangement will prevent the loss of tax due to an arrangement to be made, thus preventing money laundering.

The rest of the paper organized is as follows. Section II explains the functioning of the crypto currencies system. Section III examines the taxation of crypto currencies in terms of Turkish tax legislation and compares it with other country applications. Finally Section IV concludes.

Functioning of Crypto Currency System

The key to a central authority and a digital money transfer system that is not reliant on is the cryptographic mechanisms (Khalilov, Gündebahar and Kurtuluşlar, 2017). Cryptoptagrophy is used in the creation process of money and in the process of ensuring the reliability of the transactions made (Gültekin and Bulut, 2016). Cryptocurrency is a peer-to-peer transaction system that uses cryptoptagrophy in the creation and distribution of currencies (Mukhopadhyay, Skjellum, Hambolu, Oakley, Yu and Brooks, 2016). The money transfers that take place in this system are available at other points in time. Thus, the payments between the accounts have passed the records. The records of the transactions carried out are within the structures called blockchain (Gültekin and Bulut, 2016).

To be able to receive and send cryptocurrencies, the transaction must be recorded in public ledger known as blockchain (Farrel, 2015). Blockchain is a public ledger of all transactions performed so far(Mukhopadhyay, Skjellum, Hambolu, Oakley, Yu and Brooks, 2016). The entire transaction history is stored in the blockchain and is shared by the network. Also all transaction histories are verified by all network participants (Jang and Lee, 2018). For example, when user C receives three bitcoins from user B, user C participates in publicly verifiable processing indicating that user C has received three bitcoins from user B. User C could verify that user B was able to make the payment because user B had an earlier transaction that received three bitcoins from user A and there was no previous transaction where B spent these three bitcoins (Böhme, Christin, Edelman, and Moore, 2015). Every transaction that has been published and verified in the crypto currency network is collected in a block. The block is constantly growing with the addition of completed blocks. Thus, a distributed chronological chain of block called blockchain is formed. In each crypto currency system, the maximum size of a block is fixed to give an upper bound on the number of transactions involved (Mukhopadhyay, Skjellum, Hambolu, Oakley, Yu and Brooks, 2016).

The approval of the transactions in blockchain is realized by processes called mining. In this process, the Bitcoin owner sends a directive to the network when it wants to pay, and the computers on the network (nodes) verify the transaction before the transaction is added to the blockchain files. The validation process consists of the resolution

of a complex mathematical puzzle by nodes run by users known as miners (Low and Teo, 2017). The miner who solves the problem first and completes the block structure is entitled to add the block to the end of the chain and gets the Bitcoin prize defined per block as a reward. In this way, at the same time as the mining process, the Bitcoins have been released to the market (Khalilov, Gündebahar and Kurtulmuşlar, 2017).

Evaluation of crypto currency in terms of Turkish tax legislation

Turkish tax system consists of a structure based on three economic resources. These three economic resources were determined by the legislator as income, wealth and expenditure. The taxpayer is the one who embodies these three economic resources and the abstract rules that are present in the laws. In other words, it is the realization of the provisions in the tax laws along with an event or transaction via individuals. It is the event that gives rise to the tax that initiates the taxation process. In the Tax Procedure Law, the event that gave rise to the tax take part in art. 19. According to this provision, the event that gives rise to the tax, “the tax claim emerge with the occurrence of the event or the legal situation that tax laws tied”. Therefore, in order for the emergence of tax claim of the state, it is necessary to be situated the provisions about that tax claim in the laws and the provisions located in the tax laws should be carried out by persons with an event or transaction.

In Turkey, there are no any provisions for the taxation of crypto currency within the existing laws. Therefore, it is out of the question about taxation of crypto currency. However, in this part of the study, it is tried to be revealed the thing that is not the laws in force but the laws should be. For the answer to the question of how the tax should be taxed, it is necessary to know what the crypto currency is. According to the results to be found for the answer to the crypto currency, the taxation method may change under the tax laws. In terms of the definition of crypto currency, many opinions have been put forward. The generally accepted view is that crypto currency is in the form of a digital commodity. In this study, crypto money will be considered as a digital value and, in this context, it will be tried to be evaluated in terms of tax.

The lack of any definition of crypto currency according to Turkish legislation has caused problems in terms of taxation. In the Turkish tax system, the non-taxation of crypto currency may cause problems in terms of tax justice and tax revenues. As a result, it is included in the tax laws that require taxation of the individuals or institutions that earn income. The fact that this element of income which is not legally regulated is not subject to taxation constitutes a violation of the tax justice principle. Moreover, it can be seen as a loss of income in terms of public receivables.

Taxation of Crypto Currency for the Income Tax

Earnings for the Disposal of Crypto Currency

The profit resulting from the fact that crypto currency is a value and subject to trading transactions should be evaluated within the scope of income tax. The earnings and revenues acquired by natural persons in a calendar year constitute the subject of income tax. Article 2 of the Income Tax Law includes the components of income. It is important to determine which income element is the part of the crypto currency have importance from the point of taxation.

Commercial income, which is one of the income components, is explained in Article 2 of the Income Tax Law, in which commercial and industrial activities are subject to income tax. As the trading transactions are counted in the scope of commercial activity, it will reveal the necessity of taxing of crypto currency transactions in the context of commercial earnings. However, commercial activity should not only be considered within the scope of trading transactions, but this activity should be based on a labor-capital organization and must be carried out continuously in a commercial organization. In this context, if crypto money is considered as a value and it is subject to continuous commerce in a calendar year, it should be subject to income tax as a commercial gain within the scope of commercial activity.

In the event that the crypto currency trading activity is not continuous, namely more than one such transaction is not performed within a calendar year, it will be considered within the scope of “other earnings and income” which is one of the income items. Other earnings and revenues; gains from appreciation and gains from land are liable to income tax. It is indicated in 82. article of the Income Tax Law that crypto currency would be subject to income tax as incidental gains when the crypto currency is not traded continuously in a calendar year. According to the same article provision, 27.000 TL of the income obtained in this way for 2018 is exempted from tax. The portion exceeding this exemption amount is taxed liable to income tax.

Earnings for Mining Activity

Verification and recording of crypto currency transactions are provided by the ones carried out mining business. As a result of this activity, the control and security of crypto currency are ensured. Those who perform mining activities need high computer technology and electrical energy to do all these operations. Thus, the miners gain profits in exchange for the services they provide (Dilek, 2018).

The subject which income element is the part of mining activity within the scope of income tax is also a controversial situation. Should the operations carry out within the field of the mining activity be evaluated as a mix of labor-capital within the context of the commercial organization? Or should this activity be evaluated based on personal work, scientific and professional knowledge and expertise rather than capital? The person carrying out the mining activity must be subject to income tax within the scope of commercial earnings if it is evaluated within the context of a labor-capital intensive commercial organization. However, if this activity is taken into account based on personal work, scientific and professional knowledge, expertise rather than labor-capital, then it will have to be subject to income tax under the self-employment gain.

The reasons for the emergence of two different views on whether mining activity should be subject to income tax as commercial profit or self-employment are explained as follows:

- The person who put into practice the mining activity needs a computer with a strong processing power, not personal work, scientific or professional knowledge to carry out the operations. Therefore, it is possible to conclude that mining activity should be a commercial activity because of the fact that labour and capital influence is more weighted on the work is done. As a result, miners should be taxed according to the provisions of commercial earnings as a result of their commercial activities (Türkyılmaz, 2018).

- Within the framework of mining activity, technical information is needed to actualise activities such as security of the system, control, verification and registration of transactions Processes requiring technical knowledge of persons; it is possible to perform personal work, knowledge and vocational information based on specialization

rather than the capital. For this reason, miners must be taxed according to the provisions of the self-employment earnings (Yıldız, 2018).

Taxation of Cryptocurrency in Terms of Corporate Tax

The provision of article 1 of the Corporate Tax Law stipulates the subject of corporate tax as corporate income. The taxpayers of the corporate tax are also stated in the content of the same law. Corporate taxpayers; economic enterprises belonging to capital companies, cooperatives, economic public institutions, associations or foundations, and business partnerships are expressed as a business partnership. In addition, the corporate earnings of the taxpayers consist of elements that enter the subject of income tax.

In the Corporate Tax Law, all income items specified in the Income Tax Law are collected within a single corporate income and the tax base amount is disclosed. Corporate taxpayers who perform activities such as acquiring and disposing of crypto currency will be subject to corporate tax by determining the earnings obtained in this context as corporate income. Regardless of which income element the crypto money is subject to, the corporate earnings are taxed under the corporate tax for profit arising from the institution gains.

Earnings of intermediary institutions in crypto currency trading

Companies acting as intermediaries in the crypto currency trading process are operating as a workplace by establishing an online platform in the form of a web site. The activities of the intermediary companies are hosting the commercial gain characteristics and earn commission gains in exchange for this activity. Companies that earn commissions should be taxed within the corporate tax by including their respective earnings in the corporate earnings (Türkyılmaz, 2018).

Taxation of Crypto Currency with Respect to The Added Value Tax

According to the Value added Tax article 1. in accordance with Turkish tax system acts such as goods delivered and services performed in the territory of Turkey falls into the subject of the tax. Accordingly, the delivery of crypto currency may also be included in the scope of the tax. In addition, under the relevant article; the actions of these activities on the need of law or governmental authorities, the legal status and personalities of those who made them, whether the presence of Turkish nationality or not, whether the residence or the workplace or the legal center or business centres are in Turkey or not, is adjudged that it will not change the nature of the transactions and would not interfere with taxation. According to this provision, the small taxpayer, the full taxpayer, the special, without the official distinction, provided that the transaction is made in Turkey, the process is taxed whoever does. In this case; If the crypto currency is delivered as a digital value, it must be subject to Value Added Tax (Kaplanhan, 2018).

There are some featured situations in terms of value added tax of the crypto currency. These:

- There is no liability for the value added tax of persons who do not consistently make crypto currency trading activities, ie earn income as a result of incidental gain (Türkyılmaz, 2018).
- The Commission gains of the companies that mediated the crypto currency exchange are subject to value added tax as well. Value Added Tax must be calculated over the commission amounts obtained (Türkyılmaz, 2018).

Taxation of crypto money deliveries made within the scope of mining activity

The service activities performed within the scope of mining activities are in question. Crypto currency is obtained by rewarding service performance. Accordingly, in terms of value added tax, it is possible that this event is included in the subject of the tax. Goods deliveries and service statements carried out within the Turkish borders constitute the subject of the value added tax. In other words, people who perform mining activities within the Turkish borders must be obliged to pay taxes in terms of value added tax.

As a result of mining activity, it is necessary to mention the existence of problems that may arise in terms of value added tax. The questions that “who take advantage of service performances and the where are service performances being performed” have importance. Miners carry out a large number of transfers (3,000 transfers per block) and receive a transaction fee from the user for each transfer operation. How to ensure the registration and document order in terms of value-added tax for the existence of problems, such as the identification of the users who have been billed and transferred to each of the transactions performed are under the question (Türkyılmaz, 2018).

Conclusion

The underlying structure of the digital money system, which is not controlled by a central authority, constitutes cryptographic mechanisms. Crypto money is the digital money that uses this mechanism in the process of creating money. According to the European Central Bank money matrix, cryptographic currencies are among unregulated virtual currencies. In this context, crypto money is digital money that is based on peer to peer distribution systems not controlled and not produced by central government.

Lack of legal legislation on the definition of crypto currencies made it impossible to obtain tax. In Turkey, according to the principle of the law of taxation, It is a constitutional necessity for the tax to be placed in the law. An arrangement to be made in this area will prevent possible tax loss and prevent injustice in taxation.

In terms of the definition of crypto currency, many opinions have been put forward. The generally accepted view is that crypto currency is in the form of a digital commodity. In the evaluation of the crypto currency in terms of Turkish tax legislation; income, institutions, and value added tax are tried to be explained.

For the evaluation made within the scope of income tax; earnings of the real persons from the disposal of the crypto money and the gains obtained for the mining activity are evaluated. According to this;

- Crypto money must be taxed as a business gain if it is constantly traded.
- Crypto money should be taxed as incidental gain if it is traded without continuity.
- Income from mining activities must be taxed as a result of income, commercial gain or self-employment.

The evaluation of the crypto money gains in terms of corporate tax; Corporate tax payers who perform activities such as obtaining and disposing of crypto money will be subject to corporate tax by identifying the gains obtained in this scope as an institution's gain. In addition, institutions that have intermediaries in crypto currency buying and selling transactions obtain commission income. The corporations are required to be taxed within the scope of corporate tax by including the related earnings in the corporate income.

Finally, if the crypto currency is to be assessed in terms of value added tax; The delivery of the crypto currency within the borders of Turkey can enter into the subject of the tax. Again, the delivery of crypto currency within the context of mining activity should be subject to value added tax.

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THE ANALYSIS OF CRYPTO CURRENCY PRICE BEHAVIOR WITH ARTIFICIAL NEURAL NETWORK

Cumali MARANGOZ¹, Serap ÇOBAN²

Introduction

Today, unpredictable rapid development in the technology has affected the whole world, and under the influence of countries' financial systems and financial markets, it has caused diversification and changes in the vehicles used in these markets. In parallel with this development in technology, the money in the traditional sense has been replaced by virtual money. This development increased the use of digital money and accordingly increased the number of financial institutions intermediation activities. Brokerage functions today have reached a considerable size and increased the profits of financial institutions. This situation has made crypto coins popular, which work without being dependent on any central authority and minimize intermediation costs. Crypto coins are separated from digital and virtual coins due to the lack of physical printing and the non-functioning of a center. Especially with the introduction of Bitcoin, which was the first crypto money in 2009, the interest in crypto coins has increased considerably and the transaction volumes and market values of virtual currencies, especially Bitcoin, have increased significantly.

Bitcoin, the first crypto currency to be traded, is currently the one with the highest transaction volume. Individuals also began to accept crypto coins as an investment instrument. Therefore, the interaction between these currencies has become an issue to be considered in terms of the investor.

Vast of academic studies on crypto coins are based on Bitcoin. Bitcoin related data has been started to be reached since 2010. Undoubtedly, the fact that Bitcoin is so popular at this point is because of the rapid realization of the technological revolutions of the world. Rapid technological development triggers systematic revolutions and changes. The crypto money system is also an important part of this rapid change. Nowadays, dozens of ICO (Initial Coin Offering) are being carried out every month, with the help of coins in dozens of different coin exchanges; hundreds of crypto money continues to be traded. The world of crypto money continues to be unpredictable in the last 3-4 years, and on the other hand, it continues to lead to the variation of the monetary systems we cannot foresee.

From this date on, until the new crypto currencies are introduced, the studies focused on Bitcoin. However, with the increase in the number of investors and researchers who are interested in the markets, where the transactions are realized, and in the market value, in the transaction volume, there has also been an increase in the number of academic studies on Bitcoin and other crypto coins, and they have been the subject of some researchers' studies.

In this study, Bitcoin, Ethereum, Ripple (XRP), Bitcoin Cash and EOS, which have the highest value of 5 crypto currencies, were analyzed and compared by Artificial Neural Network (ANN) method. Although there are many studies on crypto currencies, most of them pay attention to Bitcoin. This study contributes to literature by analyzing and comparing 5 crypto currencies (Bitcoin, Bitcoin Cash, Ethereum, EOS and Ripple) with the highest trading volume with ANN method.

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Literature Review

In previous studies for Bitcoin and other crypto coins, it is generally seen that it is evaluated together with the block chain system forming the Bitcoin infrastructure. Most of the studies carried out in the first period are the block chain system and the studies describing the technical features of the system's output Bitcoin. Due to the limited number of studies on crypto currencies, Bitcoin studies are also described in this section.

CITATION Eyy18 \l 1033 (Şahin, 2018) in his study, between 02.02.2012 – 09.01.2018 by using the closing price of Bitcoin as a data only can be estimated from time to time tested using the ARIMA and Artificial Neural Networks model, which are frequently used in the literature, model. As a result of the analysis, it was found that the estimated prices with the artificial neural network model were closer to the real prices compared to the ARIMA model.

CITATION Hui17 \l 1033 (Jang & Lee, 2017) in their study with the Bayesian Neural Network method and other liner and non-liner models have estimated the price of Bitcoin. The empirical study shows that BNN performs better when estimating the Bitcoin price time series and explaining the high volatility of the final Bitcoin price.

In their study, (CITATION NII171 \l 1033 (Indera, I.M. Yassin, & Rizman, 2017) , estimated the price of Bitcoin with Multilayer Perceptron (MLP), Nonlinear Autoregressive and Exogenous Inputs (NARX) model, using opening, closing, minimum and maximum past prices with Bitcoin Moving Average (MA) technical indicators. The results of their study showed the ability of the model to accurately estimate the Bitcoin prices when passing all model validation tests.

CITATION Kar18 \l 1033 (Karasu, Altan, Saraç, & Hacıoğlu, 2018) predictBitcoin prices by using Linear Regression (LR) and Support Vector Machine (SVM) for the period of 2012-2018. Their sample consists of daily data. They use filters with different weighted coefficients for different window lengths. Their performance measure are Mean Absolute Error (MAE), Mean Squared Error , Root Mean Squared Error (RMSE), and Pearson Correlation. Their results show that SVM model performs better than LR model.

CITATION Joã15 \l 1033 (Almeida, Tata, Mose, & Smit, 2015) , predict Bitcoin's next day price performance based on previous day's price and volume. They apply ANN model. Their performance criterion is MSE. Their results suggest that ANN network outperforms the Trend Follower meaning that the model is able to evaluate valuable information.

Data

The time series data analysis includes 5 crypto currencies with highest volume in crypto currencies. We choose our sample based on data availability in the period of 01-01-2018-31-12-2018. The variables of the study; are volume, closing price, opening price highest price, lowest priceand market capitalization from CoinMarketCap.

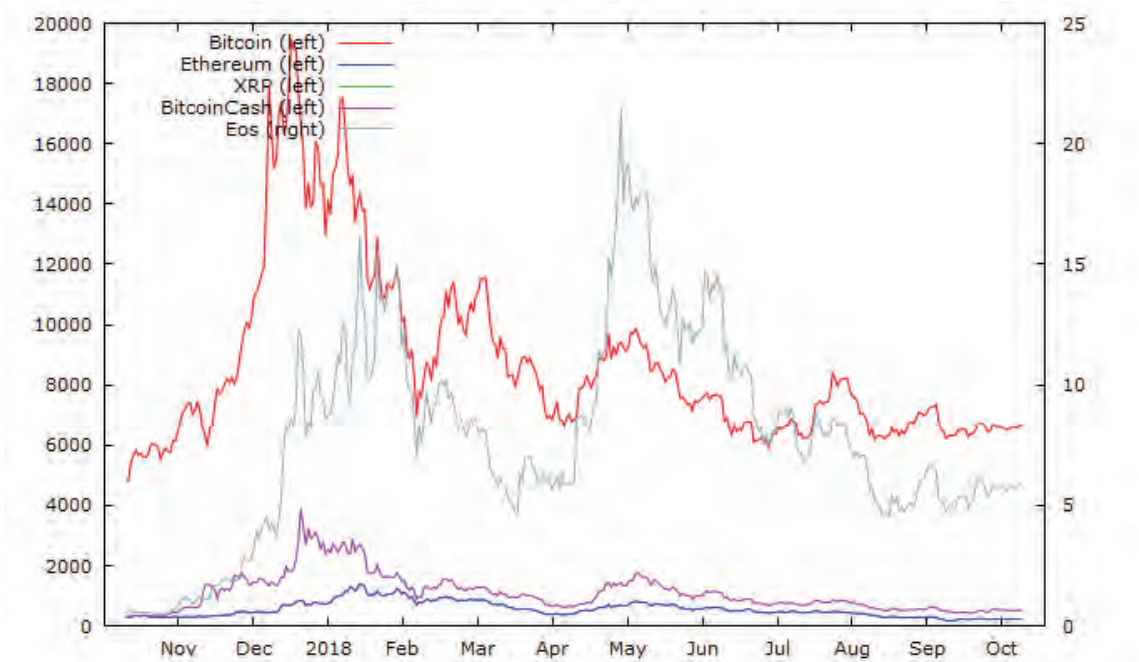
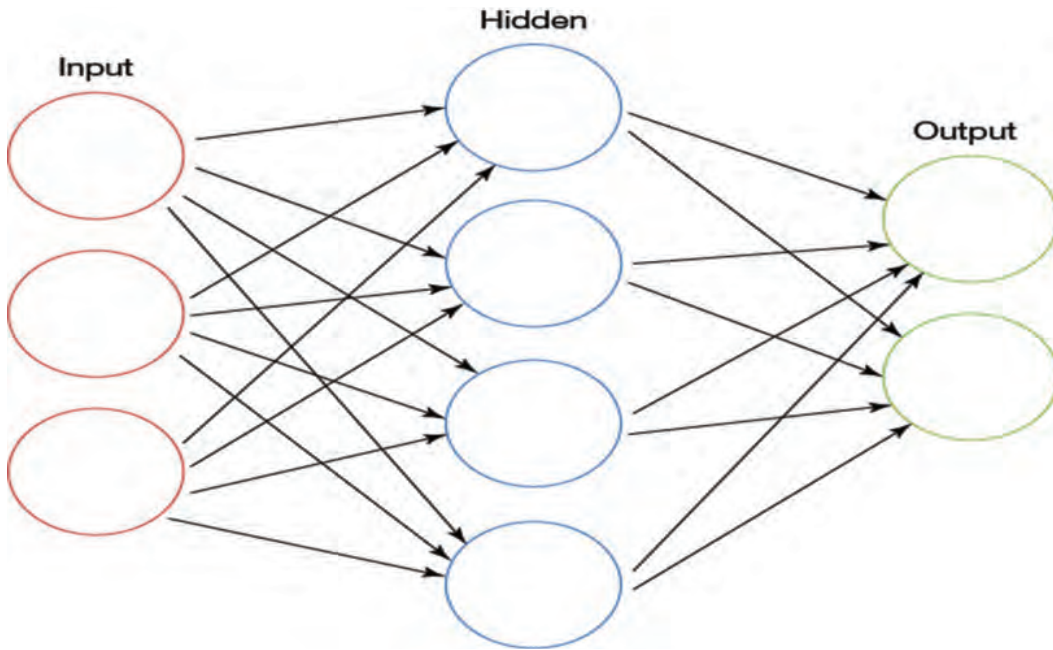
Figure1: Historical Price Data for all Crypto Currencies

Figure 1 incorporates historical prices of all crypto currencies in the sample. It can be deduced from the figure that Bitcoin and Eos are the most volatile currencies. Therefore, they are most inclined to non-linear behavior. On the other hand, BitcoinCash and Ethereum are comparatively less volatile. The reason for the volatility of Bitcoin and Eos might be the high trading prices of these currencies.

Methodology

Artificial Neural Networks (ANN) is a technique developed by inspiring human brain information processing. The mode of functioning of the simple biological nervous system with ANN is modeled mathematically. Human brain is composed of neurons with nerve cells. These neurons form a neural network by connecting to each other in various ways. These networks are capable of learning, memorizing and revealing the relationship between data. Learning in the brain occurs by chemically adjusting the connections between neurons. ANNs are able to artificially solve problems that require natural abilities of people to think and observe in mathematical environment. Learning is carried out by training the mathematical artificial neural network created using examples. The training process can be carried out mathematically with a completed ANN, data classification, recognition, optimization, data association and future-proof calculations with pure arithmetic methods. ANNs are used in many different areas. For example, CITATION Özc15 \l 1033 (Otkun, Dogan, & akpinar, 2015) used ANNs to control the speed of a linearly moving permanent magnet synchronous motor. The ANNs are normally composed of three different layers as entrance, secret and exit (Figure 1). The ANN network in the study consists of 5 input layers, 5 hidden layers and 1 output layer. The best-fitting number of layers for the best models is found by trial and error with retraining the network.

Figure 2: Artificial Neural Network Layer Depiction³



Input layer; it is the layer from which the inputs from the outside world come. This layer contains the number of entries (independent variables) of the node. Hidden Layer; process the information received from the input layer to the next layer. Output Layer; processing the information coming from the hidden layer and sending the output produced in accordance with the information coming to the input layer to the outside world.

³ Source: Wikipedia

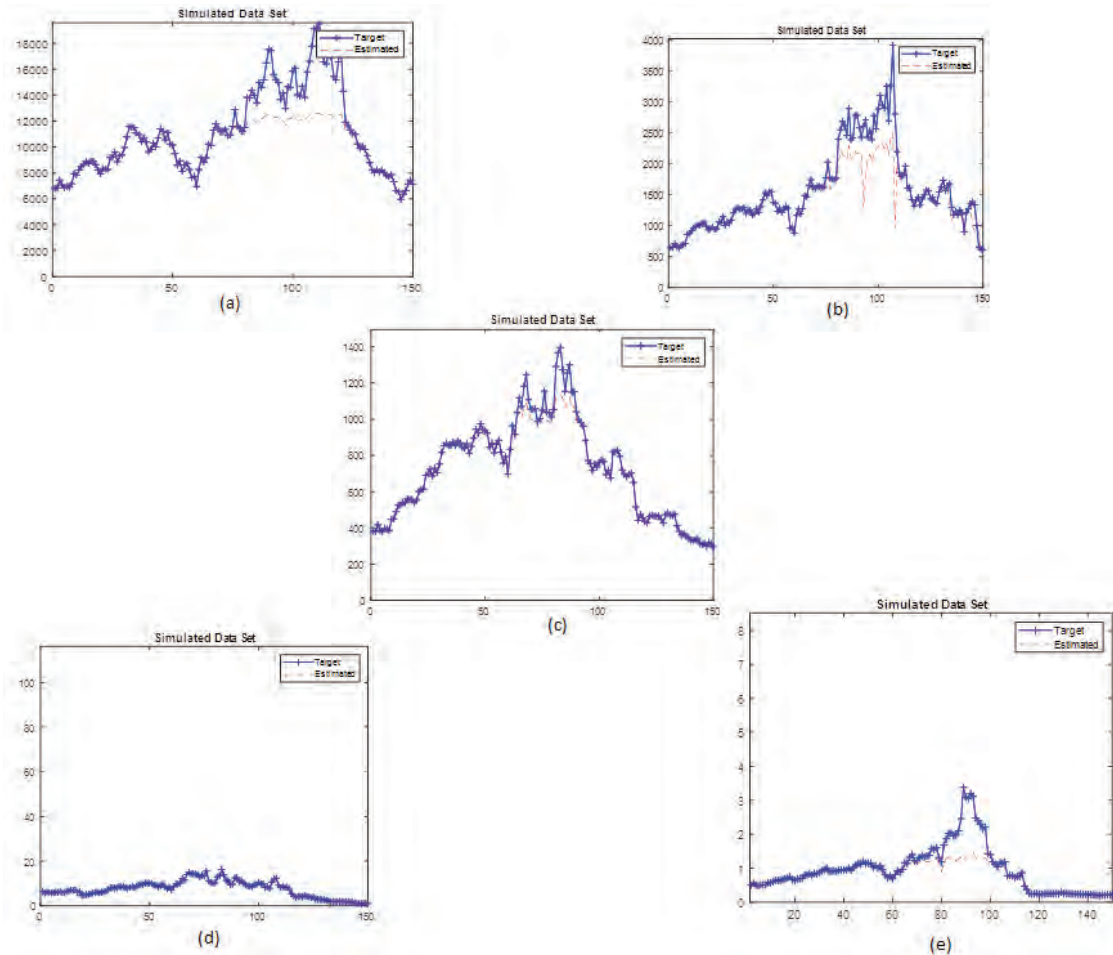
Figure 3: Simulated Data Graphs⁴

Figure 3 displays simulated data performance of ANN model among sample currencies. Despite the model's good performance for all currencies, it works best for Ethereum. From the figure, it is seen that at the volatility points, the Model performs poorly. Especially for Bitcoin and BitcoinCash, when there is volatility, the estimated prices are lower than the actual ones. It can be inferred from the figure that ANN model is having hard times with the existence of volatility.

4 a) Bitcoin b) BitcoinCash c) Ethereum d) EOS e) XRP (Ripple).

Figure 4: Test Performance of Crypto Currencies

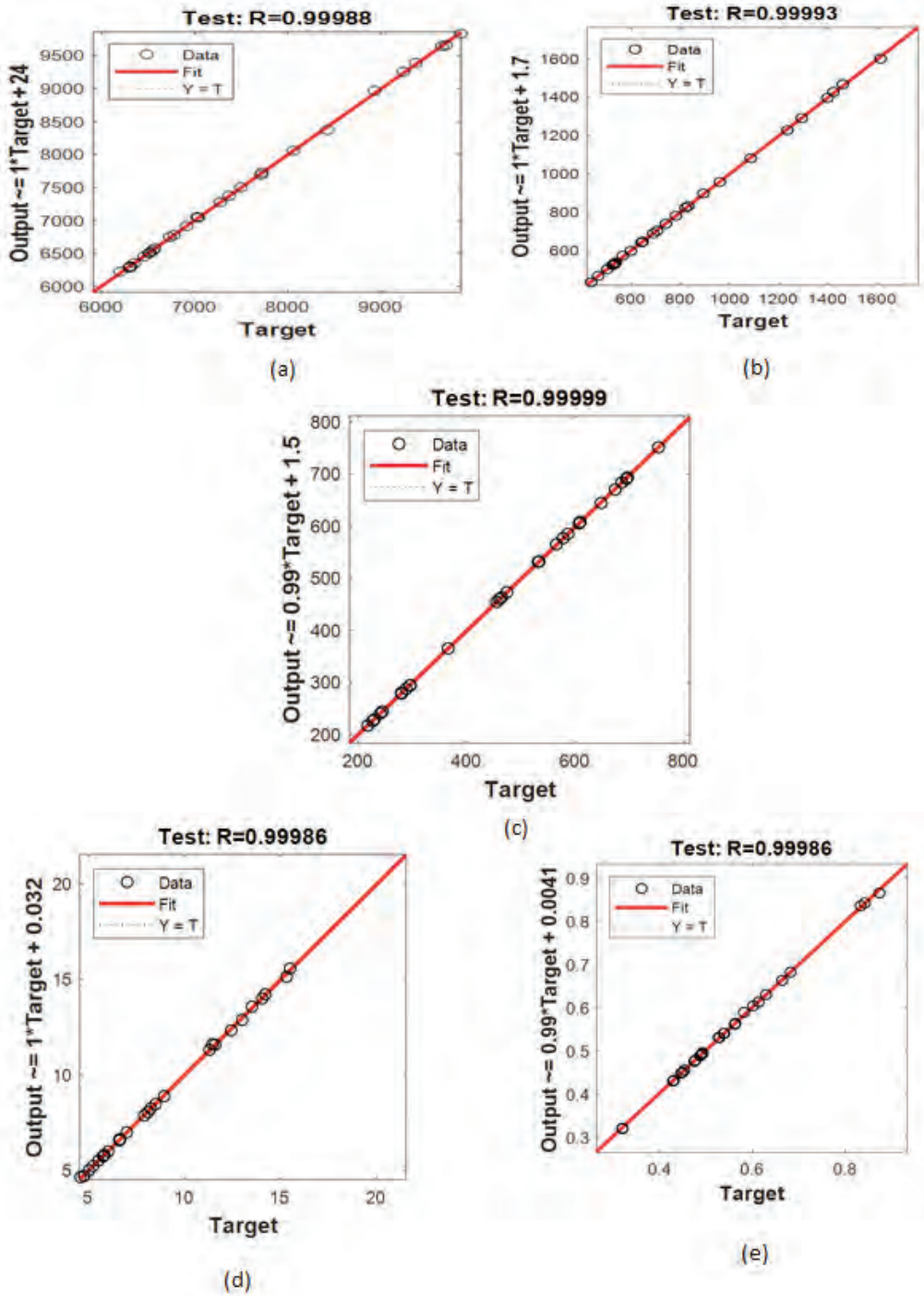
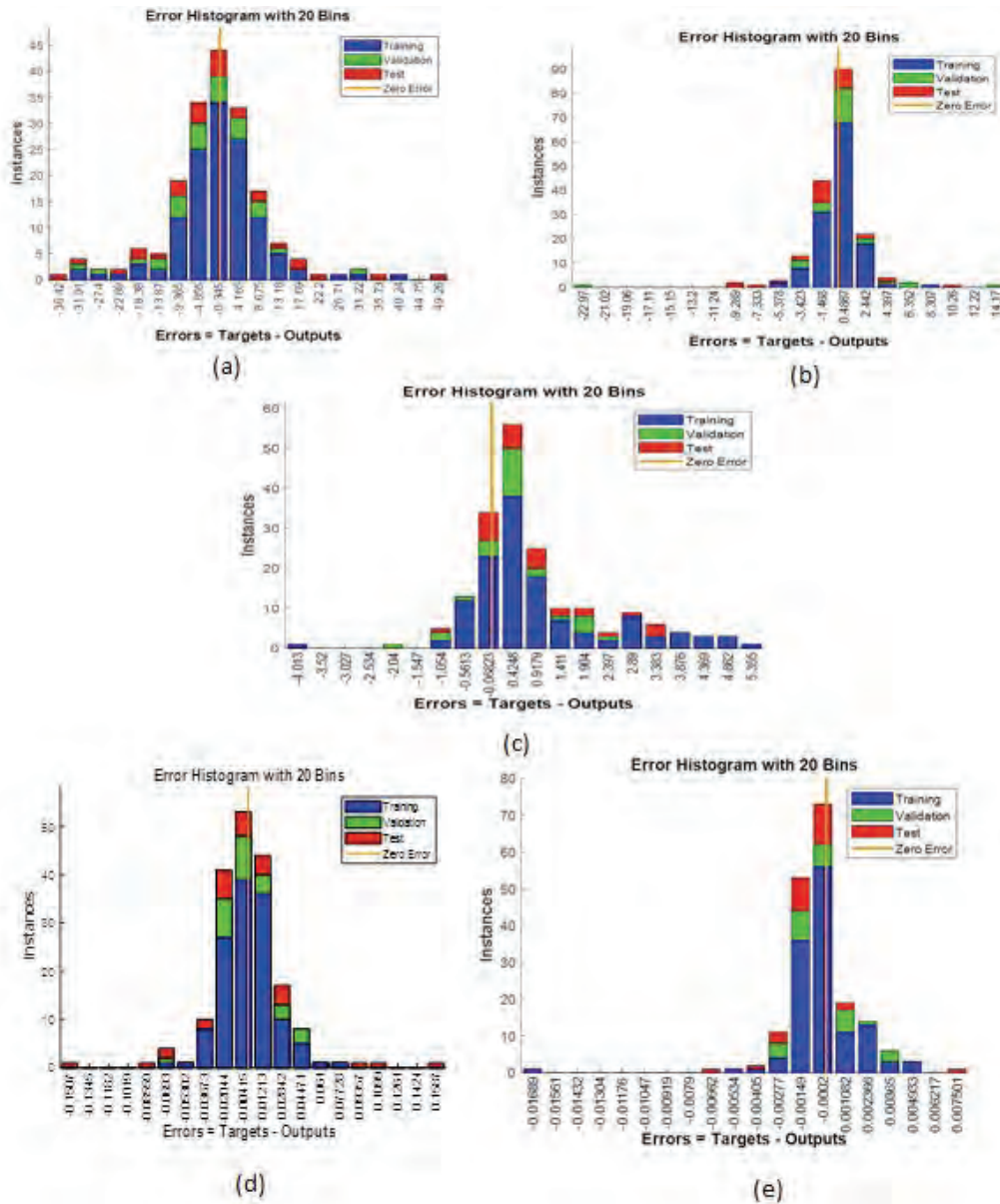


Figure 4 tabulates the test result of the network of ANN model. After training and validation stages, test results are obtained. R value signals the performance of the model. The test stage results shows that 5-input-5hidden and 1 output layer ANN network performs very well for the whole sample. Individually, for Ethereum, the model performs best. R value for Ethereum is 0.99999. One reason for the highest R value for Ethereum might be the less volatility of this currency. D and e have comparatively poor R values to other currencies.

Figure 5: Residual Histogram



Finally, we have to check the diagnostic to see the model is appropriate. Figure 5 shows residuals histograms of each crypto currency to verify the residual assumption by confirming it follows a normal distribution. As can be seen at figures, (a) has normally bell shaped distributions while (b) and (c) have sweeked left and others have sweeked right distributions. From this observation, we can interpret that all model is unbiased, valid and acceptable.

Conclusion

In this study, Bitcoin, Ethereum, Ripple (XRP), Bitcoin Cash and EOS, which have the highest value of 5 crypto currencies, were analyzed and compared by Artificial Neural Network (ANN) method. Although there are many studies on crypto currencies, most of them pay attention to Bitcoin. This study contributes to literature by analyzing and comparing 5 crypto currencies (Bitcoin, Bitcoin Cash, Ethereum, EOS and Ripple) with the highest trading volume with ANN method. The ANN network in the study consists of 5 input layers, 5 hidden layers and 1 output layer. The best-fitting number of layers for the best models is found by trial and error with retraining the network. The time series data analysis includes 5 crypto currencies with highest volume in crypto currencies. We choose our sample based on data availability in the period of 01-01-2018-31-12-2018. The variables of the study; are volume, closing price, opening price highest price, lowest price and market capitalization from CoinMarketCap.

It can be concluded from the study that ANN model performs good not only for Bitcoin but also for other crypto currencies in order to understand and analyze their behavior. ANN model is a good-fit for non-linear behavior. However, existence of volatility causes ANN model to perform poorer. In the sample, although the model performs for all currencies, it is the best-fit for Ethereum price behavior.

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THE EFFECT OF TAX REVENUES ON INCOME INEQUALITY: PANEL DATA ANALYSIS AT SELECTED DEVELOPING COUNTRIES

Havanur ERGÜN TATAR¹

Introduction

Economy, budget, and tax policies of countries have a direct or indirect effect on income distribution. Especially Keynesian practices implemented after the Second World War, effected income distribution via tax policies. Enhancing public employment, expanding the social service area, supporting labor intensive sectors and increasing taxing of the upper income group have developed the understanding of “welfare state”. This approach, which envisages the fair dispersal of income, has brought with it a high and increasing rate of tax regulation. Thus, in manner of the income equality, tax policies have been come into prominence.

With the implementation of 1980 post neo-liberal policies, the relationship of tax revenues and income distribution has been reformed. In the neo-liberal market conditions, the decrease of tax on the capital leads to the increase on tax on incomes. This situation effected the objective of income justice in a negative way.

Tax justice and tax issue has become an important phenomenon in the ensuring of income justice with the developing world. Especially reduction on income-based taxation and increase of taxation of capital brings a positive effect on income distribution and provide a balance amongst the individuals.

The main objective of this study is to analyze the impact of tax structure on income inequality in selected developing countries. In this context, data and the countries have been chosen according to availability between the years 2000 and 2016. GINI, income tax, growth, foreign investment, and unemployment variables are used to predict the model with panel data analysis method.

After defining the theoretical framework in the study, empirical literature mentioned. Later on after informing on method and data set used for analysis, several tests are conducted and results are evaluated.

Theoretical Framework

The role of tax policies has changed over time. In the beginning, tax was seen as a political tool for revenue, later it has been understood to have a strategic importance to support the development process (Kaldor, 1963). At the present time, inequality is a major problem for both developing and developed countries and taxation has a critical role on income distribution (Piketty, 2014; Atkinson, 2015).

According to Cornia and Court (2001) reasons of income inequality are divided into two groups, “traditional” and “new”. Tax system defined as one of the new reason of income inequality. The tax system providing optimal resource distribution, distributes the pressure of taxation to the society equally. Therefore, decrease on income inequality is expected as the rate of tax income to GDP increases.

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According to traditional vision, the effect of the tax system on income distribution depends on the presence of several factors. These factors can be listed as follows (Aktan and Vural: 2002):

The amount of tax paid should increase when the household's or person's income increases.

Tax exemption and exception rates should reduce when the household's or person's income increases.

When the household's or person's income increases, the opportunity to make adjustments that reduces the tax debt in tax base decreases.

Tax tariffs should be incremental rather than being depressive.

The fiscal importance of the group with income flexibility in the tax system must be high.

The measure and direction of the tax reflection and the actual taxpayer must be known.

Tax policy is one of the most important tool to provide justice in income distribution. Tax policies, tax rate, whether the payment power is taken into consideration or not, tax reflection opportunities and the nature of taxes (indirect-direct) are the factors that are effective on the redistribution of income (Yuce, 2001). Governments' tax collection system affects income distribution. Also, thanks to taxes on income and profits, income inequality decreases (Akbiyik, 2012:55). In their study Lumbantobing and Ichihashi (2012), express that after 1990, whereas the income inequality increase in countries with low tax rates such as Argentina, Bolivia and Brazil, income inequality decreases in countries with high tax rates like Germany and Pakistan.

Empirical Literature

There are various studies in the literature on the relationship between tax and income inequality. Most studies show that the tax is reducing income inequality. In terms of empirical literature, these studies can be divided into two group in the manner of method. The studies in the first group focus on the idea that taxes reduce income inequality.

In the study of Duncan and Sabirianova Peter (2008), in the period of 1981-2005, the relationship between income tax and income distribution was examined. As a result of the study covering 35 countries, it was concluded that tax income was an important variable in ensuring income justice.

Claus, Martinez-Vazquez and Vulovic (2012), examined the impact of tax and government expenditures on income distribution covering 150 countries in the period of 1970-2009. As a result of the study, it was concluded that the corporate tax and income tax were effective in redistribution of income.

In their study Lumbantobing and Ichihashi (2012), examined the impact of taxes on growth and income distribution covering 65 countries in the period of 1970-2006. As a result of the study, it was concluded that tax rates had a negative effect on the growth and income inequality.

In the study of Milligan (2013), Canada was examined in terms of the relations between tax revenues and income inequality. According to analyzes covering the period of 1980-2005, it was concluded that taxes had a great importance at increasing incomes and reducing income inequality.

In their study Losifi and Mylonidis (2016), analyzed the relationship between tax and income inequality in the period of 1970-2001. As a result of the study covering OECD countries, it was concluded that the higher tax increase on labor and consumption comparing to the capital increased the income inequality.

Second group studies focus on the idea that tax does not reduce income inequality. Studies in this direction in the literature are relatively rare.

Chu, Davoodi and Gupta (2000), investigated the effect of social state expenditures and taxes on income distribution in developing countries. They conducted a review on the effect of social state expenditures and taxes on income inequality, in sequence, in the period of 1970-1980 and in the period of 1980-1990. Research results showed that in developing countries, taxes had a little impact on redistributing income. Their study based on the idea that high indirect tax rates were insufficient to effect income distribution.

In their study Lee and Gordon (2005), examined the impact of the tax rate on economic growth covering 70 developed and developing countries. As a result of the analyses covering the period of 1970-1997, it was concluded that the corporation tax negatively influenced economic growth.

In the study Martorano, Bruno (2016), the relationship between income inequality and tax relation was examined in 18 Latin American countries covering the period of 1990-2010. As a result of the study it was concluded that high indirect tax rates had a little effect on income distribution.

Econometric Analysis

In this section, the methods and data of the study will be defined then the analysis and prediction results will be discussed.

Methods and Data

The model created to analyze the impact of taxes on income inequality is as follows:

$$Gini_{it} = \alpha_i + \beta_1 Tax_{it} + \beta_2 Gdp_{it} + \beta_3 Fdi_{it} + \beta_4 Unemp_{it} + \varepsilon_{it}. \quad (1)$$

To analyze the impact of taxes on inequality, various studies are utilized. The studies are as follows:

Tax income: Bargain and others (2011), examined the relationship between taxes and income inequality in the United States in the years of 1978-2009. Research results showed that tax policies are effective on income inequality. In the model created for this, tax is shown among descriptive variables.

Growth: Chen and Fleisher (1996), studied the relationship between income inequality and regional growth for the period of 1978-1993 in China. Solow growth model-based panel data analysis concluded that regional inequality would reduce in short-term, but in long-term inequality would increase.

Foreign investment: Suanes (2016), examined the relationship between sectoral foreign investment and income inequality for the period of 1980-2009 in 13 economies. In the study, where panel data method was used, it was concluded that foreign investment in production and service business lines had a positive impact on income inequality.

Unemployment: Bhandari (2007), investigating the relationship between foreign direct investment and income inequality for transition economies in Eastern Europe and Central Asia, used the data for the period of 1990-2002 years.

In the study, as a dependent variable of GINI coefficient representing income inequality, the unemployment rate is included in the model as a control variable. Due to the empirical results, the coefficient of unemployment rate was found to be positive in accordance with the theory.

The abbreviations for variables used in the study are as follows:

$Gini_{it}$ = Gini Coefficient

Tax_{it} = Taxes on income, profits and capital gains (% of revenue)

Gdp_{it} = GDP growth (annual %)

Fdi_{it} = Foreign direct investment, net inflows (% of GDP)

$Unemp_{it}$ = Unemployment, total (% of total labor force) (modeled ILO estimate)

The time and section dimensions of the variables to be used in the model prediction are $t = 17$ and $i = 13$ ($t = 1, \dots, T$; $i = 1, \dots, N$) in sequence.

In order to analyze the impact of gender equality on growth, the developing countries which are selected according to the IMF classification are discussed. The developing countries used in the study are as follows: Romania, Sri Lanka, Uruguay, Benin, Brazil, Bulgaria, Dominican Republic, Egypt, The Arab Republic, El Salvador, Honduras, Russia, and Ukraine.

The expected marks for variables in the study are as follows:

Table 1: Expected marks for variables

| Variables | Expected marks |
|---|----------------|
| Taxes on income, profits and capital gains (% of revenue) | (-) |
| GDP growth (annual %) | (-,+) |
| Foreign direct investment net inflows (% of GDP) | (-,+) |
| Unemployment, total (% of total Labor force) (modeled ILO estimate) | (+) |

In the study, the data of chosen countries was used for the period of 2000-2016. Missing data of countries, has been completed with interpolation² method. Data is obtained from The World Bank World Development Indicators database.

Hausman Test Results

Whereas the fixed effects model assumes that there is an association between the unobservable effect and the descriptive variables, random affect model assumes that there is no relationship between descriptive variables and unobservable effects. Random effects model is more effective in the lack of relationship between the unobservable effect and the descriptive variables (Hausman, 1978:1251-1271).

Hausman test results belonging to the country group of are shown in table 2.

2 Interpolation is a concept to predict unknown values through known values.

Table 2: Hausman Test Results

| Model | Hausman Test | Model Selection |
|-------------------------|---|-----------------|
| | H ₀ : The random effects model is appropriate. H ₁ : The fixed effects model is appropriate. | |
| | Chi-Square Statistic (Probability Value) | |
| Income Inequality Model | 5.62 (0.229) | Random Effects |

Note: The test statistics and probability values (values in parentheses) are given.

Changing Variance, Autocorrelation and Horizontal Cross-Sectional Dependency Results

Before making predictions on the panel data, changing variance, autocorrelation and horizontal cross-sectional dependency should be tested and the model should be predicted again. Testing the changing variance, autocorrelation and horizontal cross-sectional dependency varies depending on the classical model, fixed effects model or random effects model. In this study random effects model is used for the changing variance, autocorrelation and horizontal cross-sectional dependency.

In the random effects model, Breusch-Pagan Lagrange Multiplier (LM) and Levene (1960), Brown and Forsythe (1974) are the most commonly used tests to verify the presence of heteroscedasticity. Levene's test is calculated with the help of the following formula (Tatoglu, 2013:222):

$$W_0 = \frac{\sum_i n_i (\bar{z}_i - \bar{z})^2 / (g-1)}{\sum_i \sum_j (z_{ij} - \bar{z})^2 / \sum_i (n_i - 1)} \quad (2)$$

Brown and Forsythe calculate two test statistics, W₅₀ and W₁₀. Changing variance is tested by comparing the calculated test statistic to the F table value. Levene (1960), Brown and Forsythe (1974) test statistics (W₀, W₅₀, W₁₀) are compared with F test table value.

H₀: W₀, W₅₀ and W₁₀ < F Test

H₁: W₀, W₅₀ and W₁₀ > F Test

The refusal of the zero hypothesis means there is a changing variance in the regression prediction and therefore the parameter estimators do not give accurate results.

Testing of the autocorrelation in the random effects model, conducted according to Baltagi-Wu LBI and Durbin Watson Test.) The hypotheses in the test of Baltagi-Wu's (1999) Local Best Invariant (LBI) are as follows:

H₀: $\rho = 0$ (No autocorrelation)

H_{a1}: $\rho < 0$ or H_{a2}: $\rho > 0$

Finally, horizontal cross-sectional dependency is tested in the study. The case of error terms not being independent in terms of the units, causes the estimations of fixed effect and random effect being consistent but inactive. Therefore, cross-sectional addiction should be tested in the model (Tatoglu, 2013:212-215).

Changing variance, autocorrelation and horizontal section dependency tests for countries are shown in Table 3.

Table 3: Random Effects Model of Changing Variance, Autocorrelation, and Horizontal Cross-sectional Dependency Test Results

| Models | Changing Variance | | | Autocorrelation | | Horizontal Section B. | |
|--------|--------------------------------|---------------------------------|---------------------------------|---------------------------------------|--------------|------------------------------|-------------------|
| | LBF Tests | | | Baltagi-Wu LBI and Durbin Watson Test | | Breusch-Pagan Test | |
| | W0 ist. [Probability Value] | W50 ist. [Probability Value] | W10 ist. [Probability Value] | LBI Statistic | DW Statistic | Breusch-Pagan Test Statistic | Probability value |
| GINI | 4.132 (0.000) * | 2.643 (0.003)* | 3.651 (0.000) * | 0.638 | 0.982 | 0.782 | 0.434 |

Note: The test statistics and probability values (values in parentheses) are given. Accordingly, the * symbol indicates that the empty hypothesis is rejected at the significance level of 5% .

According to the results in table 3 of the developing country group, variance changes according to the units. According to the results of Baltagi-Wu LBI and Durbin Watson made to test autocorrelation, test statistical values are less than 2. This situation indicates that autocorrelation problem is important and parameters are not effective in the models. According to the results of Breusch-Pagan test where horizontal cross-sectional dependency is tested, there is no horizontal cross-sectional dependency in the model.

Regression Prediction After Correction (According to Arellano, Froot and Rogers’ Estimation Method)

Changing variance emerging in panel data models differs in case of the existence of changing variance, autocorrelation and horizontal cross-sectional dependency problems. In this case, a correction method must be selected in accordance with the deviation in the assumption. In case of the existence of changing variance, autocorrelation and horizontal cross-sectional dependency problems, the estimation methods that can be applied are as follows (Tatoglu, 2013:277):

Huber, White and Eicher estimators produces resistant estimators in the presence of changing variance.

Newey-West, Wooldridge, Froot and Rogers and Arellano estimators produce resistant estimators in case of heteroscedasticity and autocorrelation presence.

Driscoll-Kraay, Beck-Katz and Parks-Kmenta estimators produce resistant estimators in case of heteroscedasticity, inter unit correlation, and autocorrelation presence.

In this study Arellano (1987), Froot (1989) and Rogers (1993) estimation method is preferred. In the prediction method of Arellano (1987), Froot (1989) and Rogers (1993), covariance estimator not only is asymmetrical against changing variance, but also is resistant to changing variance.

Random effects model for developing countries is corrected by using the prediction method of Arellano, Froot and Rogers. The regression results after correction are presented in table 4.

Table 4: Regression Prediction Results After Correction with Arellano, Froot and Rogers Prediction Method

| Variables | Coefficient |
|------------------------|----------------------|
| C | 41.428 (0.00) * |
| Tax | -0.191 (0.057)*** |
| GDP | 0.109 (0.018)* |
| FDI | 0.105 (0.224) |
| Unemp | 0.364 (0.053)** |
| R ² | 0.28 |
| Wald Chi-Square | 23.15 |
| Number of Observations | 204 |

Note: Wald chi-square statistics in incidental effects models test whether the coefficients are all meaningful together or not. * indicates that the statistic is meaningful at % 1 significance level. ** indicates that the statistic is meaningful at least 5% significance level. *** indicates that the statistic is meaningful at least 10% significance level.

According to the prediction results, the rate of tax revenues are meaningful at 10% significance level and the mark of the coefficient is in accordance with the theoretical expectation. Tax has an important key role in terms of the countries' fair income and wealth distribution policies with development policies. Keeping a certain development pace by maintaining the optimal distribution of resources and additionally not disrupting the fair income distribution by distributing the tax burden to the community are expected from the tax system. In other words, income inequality is expected to decrease, as the rate of the tax revenues to GDP increases. Therefore, the expected mark of this coefficient for this variable is negative. Diamond and Saez (2011) and Lumbantobing and Ichihashi (2012), achieved similar results in their work. That is why the governments should develop policies to minimize tax evasion and expand the tax base. Growth variable at % 5 significance level is meaningful both theoretically and statistically. The foreign investment variable is statistically meaningless. Finally, the unemployment variable at 10% significance level is meaningful both theoretically and statistically.

Conclusion

This study, where the relationship between tax structure and income distribution is investigated, carried out in the developing countries group. In the study, by using the variables of GINI, tax revenues, growth, foreign investment and unemployment, the estimation of model is built with the panel data analysis method. To decide on the model selection, Hausman test is made and later on changing variance, autocorrelation and horizontal cross-sectional dependency is examined. Finally, regression estimation is redone by correcting the deviations.

According to the prediction results, tax revenues rate at 10% significance level is meaningful and the mark of the coefficient is in accordance with the theoretical expectation. So, income inequality decreases when the rate of the tax revenues to GDP increases. Growth variable at 5% significance level is meaningful both theoretically and statistically. The foreign investment variable is statistically meaningless. Finally, the unemployment variable at 10% significance level is meaningful both theoretically and statistically.

The provision of income distribution justice with tax justice depends on expanding the tax base and increasing the tax collection effectiveness. The fair division of income in the community should be ensured by measures to be taken against informal economy and tax evasion. In tax policies, instead of indirect taxes, direct taxes should be weighted.

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FISCAL DISCIPLINE IN THE EU: CROSS-COUNTRY COMPARISONS

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Introduction

When the state has a budget deficit problem, it usually borrows from the financial markets to cover expenditures that exceed tax revenues. If the budget deficits decrease, i.e., the government needs to borrow less, the demand for funds and thus the domestic interest rates will decrease (Hakkio, 1996: 22). As a result of the decline in real interest rates, investment, productivity and real income growth will occur. The idea that economic growth will be promoted through such deficit reduction constitutes the main economic reason for efforts to discipline fiscal policy implementation (Taylor, 1995: 151, 152).

Although the provision of fiscal discipline seems to be a problem area related to underdevelopment, it is a fairly up to date problem which is also experienced by developed countries. After World War II, implementation of Keynesian policies throughout the world has increased the burden on the budget beginning from the mid-1970s; public revenues have become unable to meet the increasing public expenditures. While public expenditures increased rapidly, the fact that public revenues could not be increased at the same rate further deteriorated the budget balance. This process, where deficit spending is used as a policy instrument, has led to borrowing to be a particularly preferred tool in the financing of increasing budget deficits. In the 1980s, the concept of fiscal discipline, based on the conception of the balance between the revenues and expenditures of the budget and the continuity of this balance, has become widely used in the field of public finance; disciplining public finances has emerged as a necessity for many countries. In this context, one of the most systematic examples was implemented by the European Union (EU). The fact that a sound fiscal structure is a necessity for the success of the economic integration process has led to certain rules on monetary and fiscal discipline for EU member states to join and continuity in the Euro Area. However, the 2008 Global Financial Crisis and the subsequent European Sovereign Debt Crisis have made the success of the implementer mechanisms questionable, despite the existing rules, and re-highlighted the importance of fiscal performance across the EU, particularly in the Eurozone, regarding the future of economic integration.

In this context, the scope and importance of the fiscal discipline will be explained shortly and the need to discipline the fiscal structure in the EU and the mechanisms forming a basis for this need will be discussed. The analysis of the level of fiscal discipline in the EU will be evaluated depending on the trends of the budget deficit and the public debt, and the level of fiscal performance of the EU will be tried to be revealed.

Fiscal Discipline and Its Importance

Fiscal issues are becoming more and more important in terms of macroeconomic performance. One of the basic principles of macroeconomics is that fiscal policy can be effective in stimulating aggregate demand and reinvigorating

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a stagnant economy (Branch & Adderley, 2009: 229). However, the unlimited use of fiscal policy deteriorates the budget balance. The situation of imbalance causes significant problems of fiscal indiscipline in developing countries as well as in developed countries.

Fiscal discipline, with the most general expression, can be defined as meeting the prudent budget deficit and public debt levels and ensuring the continuity of these levels (Hemming, 2003: 2). Although it may be acceptable for the budget to give a certain deficit in order to remove the economy from recession, there are conditions in which expansionary fiscal policies cannot be used to remove the economy from recession. It can be stated that the increased budget deficit especially in the cases where the public debts are already high, led to lower level private sector investment and consumption. In this case, the effect of expansionary policies on aggregate demand is not always at the expected level (Branch & Adderley, 2009: 229). In some countries, budget deficits can lead to high inflation or low inflation with crowding-out effect and slow economic growth (Vit, 2004: 2). Therefore, the expansionary policies implemented under those conditions do not remove the economy from the recession and further deteriorate the budget balance.

Increasing expenditure demands when resources are limited and governments are not restricted will result in high level of chronic deficits and increasing tax and debt burden. Therefore, fiscal discipline is considered to be a key concept in terms of public fiscal management. (Fölscher, 2007: 80). In this sense, the discipline of fiscal structures has been occupying the agenda of the economies from each level of development. The first and most important reason for this situation is that the sound public finance structure is a prerequisite in terms of macroeconomic stability. By this way, the aggregate demand pressures accompanied by inflation and balance of payments disequilibrium can be prevented and also the cyclical fluctuations can be prevented. The second is to avoid the consequences of loose fiscal policies that limit the effectiveness of monetary policy by ensuring fiscal discipline. Thirdly, fiscal discipline makes policy makers to attain more importance to the effectiveness of the tax system and expenditure programs, and has a positive impact on resource allocation and growth. Fourthly, it provides the organization of both predictable and unpredictable fiscal pressures (Hemming, 2003: 2). In general, the existence of a medium-term expenditure plan based on a stable macroeconomic program, the relative superiority of the relevant ministries, the existence of legal restrictions on expenditures and budget deficits create favorable conditions for the provision of fiscal discipline (Campos & Pradhan, 1996: 5).

When accountability and transparency are improved and political costs are imposed on politicians and bureaucrats who violate the rules, it is easier to ensure fiscal discipline. Equilibrium of the total expenditures planned and realized, the total deficits planned and realized; the public disclosure of the results obtained, the combination of all expenditures in the budget, including the extra-budgetary funds are the mechanisms that serve for transparency and accountability (Campos & Pradhan, 1996:5). Except for extraordinary periods, budgeting based on the principle of equality and unity and transparency and accountability will be able to limit expenditures and deficits by avoiding discretionary actions and preventing policymakers' populist decisions. The most notable subject in this respect is that the fiscal decisions, fiscal policies and fiscal instruments used should be based on systematic fiscal rules.

Fiscal rules are the rules that restrict the activities of policy-makers who apply their own party programs and thus allow governments to avoid the budget deficit that increases debt burden (Strawczynski, 2014: 6). Fiscal rules that limit public expenditures with corresponding revenues and borrowing, and that require a balanced budget deficit position are important in the discipline of public finance.

There are three types of rules that are generally related to numerical, procedural and budget transparency in order to provide fiscal discipline in the process of designing, approving and implementing budgets (Alesina & Perotti, 1996: 401,402). Regardless of the type, fiscal rules with well-defined purpose and limit prevent budget deficits, limit debt instrument that is used to finance these deficits, and thus limit public debt burden, serve for the provision of a sound public finance and fiscal discipline.

The Need for the Discipline of Fiscal Structures in the EU and Related Mechanisms

The Maastricht Treaty, signed in 1992, took European countries one step further in the economic integration process. The Treaty, in which the transition stages of the Economic and Monetary Union (EMU) are determined, covers the coordination of the economic policies of the EU Member States and their multilateral surveillance of this coordination and their observance of financial and fiscal discipline. Macroeconomic convergence criteria were determined in order to eliminate the differences between the Member States' economies before the transition to the 3rd phase of EMU, which was determined as 1 January 1999. The limits that two of were related to budgetary discipline and that these criteria are based on are clarified by the Protocol on the Excessive Deficit Procedure attached to the Treaty. Accordingly, Member States' budget deficit must not exceed 3% of their GDP and public debt must not exceed 60% of their GDP. In 1999, 11 EU members who met the criteria - Germany, France, Italy, Spain, the Netherlands, Belgium, Portugal, Austria, Finland and Ireland- formed the Eurozone by adopting the Euro; The United Kingdom and Denmark remained outside the Eurozone with the opt-out advantage and Sweden remained outside at that time and has not yet adopted the euro; since it could not meet the criteria in 1999, Greece was included in the Eurozone in 2001. Today, 19 countries of the 28-Member EU have been participated in the Eurozone by demonetizing their national currency.³

The Maastricht Treaty reflects a narrow dimension of fiscal discipline; it is important in terms of shaping around the idea that the fiscal wastefulness at the national level constitutes a great risk for the monetary union and that strong public finances should be committed by all countries (Bénassy-Quéré, Ragor, & Wolff, 2016: 2). However, as the time passes, the arrangements of the Maastricht Treaty were subject to various criticisms in terms of its sufficiency in ensuring the stability of the Eurozone; In addition to the prior performance evaluation, the need for fiscal performance evaluation after joining the Eurozone has emerged and thus the Stability and Growth Pact (SGP) was founded.

The SGP emerged as part of the third stage of the Economic and Monetary Union and was designed to ensure that EU member states maintain their sound fiscal structure after the entry into force of the single currency. Formally, the SGP is composed of a European Council resolution which was adopted in 1997 and two Council Regulations (one is related to the surveillance of budgeting positions and the coordination of economic policies; the other is related to the implementation of the excessive deficit procedure) which was dated July 1997 and determined technical regulations.⁴

The Stability and Growth Pact is a set of rules detailing the functioning of the fiscal discipline (Bénassy-Quéré et al., 2016: 2). In this respect, it can be said that it manages the coordination of the EU countries' fiscal policies. SGP has two organs to protect sound public finances. The preventive organ ensures the sustainable implementation

3 See the Treaty on European Union and visit the European Union website: https://europa.eu/european-union/about-eu/money/euro_en for detailed information.

4 Visit the EU Law/EUR-Lex website: <https://eur-lex.europa.eu/homepage.html> for further information about SGP.

of the fiscal policies of the EU Member States. The corrective organ determines the measures to be taken by the countries whose public debt and budget deficit levels are considered to be “excessive”. The Excessive Deficit Procedure is detailed in Article 126 of the Treaty on the Functioning of the European Union (TFEU). Accordingly, Member Countries must avoid excessive deficits. Any exceptional, temporary or a short time deficit that exceeds the reference values mentioned in the Protocol on the Excessive Deficit Procedure attached to the Treaty shall not be considered “excessive”. Every April, the Eurozone countries offer stabilization programs to the Commission and the Council, while non-euro countries offer convergence programs to the same institutions. A stabilization or convergence program must include the country’s medium-term budget objective and information on how to achieve it. The programs are examined by the Commission; if one or both of the criteria are not met, the Council launches an Excessive Deficit Procedure with the recommendation of the Commission, taking into account the various factors. The Excessive Deficit Procedure requires the provision of a plan for the corrective action of the country and the time for which the subsequent policies and positive results will be obtained. It is possible to impose various sanctions, including the imposition of fines on Euro Area countries that do not comply with the recommendations.⁵

Following the discussions on the functioning of the SGP, a number of regulations were made in 2005. However, those regulations were insufficient to avoid impacts of the Global Financial Crisis in 2008, resulting in significant fiscal imbalances in some EU countries. The Financial Crisis of 2008 reiterated the need for sound public finances for a strong union, both in the Eurozone and across the EU, and highlighted the inadequacy of regulations done before the crisis. The deficit and debt levels that exceeded the reference values in terms of the budget deficit and borrowing criteria, and the debt crisis, which began to appear severely in some EU countries, required the implementation of new measures for the future of the EU. As these developments continue, many regulations were proposed by the European Commission in 2010 and implemented as a part of European Semester started in 2011 with the aim of stronger economic coordination among the member countries. After the crisis, the EU’s economic governance rules have been strengthened by 8 EU regulations and an international treaty referred to as the Six Pack, Two Pack, the Treaty on the Stability, Coordination and Governance of the Economic and Monetary Union.

⁵ For detailed information about EDP visit the EU Law/EUR-Lex website: <https://eur-lex.europa.eu/homepage.html>

Table 1: *Historical Development of Mechanisms for Ensuring Fiscal Discipline in the EU*

| YEAR | DEVELOPMENT | EXPLANATION |
|------|--|---|
| 1992 | Signing of the Maastricht Treaty | With the Maastricht Treaty, the monetary and fiscal rules to be provided by the member countries are arranged for the transition to the Eurozone. The limits on which two criteria for budgetary discipline are based on the understanding that Member States must avoid excessive deficits are as follows: Member countries' budget deficit must not exceed 3% of their GDP Member countries' gross public debt must not exceed 60% of their GDP |
| 1997 | Emergence of the Stability and Growth Pact (SGP) | The SGP was emerged when the EU Member States agreed to strengthen the monitoring and coordination of national fiscal and economic policies to implement the budget deficit and debt limits adopted by the Maastricht Treaty. With the SGP, it was aimed to monitor the fiscal performances not only before entry but also after the entry to the Eurozone. |
| 1998 | The entry into force of the Stability and Growth Pact's Preventive Rules | Preventive Measures that step in before excessive deficits occur. |
| 1999 | The entry into force of the Stability and Growth Pact's Corrective Rules | Total of the Corrective Measures that are applied for the elimination of excessive deficits. |
| 2005 | Amendment in the Stability and Growth Pact | The SGP has been amended to ensure that it considers the individual national conditions and to make the rules more rational for compliance. |
| 2011 | Six Pack | The SGP has been made more comprehensive and foreseeable by greatly expanding the EU's economic governance rules by a number of new regulations known as the Six Pack. Follow of both budgetary and economic policies was regulated by the European Semester. |
| 2013 | The Fiscal Compact Two Pack | The importance of the Medium-Term Objectives was reinforced by a law known as the Fiscal Compact, which is part of the Treaty on Stabilization, Coordination and Governance. The commitment to the SGP was further strengthened by the new arrangements between Member States, which both strengthened economic coordination and brought new monitoring tools and were called Two Pack. |
| 2014 | Review of the Stability and Growth Pact | The revision of the Six Pack and Two Pack rules introduced in the legislation has revealed that the legislation contributes to the development of fiscal consolidation in the EU. The review highlighted some of the strengths as well as possible areas for improvement. |
| 2015 | Flexibility of the Stability and Growth Pact | The Commission provides guidance on how to implement the SGP rules to strengthen the link between structural reforms, investment and fiscal responsibility in promoting jobs and growth. |

Source: *European Commission*

Fiscal Discipline Level in EU Member States

Although the fiscal indiscipline in the EU and the Eurozone has been debated with the 2008 global financial crisis and the debt crisis that began in some European countries, the source of the problem has been revealed as the past concessions. In this context, various sanctions have been applied and gradual progress has been made in order to avoid excessive deficits and to discipline fiscal structures with the implementations based on the regulations which have been accelerated after 2010.

The two EU countries that have not been subjected to the excessive deficit procedure due to their performance so far are Estonia and Sweden. For some EU countries, the excessive deficit procedures and related recommendations have begun to produce results. Today, Spain is the only EU country where the Excessive Deficit Procedure is ongoing.

Budget Balance in the EU

Table 2 shows that the budget balance of EU member countries with generally prudent deficit positions, with some exceptions, began to deteriorate due to the emergence of the 2008 global financial crisis; in the following few years when the crisis deepened, the deficits in all countries increased; the countries that had budget surpluses in previous years also began to have deficits.

After 2010, when the European Sovereign Debt Crisis has started to be felt in Europe, budget deficit-to-GDP ratio of the most affected member states; Ireland, Greece, Spain, Italy and Portugal; has not been decreased for many years. Similarly, France, Croatia, Cyprus, Lithuania, Latvia, Hungary, Netherlands, Poland, Romania, Slovakia and Slovenia are seen as countries where the budget deficit level cannot be lowered than the reference value for 4 years or more.

Table 2: *General Government Deficit and Surplus in the EU (Percentage of GDP), 2006-2017*

| Country | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
|----------------|------|------|-------|-------|-------|-------|-------|-------|------|------|------|------|
| Belgium | 0.2 | 0.1 | -1.1 | -5.4 | -4.0 | -4.1 | -4.2 | -3.1 | -3.1 | -2.5 | -2.5 | -1.0 |
| Bulgaria | 1.8 | 1.1 | 1.6 | -4.1 | -3.1 | -2.0 | -0.3 | -0.4 | -5.5 | -1.6 | 0.2 | 0.9 |
| Czech Republic | -2.2 | -0.7 | -2.0 | -5.5 | -4.2 | -2.7 | -3.9 | -1.2 | -2.1 | -0.6 | 0.7 | 1.6 |
| Denmark | 5.0 | 5.0 | 3.2 | -2.8 | -2.7 | -2.1 | -3.5 | -1.2 | 1.1 | -1.5 | -0.4 | 1.0 |
| Germany | -1.7 | 0.2 | -0.2 | -3.2 | -4.2 | -1.0 | 0.0 | -0.1 | 0.5 | 0.8 | 1.0 | 1.3 |
| Estonia | 2.9 | 2.7 | -2.7 | -2.2 | 0.2 | 1.2 | -0.3 | -0.2 | 0.7 | 0.1 | -0.3 | -0.3 |
| Ireland | 2.8 | 0.3 | -7.0 | -13.8 | -32.1 | -12.7 | -8.0 | -6.1 | -3.6 | -1.9 | -0.5 | -0.3 |
| Greece | -5.9 | -6.7 | -10.2 | -15.1 | -11.2 | -10.3 | -8.9 | -13.2 | -3.6 | -5.7 | 0.6 | 0.8 |
| Spain | 2.2 | 1.9 | -4.4 | -11.0 | -9.4 | -9.6 | -10.5 | -7.0 | -6.0 | -5.3 | -4.5 | -3.1 |
| France | -2.4 | -2.6 | -3.3 | -7.2 | -6.9 | -5.2 | -5.0 | -4.1 | -3.9 | -3.6 | -3.4 | -2.6 |
| Croatia | -3.4 | -2.4 | -2.8 | -6.0 | -6.5 | -7.8 | -5.2 | -5.3 | -5.1 | -3.4 | -0.9 | 0.8 |
| Italy | -3.5 | -1.5 | -2.6 | -5.2 | -4.2 | -3.7 | -2.9 | -2.9 | -3.0 | -2.6 | -2.5 | -2.3 |
| Cyprus | -1.0 | 3.2 | 0.9 | -5.4 | -4.7 | -5.7 | -5.6 | -5.1 | -9.0 | -1.3 | 0.3 | 1.8 |

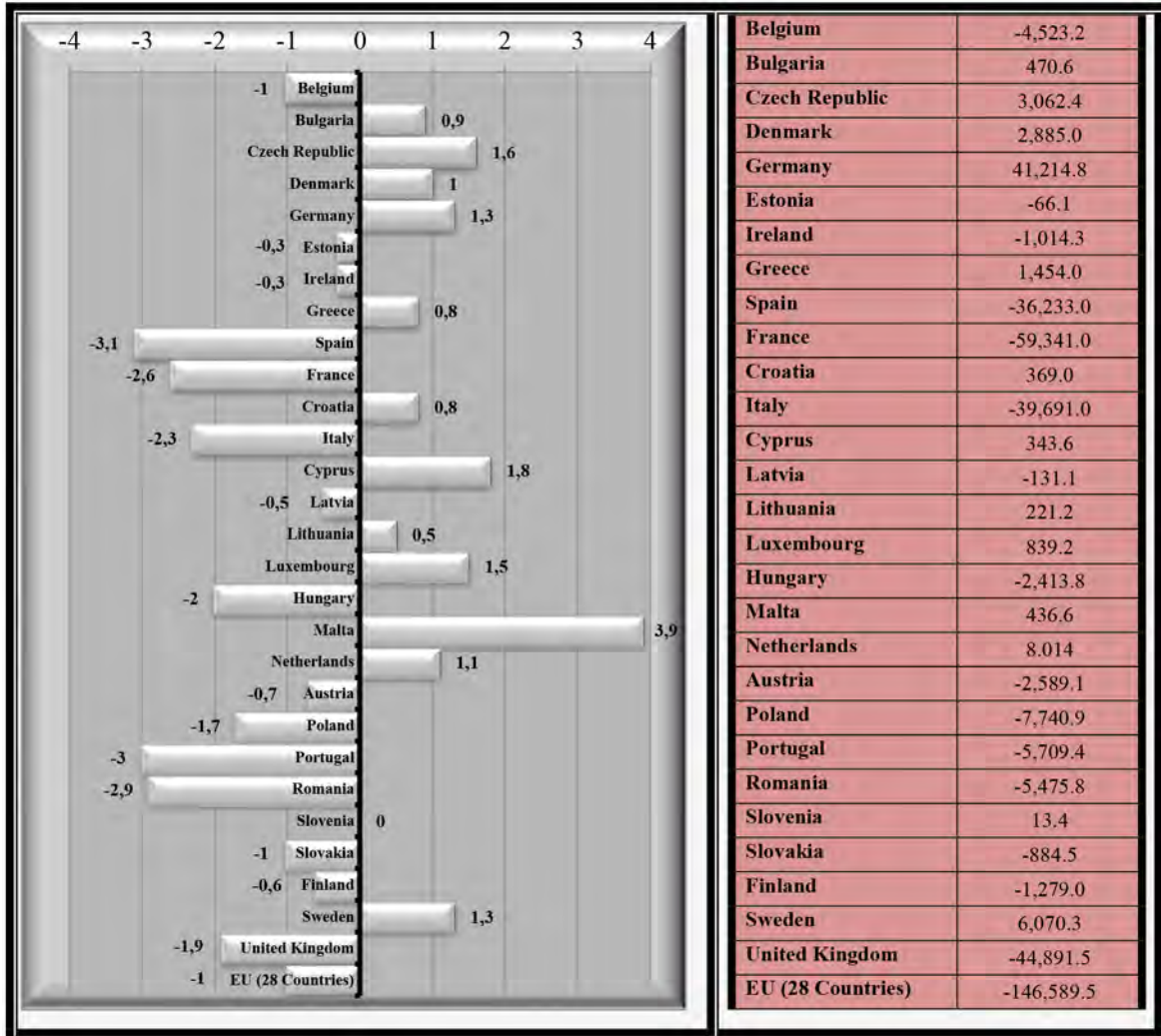
| Country | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
|--------------------------|------|------|------|-------|-------|------|------|-------|------|------|------|------|
| Latvia | -0.5 | -0.5 | -4.2 | -9.1 | -8.7 | -4.3 | -1.2 | -1.2 | -1.5 | -1.4 | 0.1 | -0.5 |
| Lithuania | -0.3 | -0.8 | -3.1 | -9.1 | -6.9 | -8.9 | -3.1 | -2.6 | -0.6 | -0.2 | 0.3 | 0.5 |
| Luxembourg | 1.9 | 4.2 | 3.3 | -0.7 | -0.7 | 0.5 | 0.3 | 1.0 | 1.3 | 1.4 | 1.6 | 1.5 |
| Hungary | -9.3 | -5.0 | -3.7 | -4.5 | -4.5 | -5.4 | -2.4 | -2.6 | -2.6 | -1.9 | -1.7 | -2.0 |
| Malta | -2.5 | -2.1 | -4.2 | -3.2 | -2.4 | -2.4 | -3.5 | -2.4 | -1.8 | -1.1 | 1.0 | 3.9 |
| Netherlands | 0.2 | 0.2 | 0.2 | -5.4 | -5.0 | -4.3 | -3.9 | -2.4 | -2.3 | -2.1 | 0.4 | 1.1 |
| Austria | -2.5 | -1.4 | -1.5 | -5.3 | -4.4 | -2.6 | -2.2 | -2.0 | -2.7 | -1.0 | -1.6 | -0.7 |
| Poland | -3.6 | -1.9 | -3.6 | -7.3 | -7.3 | -4.8 | -3.7 | -4.1 | -3.6 | -2.6 | -2.3 | -1.7 |
| Portugal | -4.3 | -3.0 | -3.8 | -9.8 | -11.2 | -7.4 | -5.7 | -4.8 | -7.2 | -4.4 | -2.0 | -3.0 |
| Romania | -2.1 | -2.7 | -5.4 | -9.2 | -6.9 | -5.4 | -3.7 | -2.1 | -1.3 | -0.8 | -3.0 | -2.9 |
| Slovenia | -1.2 | -0.1 | -1.4 | -5.8 | -5.6 | -6.7 | -4.0 | -14.7 | -5.5 | -2.9 | -1.9 | 0.0 |
| Slovakia | -3.6 | -1.9 | -2.4 | -7.8 | -7.5 | -4.3 | -4.3 | -2.7 | -2.7 | -2.7 | -2.2 | -1.0 |
| Finland | 3.9 | 5.1 | 4.2 | -2.5 | -2.6 | -1.0 | -2.2 | -2.6 | -3.2 | -2.8 | -1.8 | -0.6 |
| Sweden | 2.2 | 3.4 | 1.9 | -0.7 | 0.0 | -0.2 | -1.0 | -1.4 | -1.6 | 0.2 | 1.2 | 1.3 |
| United Kingdom | -2.8 | -2.6 | -5.2 | -10.1 | -9.4 | -7.5 | -8.2 | -5.4 | -5.4 | -4.3 | -3.0 | -1.9 |
| EU (28 Countries) | -1.6 | -0.9 | -2.5 | -6.6 | -6.4 | -4.6 | -4.3 | -3.3 | -2.9 | -2.3 | -1.6 | -1.0 |

Source: Eurostat

The budget deficits that have been tried to be reduced since the emergence of the Global Financial Crisis have been above the reference value in some countries until 2017. Estonia, Luxembourg and Sweden are the member countries where the budget deficit is not exceeded the reference value in the period of two major crises, one in global finance and the other in the regional debt crisis.

Table 2 shows that Bulgaria, Czech Republic, Denmark, Germany, Austria are the member countries that do not exceed the reference level frequently and at a high level and that can gradually reduce the budget deficit after the reference level is exceeded. Finland is the member state where the budget deficit reference level is exceeded once only in the period 2006-2017.

Figure 1: General Government Deficit and Surplus in the EU (Percentage of GDP & Million Euro), 2017



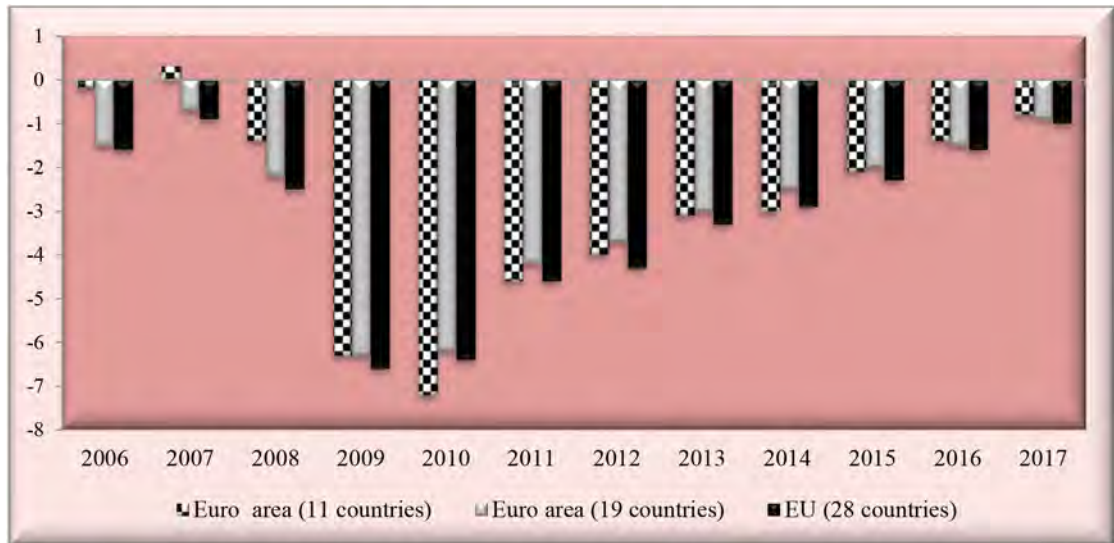
Source: Eurostat

As shown in Figure 1, countries with the highest budget surplus as a percentage of GDP are Malta, Cyprus, Czech Republic, Luxembourg, Sweden and Germany, the Netherlands, Denmark, Bulgaria, Greece and Croatia, Lithuania respectively. Countries with a budget deficit as the percentage of GDP are listed as Estonia and Ireland, Latvia, Finland, Austria, Belgium and Slovakia, Poland, the United Kingdom, Hungary, Italy, France, Romania, Portugal and Spain, respectively from the lowest to the highest budget deficit.

Spain is the only country that has failed to meet the budget deficit criteria within the 19 countries of the Eurozone and the 28 EU member states. Another remarkable situation in Figure 1 is France's extremely high budget deficit. In terms of the size of the budget deficit, France is followed by the United Kingdom, Italy and Spain. With the

budget surplus of 41,214.8 million Euros, Germany has the highest budget surplus in the EU, while the country with the highest budget surplus after Germany is the Netherlands with 8,014 Million Euros.

Figure 2: *General Government Deficit and Surplus in Europe by Country Groups⁶*



Source: Eurostat

Before the 2008 Global Finance Crisis, the stable budget balance of the first 11 countries of the Eurozone, consisting of Belgium, Germany, Ireland, Spain, France, Italy, Luxembourg, Netherlands, Austria, Portugal and Finland, began to deteriorate due to the crisis and the levels of budget deficit exceeded the previous years' and the reference level. After the 2008 Crisis, the level of budget deficits in these countries, which are considered to be the 11 largest economies of the European Union, changed the false notion that fiscal indiscipline is a problem specific to developing countries.

With the participation of Greece in 2001, Slovenia and Cyprus in 2007, Malta and Slovakia in 2009, Estonia in 2011, Latvia in 2014 and Lithuania in 2015, the number of countries that are in the Eurozone increased to 19. Countries that have participated in the Eurozone later were often accepted as if the causes of fiscal indiscipline because of their poor fiscal performance. In some of the mentioned countries, especially in Greece, the indicators do not meet the reference values, however it should be noted that the same applies to some of the developed constituent countries.

Public Debt in the EU

A government can borrow to finance long-live productive assets, infrastructure investments or extraordinary expenditures. However, the cost of borrowing becomes more important if the government borrows to cover its expenditures that exceed its income. Today's substantial amount of borrowing means substantial payouts to creditors tomorrow. If the government cannot pay the debt when the due comes, credibility will decrease and the government may get into shortage of refunding; hence the government may lose its ability to borrow when

⁶ The Eurozone category with 11 countries was calculated by taking the arithmetic mean of the budget deficit levels of the first 11 countries that constituted Eurozone for each year.

FISCAL DISCIPLINE IN THE EU: CROSS-COUNTRY COMPARISONS

Esin ASLANPAY ÖZDEMİR, Asuman ALTAY

it is really in need of borrowing (Seidman, 2009: 316, 317). Following the Global Financial Crisis in 2008; the impact of the European Sovereign Debt Crisis on the EU which shows itself as high public debt in EU countries is a good example of this situation. It is possible to see the situation in Table 3 where the level of public debt in the EU is showed over the years.

Table 3: *General Government Gross Debt in the EU (Percentage of GDP), 2006-2017*

| COUNTRY | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
|----------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Belgium | 91.1 | 87.0 | 92.5 | 99.5 | 99.7 | 102.6 | 104.3 | 105.5 | 107.0 | 106.1 | 105.9 | 103.1 |
| Bulgaria | 21.0 | 16.3 | 13.0 | 13.7 | 15.3 | 15.2 | 16.7 | 17.0 | 27.0 | 26.0 | 29.0 | 25.4 |
| Czech Republic | 27.7 | 27.5 | 28.3 | 33.6 | 37.4 | 39.8 | 44.5 | 44.9 | 42.2 | 40.0 | 36.8 | 34.6 |
| Denmark | 31.5 | 27.3 | 33.3 | 40.2 | 42.6 | 46.1 | 44.9 | 44.0 | 44.3 | 39.9 | 37.9 | 36.4 |
| Germany | 66.5 | 63.7 | 65.2 | 72.6 | 80.9 | 78.6 | 79.8 | 77.5 | 74.7 | 71.0 | 68.2 | 64.1 |
| Estonia | 4.4 | 3.7 | 4.5 | 7.0 | 6.6 | 6.1 | 9.7 | 10.2 | 10.7 | 10.0 | 9.4 | 9.0 |
| Ireland | 23.6 | 23.9 | 42.4 | 61.5 | 86.1 | 110.3 | 119.6 | 119.4 | 104.5 | 76.9 | 72.8 | 68.0 |
| Greece | 103.6 | 103.1 | 109.4 | 126.7 | 146.2 | 172.1 | 159.6 | 177.4 | 178.9 | 176.8 | 180.8 | 178.6 |
| Spain | 38.9 | 35.6 | 39.5 | 52.8 | 60.1 | 69.5 | 85.7 | 95.5 | 100.4 | 99.4 | 99.0 | 98.3 |
| France | 64.6 | 64.5 | 68.8 | 83.0 | 85.3 | 87.8 | 90.6 | 93.4 | 94.9 | 95.6 | 96.6 | 97.0 |
| Croatia | 38.6 | 37.3 | 39.0 | 48.3 | 57.3 | 63.8 | 69.4 | 80.5 | 84.0 | 83.8 | 80.6 | 78.0 |
| Italy | 102.6 | 99.8 | 102.4 | 112.5 | 115.4 | 116.5 | 123.4 | 129.0 | 131.8 | 131.5 | 132.0 | 131.8 |
| Cyprus | 58.7 | 53.5 | 45.1 | 53.8 | 56.3 | 65.7 | 79.7 | 102.6 | 107.5 | 107.5 | 106.6 | 97.5 |
| Latvia | 9.6 | 8.0 | 18.2 | 35.8 | 46.8 | 42.7 | 41.2 | 39.0 | 40.9 | 36.8 | 40.5 | 40.1 |
| Lithuania | 17.2 | 15.9 | 14.6 | 28.0 | 36.2 | 37.2 | 39.8 | 38.8 | 40.5 | 42.6 | 40.1 | 39.7 |
| Luxembourg | 7.8 | 7.7 | 14.9 | 15.7 | 19.8 | 18.7 | 22.0 | 23.7 | 22.7 | 22.0 | 20.8 | 23.0 |
| Hungary | 64.5 | 65.5 | 71.6 | 77.8 | 80.2 | 80.5 | 78.4 | 77.1 | 76.6 | 76.7 | 76.0 | 73.6 |
| Malta | 64.5 | 62.3 | 62.6 | 67.6 | 67.5 | 70.1 | 67.8 | 68.4 | 63.8 | 58.7 | 56.2 | 50.8 |
| Netherlands | 44.7 | 42.7 | 54.7 | 56.8 | 59.3 | 61.6 | 66.3 | 67.8 | 68.0 | 64.6 | 61.8 | 56.7 |
| Austria | 67.3 | 65.0 | 68.7 | 79.9 | 82.7 | 82.4 | 81.9 | 81.3 | 84.0 | 84.6 | 83.6 | 78.4 |
| Poland | 46.9 | 44.2 | 46.3 | 49.4 | 53.1 | 54.1 | 53.7 | 55.7 | 50.3 | 51.1 | 54.2 | 50.6 |
| Portugal | 69.2 | 68.4 | 71.7 | 83.6 | 96.2 | 111.4 | 126.2 | 129.0 | 130.6 | 128.8 | 129.9 | 125.7 |
| Romania | 12.3 | 11.9 | 12.4 | 22.1 | 29.7 | 34.0 | 36.9 | 37.5 | 39.1 | 37.7 | 37.4 | 35.0 |
| Slovenia | 26.0 | 22.8 | 21.8 | 34.6 | 38.4 | 46.6 | 53.8 | 70.4 | 80.3 | 82.6 | 78.6 | 73.6 |
| Slovakia | 31.0 | 30.1 | 28.5 | 36.3 | 41.2 | 43.7 | 52.2 | 54.7 | 53.5 | 52.3 | 51.8 | 50.9 |
| Finland | 38.2 | 34.0 | 32.7 | 41.7 | 47.1 | 48.5 | 53.9 | 56.5 | 60.2 | 63.5 | 63.0 | 61.4 |
| Sweden | 44.0 | 39.3 | 37.8 | 41.4 | 38.6 | 37.9 | 38.1 | 40.7 | 45.5 | 44.2 | 42.1 | 40.6 |
| The UK | 40.8 | 41.9 | 49.9 | 64.1 | 75.6 | 81.3 | 84.5 | 85.6 | 87.4 | 88.2 | 88.2 | 87.7 |
| EU – 28 | 60.1 | 57.5 | 60.8 | 73.4 | 78.9 | 81.5 | 83.9 | 85.8 | 86.5 | 84.5 | 83.3 | 81.6 |

Source: Eurostat

According to Table 3, Bulgaria, Czech Republic, Denmark, Estonia, Latvia, Lithuania, Luxembourg, Poland, Romania, Slovakia and Sweden stand out as the EU countries where levels of public debt do not exceed the reference value in the period 2006-2017. Almost all of these countries do not exceed the reference value of 60%, and even public debt ratio is not close to the reference value.

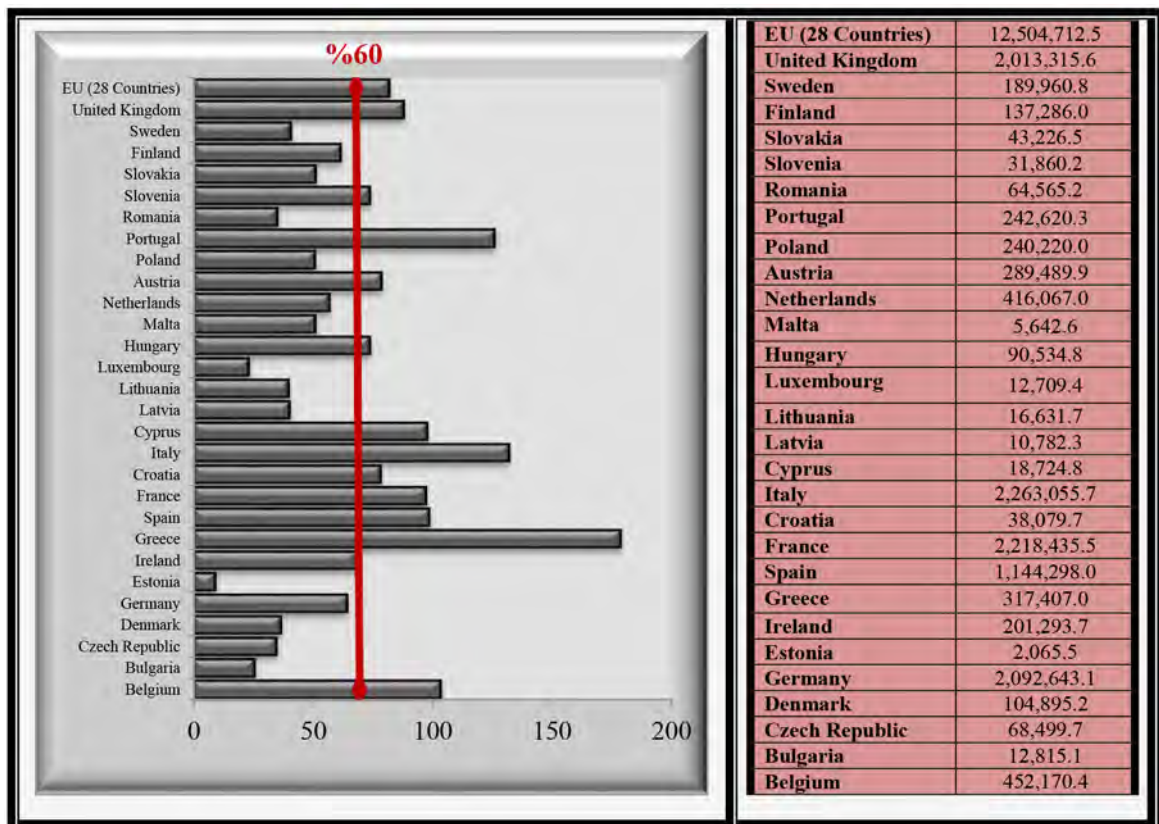
Belgium, Germany, Greece, France, Italy, Hungary, Austria and Portugal are seen as the countries where the public debt level has been continuously increasing over the years and it is well above the reference value during the period of 2006-2017.

The public debts, which have started to increase following the crises in EU member countries such as Ireland, Cyprus, Croatia, and the United Kingdom, have continued to increase during the following years and still continue to exist well above the reference value.

There are only two countries where the high public debt level could be reduced by 2017. Malta and Netherlands have managed to reduce the debt ratios which were above the reference value in previous years.

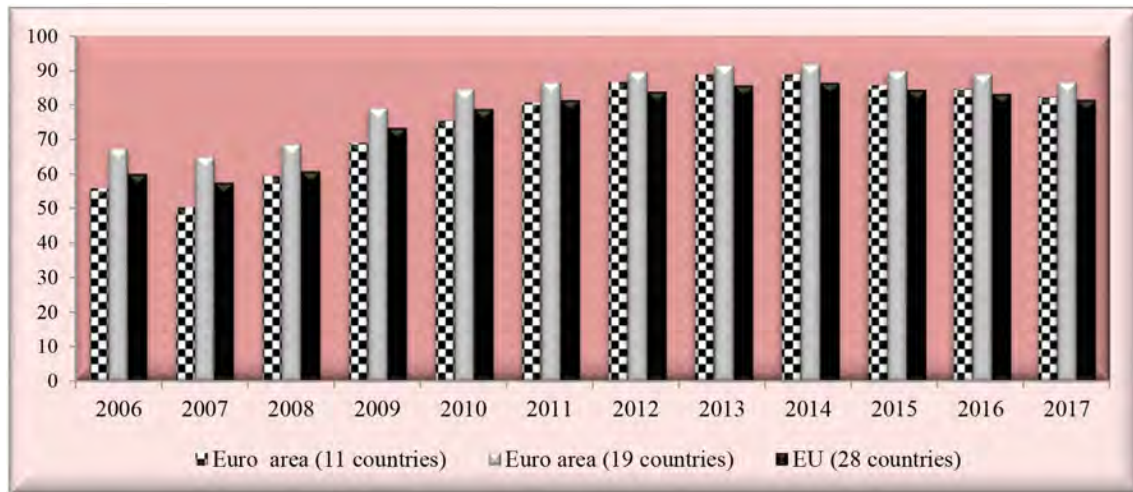
The countries with the highest public debt ratio among the countries that exceed the 60% reference value by 2017 are Greece, Italy, Portugal, Belgium, Spain, France, Cyprus, United Kingdom, Austria, Croatia, Hungary, Slovenia, Ireland, Germany and Finland, respectively. While the deficit reduction efforts for Greece, which has become a major issue of the economic agenda and a number of political tensions especially in the EU and abroad, have produced result in 2017; however Greece is the EU country with the highest public debt with ratio of 178,6%.

Figure 3: General Government Gross Debt in the EU (Percentage of GDP & Million Euro), 2017



Source: Eurostat

According to Figure 3, Italy, France, Germany, United Kingdom and Spain constitute $\frac{3}{4}$ of the gross public debt across the EU with their public debt levels. The country with the lowest level of public debt is Estonia with 9%.

Figure 4: General Government Gross Debt in Europe by Country Groups

Source: Eurostat

During the period 2006-2017, public debt level of the 19-member Eurozone is higher than that of the 11-member Eurozone and the EU. The most important reason for this situation is that Greece, including the pre-crisis period, has an extremely high public debt ratio. This situation led to the re-emergence of the criticism, which emerged from time to time, that the EU is a form of political integration rather than economic. The poor fiscal performance of Greece has led to a disagreement among countries within the Union, and even the discomfort of citizens of some member states has been an important part of national policy agendas.

Greece's public debt level, which joined the Eurozone in 2001, did not fall below 100% during the period of 2006-2017, and was around 180% for some years. Although it is important in terms of revealing the comparison between country groups; it should be noted that this is not the case in Greece alone. Before the outbreak of the 2008 crisis, Italy, Belgium and Portugal were seen as countries that exceed the reference value in terms of debt criteria. Especially the pre-crisis high debt level of Italy and the emergence of fiscal indiscipline in other big and strong EU economies with the emergence of the crisis brought many discussions.

With the crises, it was confirmed that unsustainable fiscal policies of a single member state could endanger the stability of the entire Eurozone. In the Eurozone, "every man for himself" is not an option and it is difficult to coordinate in the region, which includes 19 national budgeting processes and a common central bank (Bénassy-Quéré et al., 2016: 1).

Conclusion

The fiscal policies of the member states need to be coordinated as much as possible for the future of the European Union, Economic and Monetary Union and for the stability of the Euro. As a matter of fact, the 2008 Global Financial Crisis and the subsequent European Sovereign Debt Crisis have intensely shown to all parties that fiscal discipline is an uncompromisable field. It was re-proved that for a strong economic and monetary union,

monetary policy was not enough, and concessions from fiscal discipline laid the ground for major fiscal problems and, ultimately, crises.

The 2008 Global Financial Crisis showed the failure of implementer mechanism and the rules on fiscal discipline, which began with the Maastricht Treaty and was strengthened by the emergence of the Stability and Growth Pact. The high levels of budget deficit and public debt that emerged in Greece, Ireland, Italy, Portugal and Spain, posed a major threat to the future of the EU; great discussions were made inside and outside. Such that, while the repercussions of Brexit still continue, the rise of the discourse of secession from some other Member States, problem of countries with weak fiscal performance, reactions in the domestic politics of the developed European countries resulting from the fiscal burden of these countries have led to diversification of the agenda such as complete dissolution of the EU.

The intense criticism that together with the concessions given in the pre-crisis period, the measures to combat crisis were also insufficient; hence the ground for the European Debt Crisis has been prepared and the concerns of the EU about the future have led to stronger and more decisive steps since 2010. After the crises, the EU's economic governance has been strengthened by regulations called Six Pack, Two Pack, and Fiscal Compact. In this context, the Excessive Deficit Procedures for 26 member states of the EU, including the countries that have been subjected to criticisms that no action was taken in the previous periods due to their political power, have been launched so far. Estonia and Sweden are member states that have not been launched the Excessive Deficit Procedures so far, as it is shown by the budget deficit and public debt trends. As of September 2018, the Excessive Deficit Procedures were closed for 25 countries. Spain is the only member state which is still under the Excessive Deficit Procedure.

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THE COMPARATIVE OVERVIEW OF TAXATION OF INTANGIBLE ASSETS IN THE WORLD AND TURKEY

Baki YEGEN¹

Introduction

As is known, the term income is defined in the 1st article of the Income Tax Law no.193, and the elements considered as income are listed in the 2nd article. As per the Corporate Tax Law no.5520, the corporations that are subject to corporate tax are listed in the 1st article, and in the same article, it is stated that the profit of the company is comprised of the profits that are subject to the income tax. In other words, everyone, no matter the subject is a legal entity or a real person, who is making transactions that are subject to income tax, is going to be taxed for these activities. Considering the taxable income elements and the activities within these elements, although initially the physical activities come to the mind, there are also non-physical activities that are taxed. Although the most known among these activities are copyrights and patent rights, it is known that the intangible rights defined as the “royalty” in the foreign literature are high in number. In this study, which is prepared within the context of taxation of the intangible right incomes, firstly the taxation regimes of the intangible rights in Turkey are discussed, subsequently, the taxation regimes of the intangible rights in different countries in the world are mentioned, and finally, the implementations in Turkey and the world are compared.

1. Taxation of the Intangible Assets in Turkey

In the Turkish tax legislation, there is no definition about the intangible rights (Pehlivan, 2014, p. 63). However, in the 269th article of the Tax Procedure Law, it is stated that the intangible rights can be considered as a real estate (Turan, 2014, p. 311).

The intangible rights are clearly listed in the 5th and the 6th paragraphs of the 70th article of the Income Tax Law (ITL) no.193. Accordingly, the intangible rights are mentioned as, the right of search, operating, franchise, and their licenses, patent right, trademark, brand, business name, all kinds of technical drawings, design, model, plan, cinema and TV movies, soundtracks and video-types, the information concerning an experience in the industry, trade and science fields, and the right of use on a secret formula or a production method, or rights such as usage franchise (5th paragraph), and copyrights (6th paragraph). It is stated that the revenues obtained from the leasing by the owners, tenants, possessors, owners of easement, and beneficial owners of the rights mentioned in the 5th and 6th paragraphs of the 70th article in the ITL, are real property income. However, the profits obtained from the leasing by the inventors of the patent right or legal heirs are also defined as a self-employment income. Similarly, the profits obtained from the leasing by the authors of the copyrights or legal heirs are defined as self-employment incomes, as well (Tosuner and Arıkan, 2013, p. 137).

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Accordingly, it is observed that real property income provisions are applied in the taxation concerning the leasing of the intangible assets (Oncel, Kumrulu and Cagan, 2010: 302). However, it is also observed that the provisions of self-employment income are applied in case the principal owners or the legal heirs of the patent right or the copyright, among the intangible rights, are leased. Thus, based on the 18th article of the ITL, the profits obtained from the leasing of the patent rights or the copyrights by the principal owners or the legal heirs are free of tax. In other words, while the leasing of the intangible rights except for the patent rights and the copyrights are being taxed in terms of real estate income, the leasing of the patent rights and copyrights by the principal owners or the legal heirs is free of tax in terms of self-employment income. However, the leasing of the patent rights or the copyrights by the individuals, who are neither principal owners nor legal heirs, is subject to application of the real estate income provisions, thus, the leasing amount is taxed.

In case the intangible rights are leased to the ones listed in the 94th article of the ITL, different cutback rates are implemented (Pehlivan, 2018, p. 261). Namely, while the ones listed in the 94th article of the ITL are leasing their patent rights and copyrights, they have to apply 17 % tax cut in the payments of these individuals (Bilici, 2011, p. 171). However, in case the intangible rights (except for the patent rights and copyrights) are leased to the ones listed in the 94th article of the ITL, 20% tax cut is applied.

It is observed that there are differences in the disposal of the intangible rights, besides their lease transactions. In the 80th repeating article of the ITL, the incomes obtained from disposal of the rights (except for the patent rights), which are mentioned in the item number (5) of the first paragraph of the article 70, are stated to be the value increment incomes among the other incomes and elements, which are the seventh income element (Oner, 2016, p. 83). According to this, the provisions of the other incomes and elements are implemented to the incomes obtained from disposal of the intangible rights. However, in case of the disposal of the patent rights and copyrights, among the intangible rights, by the legal heirs or principle owners, the provisions of self-employment income are applied. Therefore, it is observed in the 18th article of the ITL that the incomes obtained by the disposal of the patent rights and copyrights by the principle owners or the legal heirs are tax free. However, in case of the disposal of the patent rights and the copyrights by third parties different from the principle owners or the legal heirs, the incomes of the third parties are admitted as the increment value incomes, as well.

It is observed that the real person limited taxpayers earn real property incomes by leasing the intangible rights in Turkey, and that they earn increment value incomes from disposal of intangible rights. In other words, the principles, which are applied to the residents in Turkey concerning the taxation of the intangible rights, are implemented to the limited taxpayers concerning the taxation of the intangible rights (Ocal, 2010). For example, it is stated in the 4th paragraph of the article number 94 of the ITL that a 20 % tax cut should be applied to the payments based on the disposal of patent rights and copyrights of the limited taxpayers (Pehlivan and Oz, 2011, p. 180).

Besides the real persons, corporations with legal entities can also earn incomes from leasing or disposal of the intangible rights. In such cases, the incomes of the fully obligated corporations, whose legal or business centers are in Turkey, are subject to 22 % corporate tax. It is because in the 1st article of the Corporate Tax Law (CTL), it is stated that the corporate income is comprised of the elements that are subject to the income tax.

The incomes of the limited taxpayer corporations, whose legal or business centers are not in Turkey, are listed in the 3rd paragraph of the 3rd article in the CTL, and concerning the intangible rights, there are statements such as “The incomes obtained from the leasing of the rights, assets, and real estates in Turkey” and “Other incomes and

revenues obtained in Turkey”. Thus, the incomes from leasing or disposal of the intangible rights of the limited taxpayer corporations in Turkey are subject to Corporate Tax by 22 %.

In the 30th article of the CTL, concerning the limited taxpayer corporations, it is stated that a corporate tax cut by 15 % is applied to the amounts of cash payments or payments on account in exchange for the disposal or assignment of the intangible rights such as copyrights, franchises, patent rights, operating rights, trade name, brand etc., disregarding whether the corporations are included in groups of business or agriculture income (Chamber of Sworn-in Certified Public Accountants of Istanbul, 2017, p. 4).

2. Taxation of the Intangible Assets in the World

As is in Turkey, it is known that the intangible assets are subject to taxation in foreign countries as well. The incomes concerning the intangible rights are taxed in many countries via withholding taxation (Alptürk, 2005, p. 346). In this context, concerning the intangible assets, the taxation implementations of some countries via withholding are discussed in the following part.

2.1. Withholding Rates in the World Concerning the Intangible Assets

In case the incomes from the disposal or leasing of the intangible assets are transacted within the borders and among the citizens of a country, it is defined as an income, thus, it is subject to income tax. When the intangible assets are leased or bought by the corporations or real persons with withholding obligations, the withholding is compulsory for these persons or the corporations. The real persons or corporations apart from these are not obliged for withholding. Moreover, if the real person or the legal entity that earns income from intangible rights is a limited taxpayer, in other words, if it is a non-resident in the country where the income is earned, it is observed that the income from the intangible rights is subject to taxation based on the principle of territoriality of the countries, which make the payment. Put it differently, tax cuts are implemented in the payment to the limited taxpayers during the disposal or leasing of the intangible rights. Namely, withholding tax-cuts are implemented in two different situations concerning the intangible assets payments. As per the rates of the mentioned cuts, it is observed that there are differences across countries. Accordingly, withholding tax cut rates of various countries concerning the intangible rights as of 2018 are presented in Table 1.

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Table 1: Withholding Rates in the World as of 2018 Concerning the Intangible Assets

| Country | Rate (%) | | Country | Rate (%) | |
|----------------|----------|--------------|--------------|----------|--------------|
| | Resident | Non-Resident | | Resident | Non-resident |
| Australia | 0 | 30 | Luxembourg | 0 | 0 |
| Austria | 0 | 20 | Malaysia | 0 | 10 |
| Barbados | NA | 15 | Malta | 0 | 0 |
| Belarus | NA | 15 | Morocco | NA | 10 |
| Belgium | 30 | 30 | Montenegro | NA | 9 |
| Brazil | NA | 15 | Netherlands | 0 | 0 |
| Bulgaria | 10 | 10 | New Zealand | 0 | 15 |
| Canada | NA | 25 | Norway | NA | 0 |
| China | NA | 10 | Poland | NA | 20 |
| Chile | NA | 30 | Portugal | 25 | 0/25 |
| Colombia | 0/35 | 15/26.4 | Romania | NA | 16 |
| Croatia | 24 | 24 | Russia | NA | 20 |
| Czech Republic | 0 | 15/35 | Saudi Arabia | NA | 15 |
| Denmark | 22 | 22 | Serbia | NA | 20/25 |
| Egypt | NA | 20 | Singapore | NA | 10 |
| Estonia | 0/20 | 10 | Slovakia | 0 | 19/35 |
| Finland | 0 | 20 | Slovenia | NA | 15 |
| Germany | 0 | 15 | South Africa | 0 | 15 |
| Greece | 20 | 20 | Spain | 19/24 | 19/24 |
| France | NA | 33.33 | Sweden | NA | 22 |
| Hong Kong | 0 | 2.475/4.95 | Switzerland | 0 | 0 |
| Iceland | 0 | 20 | Taiwan | 10 | 20 |
| India | 10 | 10 | Thailand | 3 | 15 |
| Indonesia | 15 | 20 | Turkey | 0/17/20 | 20 |
| Ireland | 20 | 20 | Ukraine | NA | 15 |
| Israel | 30 | 23 | Britain | 20 | 20 |
| Italy | 0 | 30 | America | NA | 30 |
| Korea (South) | 0 | 20 | Uzbekistan | NA | 20 |
| Japan | 0 | 20 | Venezuela | 5 | 34 |
| Latvia | 0 | 20 | Vietnam | NA | 10 |
| Lithuania | NA | 0/10 | Zambia | 15 | 20 |

Source: *www.taxsummaries.pwc.com*, prepared from the study named "Withholding Tax Rates".

As is seen in the Table 1, the withholding tax rates concerning the taxation of the intangible rights vary across the countries. Even within the same country, the withholding rates vary based on being resident or non-resident, in other words, based on having full or limited liability to tax. In some countries, same withholding rates are determined for the residents and non-residents. Even in some countries, the withholding tax rates are 0 % for both the residents and non-residents, in other words, the incomes from the intangible rights are not taxed. On the other hand, it is remarkable that the withholding tax rate is determined as 35 % in some countries. In other examples, it is observed that the withholding tax rate is 0 % for the residents, while different rates are implemented for the non-residents. All in all, it can be mentioned that a tax-cut of 15 to 20 % is implemented to the intangible assets.

In the taxation of the intangible assets via withholding taxation, a double taxation problem arises based on the authorized country. Namely, based on the principle of territoriality, the country, where the income is earned, may claim that it is entitled to tax, since the income is earned within the borders of this country. However, the country, where the limited taxpayer earning from the intangible rights is resided, may want to levy a tax on its citizens' incomes within or outside the borders of the country, based on the personality principle and considering that the income was earned by its citizen. Since both countries claim the authority to tax, the person earning from the intangible rights will be taxed both in the country, where he/she transacted the lease or disposal of the intangible rights, and in the country, where he/she is resided, since he/she earns an income. In other words, the income earned from the same intangible right will be subject to taxation in the both countries. In order to prevent this situation the countries make an agreement to prevent double taxation (Ozkan and Uslu, 2016, p. 172). In these agreements, the authority for taxation is left either to the country, where the person is resided, or to the source country, where the income is obtained, based on the situation; in other cases, it is shared between two countries. In the latter situation, where the taxation is applied in the both countries, in order to prevent double taxation for the same incomes, the tax paid to the other state is either received on account or exempted based on the provisions in the double taxation agreement (www.gib.gov.tr). If there is no double taxation agreement with the other state or the existing agreement does not prevent withholding, the withholding is transacted according to these provisions. However, if there is an agreement concerning the taxation, and if it prevents withholding, it cannot be transacted. If the provisions are organized in the agreement to make withholding in lower rates, these rates are applied (Oz, 2011).

It is observed that Turkey has signed double taxation agreements with 84 countries, including the last agreement signed with Vietnam in 2014. The tax rates to be collected from the intangible assets in the source countries are mentioned in the agreements. When these rates are examined, it is observed that these rates are mostly around 10%. In other words, the country, where the income is earned, is authorized to collect a tax by 10 % concerning the intangible assets. It is seen that the provisions organizing the taxation of the intangible assets are mentioned generally in the 12th articles of the agreements. According to these provisions, the authority for taxation concerning the intangible assets is given to the both states, the state of source and the state of residence; however, the taxation of the source state is limited to 10 %. Generally, the provisions concerning the prevention of double taxation are mentioned in the 23th articles of the agreements. It is also observed that offsetting is embraced as the double taxation prevention method. Namely, in case a Turkish citizen earns an income from intangible assets in a state, which has a double taxation agreement with Turkey, it is stated that the tax he/she pays in the foreign state will be accepted as payment on account for the tax in Turkey, while, similarly, the tax that is paid by a foreign citizen to Turkey will be accepted as payment on account for the income tax in the state of residence.

For example, in case that the X unlimited company in Turkey buys the franchise rights from a German-origin person, a tax-cut of 20 % is needed for the X unlimited company, since this company has an obligation for withholding. However, according to the 2nd paragraph of the 12th article of the double taxation agreement signed by Turkey and Germany, the gross amount of the intangible assets will be subject to withholding taxation by 10 % by Turkey. On the other hand, the tax that is paid in Turkey by this German individual over this income will be deducted from the income tax that he/she will pay in Germany. In the contrary case, if a Turkish citizen sells the franchise rights to a person with an obligation of withholding in Germany, the tax that the Turkish citizen pays in Germany (10 % according to the agreement, 15 % if there would be no agreement) will be deducted from the income tax that he/she will pay in Turkey.

3. Comparison of Turkey and the World Countries Concerning the Taxation of the Intangible Assets

In our taxation system, the intangible assets are admitted within the ITL or CTL. As is in other states, the intangible rights issue is accepted as an issue of income in our country and it turns into a domain for taxation. In our country and in other countries, the intangible assets are subject to taxation, namely, a tax cut is applied to the payments to a person earning an income from the intangible rights. While the withholding tax rate is 20 % in our country, it is observed that this rate varies between 0 and 35 % in other countries. Although there is no problem in withholding transactions within the borders of a country, problems arise between countries in the leasing and handing-over of the intangible rights, creating disagreements about the taxation of this income. In the resolution of these disagreements, the double taxation agreements take the center stage. With the double taxation agreements in the taxation of the intangible assets, it is observed that the taxation authority is either given to one of the states or to both of them under certain circumstances. There are differences among the countries concerning the number of the double taxation agreements. For example, the number of the agreements that are signed by Turkey as of 2018 is 84, while it is 93 for India, 115 for the United Arab Emirates, 40 for New Zealand, and 35 for Brazil.

In the European Union, with the directive numbered 2003/49/EC, the withholding taxes were lifted, which were being applied over interests and intangible assets among the corporations of the member states (Bozkurt, 2006, p. 102). In other words, there are no tax-cuts in the payments concerning the intangible assets among the parent companies and subsidiary companies of different member states. In case that subsidiary companies of different countries make leasing or disposal transactions of intangible rights in our country, a tax cut is applied to the mentioned amounts of leasing or disposal, different from the European Union. In other words, in the taxation of intangible assets in Turkey, it is not considered whether the companies are parent or subsidiary, it is implemented the same as of the taxation of two foreign companies. For example, according to a request form of special notice of tax status submitted by a corporate taxpayer in 2010, it was stated that the corporation bought royalty service from its associated foreign company within the scope of a license agreement, and the opinion of the authority was requested about whether the corporation needed to apply a withholding corporate tax over the invoices paid to the limited taxpayer in exchange for the service bought.² As the response, based on the provisions of the double taxation agreement signed between Turkey and the mentioned state, and according to the 2nd paragraph of the 12th article of the agreement, it was evaluated that a 10 % tax-cut should be applied over the gross amount of

2 <https://www.pwc.com.tr/tr/microsite/transfer-pricing/yayinlar/2011/pages/zeki-gunduz-21.12.2011-carsamba-know-how-midanismanlikmi.pdf> [Accessed 08.10.2018].

the intangible assets payments. As is seen, in Turkey, different from the EU, a withholding tax is applied to the payments made by the local corporation to its associated company in a foreign country concerning the intangible assets, while this transaction is exempted from taxation in the EU member countries.

In the tax agreements of Turkey with other countries, since there is no provision concerning the taxation of the intangible rights and about whether withholding taxation will be implemented to the payments being made to the associated company, a withholding tax of a certain amount (generally 10 %) determined in the agreement is applied to the intangible assets payments, disregarding the existence of associated companies between Turkey and the contracting states.

Conclusion

Intangible assets are accepted as an income in our country, and in this regard, the rights accepted as income are mentioned in the ITL and CTL. As is in other states, it is observed that mostly withholding taxation method is applied in the taxation of the mentioned rights in our country. Although it is seen that the withholding rate applied to the intangible assets in our country is generally 20 %, the rate is observed to vary between 0 and 35 % in other countries. In case the limited taxpayers earn from intangible assets in countries, where the limited taxpayers are non-resident, some problems arise concerning the taxation of the income earned between the country of source and country of residence. These problems are settled with double taxation agreements signed between the countries. In these agreements, the taxation authority can either be given to the country of residence or to the country of source under certain circumstances, as a third alternative, it can be shared among the contracting countries. There are differences between Turkey and the EU about taxation since, in the taxation of the intangible rights in the EU, the payment of a corporation in a member state is not subject to taxation concerning the leasing or disposal of an intangible right from its associated company, while these payments are subject to withholding tax in Turkey.

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CONVENTIONAL AND ISLAMIC STOCK PRICES AND THE EFFICIENT MARKET HYPOTHESIS: EVIDENCE FROM AUGMENTED DICKEY FULLER AND CARRION-I SILVESTRE STATIONARY TEST WITH STRUCTURAL BREAKS

Mustafa UYSAL¹, Zafer ADALP²

1. Introduction

The market efficiency has been one of the attracted topics in the field of the finance literature. The efficient market theory is based on the efficient market hypothesis, which poses that all information about the intrinsic value of the asset fully includes in stock price in other words stock prices have already reflect all information at that point in time. Therefore, market participants cannot excess gain above market average since an efficient market can lead investors to not exploit information (Malkiel and Fama, 1970; 383-417).

Considering the explanation, the market efficiency theory linked to a random walk (unit root) sight, it is not possible to predict the stock market returns as stock prices are associated with a random walk process. Therefore, the historical observation on stock markets prices is not opportunity since any shock to stock market price is accepted as permanent and there is no disposition for the stock price to return to a trend path over time. On the other hand, stationary process emphasized that any shock to stock market price is transitory which induce the stock market price to return to a trend path over time (Ozdemir, 2008;633). Briefly, the random walk process suggests that the stock market returns cannot predict by using historical price observation. Taking into all the theoretical insight of the market efficiency, it is understood that effective market hypothesis is regarded as the pioneer of excellent competition and market participants are not able to exploit the market in the long run. Obviously, rapidly advanced technologies play a vital role in the market efficiency since the rapid transfer of the information, accessible advanced ICT and globalization have a positive impact on the interactions among markets (Haque et al., 2011).

While the tested of the market efficient theory considering random walk process, is accepted as rage topics in the literature, its popularity has been already attracted because the studies related to this topic is very controversial and there is no consensus on this field. A number of studies support the random walk process and hence their results are consistent with the efficient market hypothesis (Ozdemir, 2008; Obaidullah, 2001; Chourdy, 1997; Hasan,2001; Kawalatsu and Morey,1999; Munir and Mansur, 2009; Alexeev and Tapon, 2011). Some studies' results are inconsistent with the efficient market hypothesis (Narayan, 2008; Narayan and Smyth, 2004; Lee et. al, 2010; Lean and Symth, 2007; Lo and Mackinley, 1988).

Stock market indexes are used in order to test the validity of the market efficiency theory. Within this aim, the efficiency theory linked to the stock market is associated with the assumption in which investors can consider all existing investing tools. However, market participants can diversify their portfolio tools in views of the portfolio

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diversification motives and their belief. Indeed, the religious opinion does indeed play a vital role in the portfolio assessment. Companies' stock shall be invested by investors through their belief. Islamic finance seems to be one of the important examples with respect to this sight. Islamic stock markets have been received great attention because it leads to alternative portfolio diversification and proper investment field based on religious opinion (Tuna and Uysal, 2015; 915-916).

In this study, the question of the market efficiency theory in conventional and Islamic stock markets belonging to selected the developing countries have been attempted by using Augmented Dickey Fuller (ADF) unit root test and the Carrion-i Silvestre (CS) unit Root Tests with Multiple Structural Breaks. For this purpose, monthly data of 5 developing countries' conventional and Islamic stock indexes established in line with MSCI principles for the period between May 2002-September 2018 was evaluated. According to the results of the analysis, it will be possible to give some portfolio recommendation to market participants regarding this concept.

There are four different parts in this study. After this introduction part, the second part data and methodology. Within this scope, information about data, method; besides, analysis results will be emphasized in the third part. Moreover, the final part summarizes results and underlines recommendation.

2. Data and Methodology

2.1. Data

In this study, the data set of conventional and Islamic stock markets index belonging to Turkey, Russia, China, India and Brazil prepared by Morgan Stanley Capital International (MSCI) is used. The purpose of selected those countries is all countries developing countries and many investors diversified their portfolios in the light of the change in structural and macroeconomic events in those countries. In this study, monthly price values of the indices for the stock markets were examined within the period of May 2002-September 2018. However, Islamic stock market indexes are based on the index rules established compatibly with the MSCI principles. According to this principle, there are some restrictive field of activities which companies should not be interested in. Finance based on interest, trade, financial renting, factoring, banking, service, mediation, wrong related to Islamic religion activities (consisting of alcoholic beverages, gambling, games of chance, pork meat), press, publication, advertising, tourism, entertainment, tobacco products, guns, timed gold, silver and currency trade. Furthermore, the companies to enter the index should provide certain financial ratios. According to financial responsibility, the ratio of total interest credits of the companies to market value should be less than %30, the ratio of interest yield cash and stock and bonds of the companies to market value should be less than %30 and the ratio of the incomes of the companies that it obtains from abovementioned field of activities to total incomes should be less than %5³. The starting date of the study is May 2002 since the MSCI Islamic indexes are calculated after this date. The main purpose of using the data of Islamic indices is to determine whether there is any difference between the results of the Effective Market Hypothesis derived from the traditional indices and the similar results obtained from the Islamic indexes

2.2 Methodology

In this research, it is aimed to determine the validity of market efficiency theory in both conventional and Islamic markets by using indexes established in line with MSCI principles. Time series may be influenced by different structural breaks during the examination period. If the existence of these structural breaks has not been taken into

3 (<https://www.msci.com/documents/10199/c0b90e16-5746-4cdc-b033-1ec7da64386e>)

consideration or neglected, the results obtained from the analyzes can be inaccurate (Sevüktekin and Nargeleşkenler, 2010: 339). However, Perron (1989) states that standard ADF tests tend not to reject the unit root hypothesis in the presence of structural fractures in the examined series. Thus, a result can be obtained that a stationary series is not stationary. Therefore, in the research, in the testing of the effectiveness of the conventional and Islamic stock market of developing countries, unit root tests were used which allowed a different number of structural breaks as well as traditional unit root tests which do not allow structural breaks. In the study, CS unit Root Test, taking into five structural breaks, and ADF unit root test were used.

2.2.1. Augmented Dickey Fuller Unit Root Test

Analysis of stationary test is also defined as unit root test analysis. Various econometric tests have been used and developed in order to determine a series have unit root or not, in other words whether it is stationary. When a series have not unit root, it is called as a stable series. The first unit root test developed by Dickey-Fuller (1979) is DF unit root test. DF test assumes that there is no correlation between error terms so when there is a correlation between the error terms, the DF test cannot be used. To overcome this restrictive assumption, a news unit root test, called as developed Augmented Dickey Fuller Test (1979, 1981), have been alternated to DF test. With the help, of ADF, the lagged values of the dependent variables can be added to the right side of the equation so a possible correlation between error terms is no longer a problem. ADF unit root poses that a series does not contain unit root if its mean value and variance do not change in time and its covariance should be depend on the distance between two periods, not only to the period in which the calculations are made (Bozkurt, 2007: 39).

The details of this method analyzed in the investigation of stable nature of the series are given below (Gujarati and Porter, 2014: 755-757):

None equation:

$$\Delta Y_t = \alpha_1 Y_{t-1} + \sum_{i=1}^k \beta_i \Delta Y_{t-i} + \varepsilon_i \quad (1)$$

Costant Equation:

$$\Delta Y_t = \alpha_0 + \alpha_1 Y_{t-1} + \sum_{i=1}^k \beta_i \Delta Y_{t-i} + \varepsilon_i \quad (2)$$

Constant-Trend Equation:

$$\Delta Y_t = \alpha_0 + \alpha_2 \text{trend} + \alpha_1 Y_{t-1} + \sum_{i=1}^k \beta_i \Delta Y_{t-i} + \varepsilon_i \quad (3)$$

By comparing the Mackinnon (1996) critical values, it can be decided to accept or reject ($H_0: \gamma=0$) which poses that the series contains unit root, in other words, it is not stationary. In addition, ($H_1: \gamma \neq 0$) refers that the series is stationary and have not unit root. When the calculated value is absolutely lower than the critical value, ($H_1: \gamma \neq 0$) shall be accepted and it shall be concluded that the series is not stable. However, Schwarz information criteria have been taken with respect to determining the length of delay.

2.2.2. Carrion-i Silvestre Unit Root Test

The presence of structural change is generally known and it can dramatically bias unit root test towards under-rejection of the non-stationarity hypothesis. Basically, a structural break refers an infrequent event leading to spurious persistence and the appearance of permanent shocks in which the ability to accept or reject stationary became difficult. To account for the structural- break, various econometrics methods have been developed and Carrion-I Silvestre (2009) is one of them. Conventional unit roots test consisting of DF, ADF and PP i.e. have not allowance for structural breaks while CS (2009) based on the quasi-generalized least squares allows for five structural breaks. Considering this test, effective results for small sampling can be obtained. This test account for 5 structural breaks and these breaks points using by Bai and Perron (2003) algorithm and Quasi-GLS (Generalized Least Squares) leads to dynamic program process and minimizing total of fault remnants (Göçer ve Peker, 2014: 114).

Stochastic data production process used in Carrion-i Silvestre (2009) is given below (Carrion-i Silvestre et al, 2009: 1757):

$$\begin{aligned} y_t &= d_t + u_t \\ u_t &= au_{t-1} + v_t, \quad t = 0, \dots, \dots, T \end{aligned} \quad (4)$$

In order to determine stable nature of the sets, CS (2009) developed five different test statistics (Carrion-i Silvestre et al, 2009: 1759-1762):

$$P_T(\lambda^0) = \{S(\bar{\alpha}, \lambda^0) - \bar{\alpha} S(1, \lambda^0)\} / s^2(\lambda^0) \quad (6)$$

$$MP_T(\lambda^0) = \left[c^{-2} T^{-2} \sum_{t=1}^T \tilde{y}_{t-1}^2 + (1 - \tilde{c}) T^{-1} \tilde{y}_T^2 \right] / s(\lambda^0)^2 \quad (7)$$

$$MZ_\alpha(\lambda^0) = (T^{-1} \tilde{y}_T^2 - s(\lambda^0)^2) (2T^{-2} \sum_{t=1}^T \tilde{y}_{t-1}^2)^{-1} \quad (8)$$

$$MSB(\lambda^0) = (s(\lambda^0)^{-2} T^{-2} \sum_{t=1}^T \tilde{y}_{t-1}^2)^{-\frac{1}{2}} \quad (9)$$

$$MZ_t(\lambda^0) = (T^{-1} \tilde{y}_T^2 - s(\lambda^0)^2) (4s(\lambda^0)^2 T^{-2} \sum_{t=1}^T \tilde{y}_{t-1}^2)^{-\frac{1}{2}} \quad (10)$$

H_0 in CS refers that series contain unit root under structural breaks while H_1 series have not unit root under structural breaks under the H_1 .

Bootstrap provide asymptotic value which is necessary for determining the validity of hypothesis and when the calculated test statistic is less than the critical value, H_0 hypothesis shall be rejected. In addition, when structural breaks in the series are observed, it is concluded that the new set is stable and it does not contain unit root (Göçer vd., 2013: 8).

3.The Empirical Results

ADF Unit root test is applied in order to determine separately Conventional stock markets and Islamic stock markets used in this study are stationary or not. The obtained results are shown in Table 1 and Table 2.

Table 1: The Results of ADF unit Root Test for Conventional Stock Markets

| Countries | t-statistic values (Level) | Probability (Level) |
|--|-----------------------------|---------------------|
| Turkey | -1.7546 | 0.7230 |
| Brazil | -1.4132 | 0.8544 |
| Rusia | -2.5758 | 0.2919 |
| India | -2.1013 | 0.5415 |
| China | -1.8505 | 0.6762 |
| Critical Value -4.0055 -3.4330 -3.1403 | | |

Note: Country names refer Conventional Stock Markets belonging to those countries.

Table 2: The Results of ADF unit Root Test for Islamic Stock Markets

| Countries | t-statistic values (Level) | Probability (Level) |
|--|-----------------------------|---------------------|
| Turkey | -2.9279 | 0.1561 |
| Brazil | -1.3702 | 0.8667 |
| Rusia | -2.5758 | 0.2922 |
| India | -2.1030 | 0.5405 |
| China | -1.7318 | 0.7335 |
| Critical Value -4.0055 -3.4330 -3.1403 | | |

Note: Country names refer Conventional Stock Markets belonging to those countries.

According to the results of the ADF, it is found that Islamic stock markets and Conventional stock markets contain unit root, i.e. both of them are not stationary. As a result, the validity of market efficiency hypothesis for Islamic stock markets and Conventional stock markets is confirmed. With the helps of the unit root test, it seems to be concluded that investors cannot determine markets' future by observing the past price movements and return above the market average is not beside the point.

CS unit root test results allowing for five structural fractions are provided in Table 3 and Table 4.

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Table 3: Results of Carrion-i Silvestre Unit Root Tests with Multiple Structural Breaks For Conventional Stock Markets

| Countries | Level | | Structural Date |
|---------------|-------------|--------------------|-------------------|
| Turkey | P_T | 15.33 (8.53) | March 31. 2004 |
| | MP_T | 14.82 (8.53) | February 28. 2006 |
| | MZ_α | -27.46 (-45.45) | December 31. 2007 |
| | MSB | 0.13 (0.10) | April 30. 2010 |
| | MZ_t | -3.66 (-4.75) | May 31. 2012 |
| Brazil | P_T | 18.76 (8.79) | June 30. 2004 |
| | MP_T | 17.31 (8.79) | May 30. 2008 |
| | MZ_α | -24.40 (-46.87) | June 30. 2010 |
| | MSB | 0.14 (0.10) | August 30. 2013 |
| | MZ_t | -3.47 (-4.84) | February 29. 2016 |
| Rusia | P_T | 31.93 (9.36) | March 31. 2004 |
| | MP_T | 21.86 (9.36) | April 28. 2006 |
| | MZ_α | -16.27 (-47.52) | February 27. 2009 |
| | MSB | 0.18 (0.10) | April 29. 2011 |
| | MZ_t | -2.85 (-4.86) | February 29. 2016 |
| India | P_T | 14.36 (9.10) | March 31. 2004 |
| | MP_T | 13.05 (9.10) | June 29. 2007 |
| | MZ_α | -33.08 (-46.88) | February 27. 2009 |
| | MSB | 0.12 (0.10) | October 29. 2010 |
| | MZ_t | -4.06 (-4.81) | August 30. 2013 |

| Countries | Level | | Structural Date |
|-----------|--------|--------------------|------------------|
| China | P_T | 19.06 (9.64) | October 31. 2005 |
| | MP_T | 18.21 (9.64) | October 31. 2007 |
| | MZ_a | -24.99 (-47.01) | June 30. 2009 |
| | MSB | 0.14 (0.10) | May 31. 2011 |
| | MZ_t | -3.53 (-4.80) | June 28. 2013 |

Note: *It stands for stability at %5 relevance level. The values in the parentheses are critical values generated by bootstrap with 1000 repetitions. The dates of structural fraction are the dates determined by the test method. Country names refer Conventional Stock Markets belonging to those countries.

The results of CS unit root test applied for both stock markets demonstrated that calculated test statistics is more than critical values. Within this scope, investigated stock markets contain unit root stationary separately; thus, it is emphasized that they are not stationary.

Table 4: Results of Carrion-i Silvestre Unit Root Tests with Multiple Structural Breaks For Islamic Stock Markets

| Countries | Level | | Structural Date |
|-----------|--------|--------------------|-------------------|
| Turkey | P_T | 10.21 (8.47) | March 31. 2004 |
| | MP_T | 9.74 (8.47) | November 30. 2005 |
| | MZ_a | -39.97 (-45.11) | July 31. 2007 |
| | MSB | 0.11 (0.10) | March 31. 2009 |
| | MZ_t | -4.46 (-4.73) | April 30. 2013 |
| Brazil | P_T | 18.60 (9.03) | May 31. 2004 |
| | MP_T | 16.90 (9.03) | May 30. 2008 |
| | MZ_a | -25.90 (-47.21) | July 29. 2011 |
| | MSB | 0.14 (0.10) | October 31. 2013 |
| | MZ_t | -3.59 (-4.86) | December 31. 2015 |

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| Countries | Level | | Structural Date |
|-----------|-------------|--------------------|-------------------|
| Rusia | P_T | 28.13 (9.02) | March 31. 2004 |
| | MP_T | 25.09 (9.02) | April 28. 2006 |
| | MZ_α | -17.20 (-47.02) | May 30. 2008 |
| | MSB | 0.17 (0.10) | June 30. 2010 |
| | MZ_t | -2.91 (-4.83) | June 30. 2014 |
| India | P_T | 20.06 (8.47) | December 31. 2003 |
| | MP_T | 18.57 (8.47) | October 31. 2005 |
| | MZ_α | -20.49 (-45.08) | December 31. 2007 |
| | MSB | 0.16 (0.10) | April 30. 2010 |
| | MZ_t | -3.20 (-4.73) | August 30. 2011 |
| China | P_T | 20.40 (9.46) | April 30. 2004 |
| | MP_T | 19.16 (9.46) | October 31. 2007 |
| | MZ_α | -23.90 (-47.29) | June 30. 2009 |
| | MSB | 0.14 (0.10) | May 31. 2011 |
| | MZ_t | -3.44 (-4.84) | February 29. 2016 |

Note: *It stands for stability at %5 relevance level. The values in the parentheses are critical values generated by bootstrap with 1000 repetitions. The dates of structural fraction are the dates determined by the test method. Country names refer Islamic Stock Markets belonging to those countries.

In the light of the results obtained by ADF and CS, it was concluded that investigated all markets are effective. In other saying, created a portfolio based on both stock markets cannot provide a return above average for investors.

4.The Conclusion

Effective market hypothesis recognize that all information linked to market is known and when a news information come to markets, the markets immediately reflected on the price in which induces changes in price. However, all market participants are not only aware of this situation associated with effects of new information on markets but

they know all information related to markets. Thus, gaining excessive returns above market average is not possible by forecasting price movements. In other saying, effective market will not provide immense profits.

In this study, the validity of the effective market hypothesis in Conventional stock markets and Islamic stock markets belonging to Turkey, Russia, Brazil, India, and China is investigated. In accordance with this purpose, the monthly data set of the Islamic stock markets and the conventional stock markets linked to the developing countries prepared by MSCI between May 2002 and September 2018 was used. ADF and CS are analyzed in order to test the validity of market efficiency for above mentioned countries. In examining periods, the results of ADF and CS for both stock markets demonstrated that conventional and Islamic stock markets belonging to countries have unit root, in other words, they are not stationary. In the light of market efficiency theory, markets participant investing in those markets seem to be rational and hence market efficiency theory is valid for all markets. As a consequence, there are no utilized profit opportunities in both markets so it is not possible for investors to make immense profits.

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SECTION **4.**

MANAGEMENT, MARKETING AND CONSUMER BEHAVIOURS

32

EMOTION MANAGEMENT IN ORGANIZATIONS

Ayhan KARAKAŞ¹

Emotion Management

Emotion management can be approached in various ways. In this study, the issues in relation with emotion management in organizations shall be mentioned briefly. The actions to be taken during the situations, which may be encountered by the managers and involve emotions, shall be covered.

Both individuals and managers should be able to identify the emotions and improve themselves about how the emotions effect the behaviour, the way of expressing emotions and how the emotions can be directed in order to be able to adapt quickly to changing conditions, to be satisfied with their current environment, to feel connected to their work and to gain emotional satisfaction in their business lives. At this stage, the importance of emotion management keeps increasing and positive emotional capital (tolerance, optimism, belonging, satisfaction, etc.) forms an important social capital for both organizations and individuals (Töremen & Cankaya, 2008, p. 34).

Emotions are the reactions that you give to a person (you may be happy when you see a friend of yours at work) or an event (dealing with a rude customer may cause you to lose your nerves). You betray your emotions when something makes you happy, when someone annoys you or when you fear something (Erdost Colak, 2015).

Robbins and Judge (2016) summarized the relationship between affect, emotions and moods as shown in the table below.

Table 1: Affect, emotions and moods

| Affect | |
|--|--|
| It is a common term covering many experiences including different emotions and moods of people. | |
| Emotions | Moods |
| <ul style="list-style-type: none">• They occur due to a certain situation• They last very short (seconds or minutes)• Naturally they are specific and in quite large number (fear, sadness, happiness, disgust, surprise, etc.)• They usually cause some specific facial expressions.• Their nature is based on actions. | <ul style="list-style-type: none">• Their reasons are usually uncertain and general.• They last longer than emotions (hours or days).• They are more general (there have two types of positive and negative, consisting of multiple emotions)• Usually, they are not expressed with specific facial expressions.• Their nature is cognitive. |

One of the differences between emotions and moods is that while moods are cognitive, emotions are more action oriented.

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It is also possible to divide emotions as negative and positive. Positive emotions may be happiness, pride, relaxation, love, hope, mercy and gratitude. Negative emotions may be anger, fear, anxiety, guilt, shame, sadness, jealousy, envy and hatred (Lazarus, 1991).

Relationship between attitude and behaviour

For us to understand how emotions effect our thoughts and behaviours in the workplace, we must first have knowledge on attitudes. Attitudes are expressed as the sum of beliefs, feelings and behavioural intentions towards a person, an object or an event. Attitudes are judgment while emotions are experiences. In other words, while attitudes are conscious logical reasoning, emotions are often the situations that we are unaware of. We usually experience most of our emotions for a short time, while our attitude towards something or someone is more static in time. Emotional process is also involved in understanding attitudes as well as beliefs, feelings and behavioural intentions. (McShane & Glinow, 2016).

Beliefs: The perceptions adopted in relation with the attitude objects; our beliefs on what is right and what is wrong.

Feelings: Positive or negative conscious assessments regarding the attitude object.

Behavioural intentions: The intentions refers to the willingness to display a certain behaviour depending on the attitude objects.

The relationship between emotions, attitudes and behaviours are shown in the figure below.

Figure 1 : Model of emotions, attitudes and behaviour Resource: (McShane & Glinow, 2016)



Attitude is a tendency that is attributed to an individual. Attitude is not a behaviour that can be observed and revealed but a tendency preparing for a behaviour. For example, we can decide that Ahmet, who does not allow his wife and daughter to work despite the fact that he needs it, has a negative attitude towards working women or a generally conservative attitude towards women. Conservativeness (attitude) is invisible but it can be argued that this attitude exists since it causes certain behaviours as a consequence of observing those behaviours. In other words, a behaviour is attributed to an attitude, such as Ahmet does not allow his wife and daughter to work because he is very conservative (Kagitcibasi, 2013).

Attitude is a tendency attributed to an individual that regularly forms his/her thoughts, emotions and behaviours regarding a psychological object. Therefore, what an attitude creates is not just a behavioural tendency or just an emotion, but an integration of thought-emotion-behaviour tendency. When attitude is mentioned, thought, emotion and behaviour tendency-trio comes to the mind (Smith, 1968).

Emotions providing pain or pleasure to people are diverse. These can be divided into three categories as pleasing, prohibitive-defensive and aggressive emotions (Cited from Cole & Hall, 1966 by Basaran, 2008, pp. 150-151).

Pleasing Emotions

Such emotions prompt people to a pleasurable behavior, or they give pleasure to people at the end of a behaviour. These are emotions such as love, tenderness, happiness, appreciation, curiosity, satisfaction and enjoyment. Many pleasing emotions are experienced in the organizational environment. The happiness of achieving a task may not be forgotten.

Prohibitive-Defensive Emotions

Such emotions are fear, distress, agony, sadness, grief, boredom, aversion and disgust and they, unlike the pleasing emotions, cause people to suffer. In order not to experience these emotions, people prohibit their behaviours, which lead them to those emotions, or defend themselves against the effects that may be caused by them.

The organizational environment is full of many situations that may cause the employee to have such prohibitive and defensive emotions. During his/her work, an employee sometimes gets anxious, bores or sad, sometimes get in a deep sorrow and grief while sometimes feels disgust or aversion. There are a lot of fear that frightens the employees. The most important and dominant ones are failures, accidents, sickness, financial difficulty, aging, languorousness, dismissal, failing to get promoted and retirement.

Aggressive Emotions

Such emotions are emotions that lead people to treat the other one in an agonizing way, to say bad words and to engage in destructive actions. Anger, jealousy, grudge, hatred, hostility and extreme greed are some of the aggressive emotions. They harm both the person, to whom the emotions are directed, and those who have these emotions (Nursi, 2017, p. 380).

In the development of aggressive emotions of an employee, the family and community environment, where he/she was raised in childhood, has a great importance. Permanent and violent punishments, relationship disorders, apathy, fight and conflict experienced in childhood lead adults to have more aggressive emotions.

The enterprise may have a big influence in the formation and growing of aggressive emotions. When the enterprise environment is available to do so, the employee may tend to develop and act on some of the aggressive emotions that were not displayed in childhood and adolescence.

When looking at the source of emotions, personality, days of the week and time of the day, weather, stress status, social activities, sleep, exercise, age and gender can be considered as some of the variables.

Affective Events Theory

The affective events theory (AET) was developed by Weiss and Cropanzano. According to the theory, the affective experiences experienced by individuals in the past affect their current organizational behaviours. The events of different nature (positive or negative) experienced by individuals in the past cause emotional reactions in today's business life. The theory draws the attention of organizational behaviour researchers to mind assessments and experiences. The theory is not necessarily related to emotional events experienced in the past. It is stated that an event occurred during the day also affects the behaviour of the individual in the rest of the day (Weis & Cropanzano, 1996). Therefore, under the organizational behaviours of individuals lay their personal characteristics and the affective events experienced by them outside their organization. These events also affect the attitudes and behaviours of individuals. Therefore, in individual's perception of the organization as fair or unfair or in his/her job satisfaction, the affective events experienced by the individual that day, or in the past. (Ozdevecioglu, 2004)

The AET gives us two messages of great importance. The first one is that emotions provide an important source of information in order for us to understand how struggles and enjoyments at work affect the job performance and satisfaction and the second one is that employees and managers should never ignore emotions and events creating them since the emotions accumulate (Erdost Colak, 2015).

In case of an employee with depression (hopelessness and loss), the manager should first observe and record changes in his/her work performance according to certain behaviours exhibited by that employee. The manager should arrange an interview with the employee and use consultancy techniques there. Open questions and active listening techniques should be used in order to determine whether this is a chronic condition of the employee or a response to a particular situation. The employee should know that your conversation is absolutely confidential. You should never diagnose or deduce that an employee has a disease. In case the employee decides to receive treatment, the work schedule and pace of this person should be arranged in such a way to allow them to receive treatment for a certain period of time (Barutcugil, 2004).

In reactions of sadness occurring in organizations, the first behaviour, which should be displayed by the manager, is trying to talk to the employees. The manager should help the employee to get rid of the negative situations experienced by the employee in the past. The manager should express the past contributions of the employees and appraise the employee. He/she should provide information about the changes made in the organization and explain the meaning of this to the employee. Free buffer periods should be created for the employee to recover and relax. In the interview made with the employee, the future of the organization and the employee, its vision and objectives should be mentioned. It will draw his/her interest to talk about what information and skills he/she may need in the future. Teamwork activities should be conducted in order to encourage employees to support each other (Barutcugil, 2004).

The assistance function of emotional power to the development of conscience

Conscience is the power of judging the goodness, badness, rightfulness, wrongness, fairness and unfairness of human behaviours spontaneously and internally. People judge and supervise whether their behaviours are in accordance with ethical values or not through their conscience. People arrive at a decision regarding their behaviours through this supervision and judgment and if they behave in accordance with this decision, they reward themselves and if they act wrong, they feel distress and punish themselves. Conscientiousness may be emotional and rational.

Emotional conscientiousness

It is people's judgement and supervision of their behaviours through their emotional beliefs rather than rational beliefs. A person, who controls and manages his/her behaviours through emotions, is attached to the morals with his/her emotions and tries to implement ethical principles and rules strictly. For this reason people can be a strict ethicist (moralist) and they may be thoroughly ashamed when behaving badly or unjustly. Emotional conscientious employee is appreciated by the organisation despite having difficulties in implementing ethical rules. This is because a person, who behaves in accordance with the rules uncompromisingly and without any deviation regardless of conditions, is considered a good person by the management despite the inadequacy of implementing abstract ethical rules. But it is more preferable for the employee to be rationally conscientious rather than being emotionally conscientious.

Rational Conscientiousness

It is people's judgement and supervision of their behaviours through their rational beliefs and their implementation of ethical principles and rules through the filter of their minds and questioning. At this stage, people become aware of the fact that ethical principles and rules can be adapted and applied according to place, time, situation and the person that they are applied to.

Employees, who are bound to the ethical values, not with their minds but with their emotions, get so attached to these or otherwise hate them so much that it is impossible to save them from these two extreme points. Such employees do not have the flexibility of implementing the ethical principles and rules. (Basaran, 2008, pp. 153-154)

Burnout management in organizations

Herbert Freudenberger is often considered to be the founder of the burnout syndrome. Freudenberger observed that most of his colleagues gradually suffered energy depletion and the loss of motivation and commitment, and that these mental and physical symptoms were accompanied gradually. In order to label this specific state of exhaustion, which arose about a year after the volunteers started working in the clinic, Freudenberger chose a word, which was easily used to indicate the effects of chronic drug abuse: burnout. At the same time, Christiane Maslach, who was a social psychologist, also became interested in the how the people working in human services deal with emotional fraud at workplace. He realised that the term "burnout" was used by poor lawyers from California to describe the slow exhaustion and cynicism in order to adopt the term since it was easily recognized by the interviews held among the human service specialists (Schaufeli & Buunk, 1996).

According to Maslach, burnout has three stages of emotional exhaustion, depersonalization and decreasing of personal success. Emotional exhaustion is the main stress aspect of burnout and indicates a decrease in the emotional and physical sources of the individual. The most important sources of this process are excessive workload and interpersonal conflicts in the workplace environment. At this level, the employees feel that they are "dried out" and that they are "emptied" in an "unreplaceable way" (Solmus, 2004, p. 103). By depersonalization, the employee displays a cold, careless and hard against their jobs and the people they meet via their jobs. It refers to showing humiliating and cynical attitude, categorizing people, working according to strict rules and being anxious (Aslan & Etyemez, 2014, p. 323). In case of a decrease in the sense of personal success, it is the feeling of weakness in their sense of competence and success. The individual cannot focus on his/her work and loses his/her perception of

belief and success. As well as feelings of incompetence of the employee lead to the inability to cope with depression and work stress sufficiently, it increases even more in cases of lack of social support and recognition of professional development opportunities (Keser, 2012, p. 460).

Practices such as providing a comfortable working environment, reducing long working hours, providing effective mentoring, consulting and coaching services to the employee, including employees to the decision-making processes more, setting the amount of responsibility required by the task, providing in-service training, providing promotion deserved by the individuals, influencing the thoughts and attitudes of individuals and groups who cannot adapt to these changes and ensuring that those people adapt to the changing and evolving organizations, ensuring delegation of authority, preventing conflicts within the organization and establishing organizational trust in employees can be included in managing the sense of burnout at organizations (Keser, 2012, p. 467).

In reducing and preventing the burnout experienced by the employees in the workplace, guiding the employees to realizable targets, matching the employees with realistic performance targets, using the time effectively, eliminating the unnecessary daily activities, making written plans, dividing the tasks among the appropriate people and using agenda may be useful. Employees taking breaks at certain times while working allow them to refocus on their work and get away from the work environment for a short period of time. An individual should recognize his/her burnout and think of the reasons and what he/she should do. Giving breaks and to using relaxation techniques during work and managing the stress also prevent burnout. Organizational methods such as participation in social cultural events, going on vacations, working to advance in the career, receiving social support and rewarding can be used for stress management (Survegil, 2006; Aslan & Eryemez, 2014).

There are some practices that should be done individually and in the workplace in order to reduce stress. The ones that should be done individually are stress inoculation training, rational emotional therapy, cognitive restructuring, relaxation techniques, didactic stress management, time management, physical exercise, diet, increasing the social skills of the individual, assertiveness, stopping individuals to have into false expectations and establishing assistance groups. In order to manage burnout, work is redesigned (i.e. job expansion, job rotation, and labour enrichment) in the workplace to reduce the quantitative and qualitative workload. Another way of reducing qualitative workload is to arrange in-service training courses. For example, the ways of dealing with violent customers can be taught through a training. Career development programs should be conducted and importance should be paid on career counselling. Other management tools to use in reducing burnout are two-way communication between management and employees, performance of successful conflict management and participatory management (Schaufeli & Buunk, 1996, p. 336).

Importance of sense of trust in organizations

Progress also depends on cultural characteristics as well as the competitiveness of a nation. The level of trust is at the top of these characteristics (Fukuyama, 2005, p. 23). When the social capital of the countries is over, investments and expenditures made on trust and security issues increase as well. A situation, which needs to be economically tolerated, occurs. The same situation is also important for employees and enterprises.

By “it is not possible to put everything in a contract” phrase, Durkheim says that a quality life is created with values that will provide voluntary cooperation beyond deterrent measures. Accordingly, trust is the basic value

that makes the individuals to cooperate at their own will and facilitate the formation of a good society for the outcomes useful for the whole society (Uguz, 2010; Erdem & Ozen, 2003).

Weber states that small conservative communities create natural networks and businessmen are able to find workers, customers within these networks and access to credit channels (Fukuyama, 2005, p. 62). Members of such voluntary structures are connected to each other more. This loyalty creates environment of trust. Enterprises have to provide environment of trust among their stakeholders as well.

When the studies conducted on trust are examined, the dimensions of trusts mentioned in trust scales are measured through concepts such as expertise, emotionality, consistency, kindness, justice, honesty, openness, respect for commitments, helpfulness and not to engage in misconduct. These statements indicate that both managers and employees should comply with these rules in enterprises (Polat, 2009, p. 17).

By the increase of bureaucratic layers in workplaces, the sense of trust decreases. In the Japanese enterprises, where lean business model is applied, and in the German enterprises, where team spirit is highlighted, high level of trust is prominent (Fukuyama, 2005).

Lean production model is one of the indicators of trust establishment in enterprises. In lean production, distributing responsibility to working teams limits labour division and the workers are trained in such way to perform many tasks. In this way, they can be shifted from one position to another, when needed. Furthermore, the use of well-trained workers to perform flexibly defined tasks reduces the need for highly specialized machines and expensive capital tools and equipment. (James, Daniel, & Roos, 1991, pp. 52-53). In lean production, the level of trust in an assembly line worker at the lowest level is extraordinary in terms of Taylorist standards. There is a difference in even correction of the fault between the traditional mass production plant and the assembly lines where lean production is made. No intervention is made in traditional line, the error is either found by the control team or seen by the consumer. Whereas in lean production, the employee intervenes to the line and solves the problem or defect in the work environment (Fukuyama, 2005).

In order to ensure the organizational trust, it is necessary to state that effective implementation the activities related to the management of organizational behaviours contributes to the production and development of organizational social capital directly (such as the well qualified individuals dedicating themselves to their organizations) or indirectly (providing the environment suitable for the sharing and transferring information). (Ogut & Erbil, 2009).

One of the ways of building trust in organizations is a fair management. The rules distributing justice within the organization, and the fact that the people implementing these rules are practicing fairness of justice have great importance in creating trust and mistrust. The perception of organizational justice is of great importance in the formation of positive outcomes of organizational trust. When people are treated fairly within their social surroundings, it is observed that the sense of justice increases, a high level of trust is developed, and thus the willingness and the tendency to work increase. The fair treatment of the managers creates respect in employees and ensures the development of trust (Polat, 2009).

When trust is ensured in work life, corporate loyalty may arise. Many people may think that obtaining corporate loyalty suggests that most people's wages and the commitment to the corporation they work with have parallelism. However, this is only at the third place considering the other factors. What the employees mainly want at workplaces is to feel safe. If an individual thinks that he/she is valuable and working comfortably in the workplace, this person

will be happy. The second condition is that person feeling secure about his/her future in that corporation. The confidence of a person, who thinks that “My manager does not treat me fairly. He/she might dismiss me because of a small mistake”, will be damaged. Employers’ unfair behaviours reduce the corporate loyalty of the employees. This is because it is important for a person to feel valued and for what they do to be accepted in terms of business performance. The person, who feels like a second class, does not have confidence towards his/her environment. Discrimination weakens the trust. The third factor constituting loyalty to the enterprise is the salary received. In fact, the economic problems are settled (Tarhan, 2013, p. 83).

Management of conflicts caused by the occurrence of negative emotions in organizations

In the TDK (2018) methodology dictionary, conflict is defined as the contradiction arose from the opposition of opinions and ideas. Considering from the point of view of organizations, conflict can be defined as the beliefs that individuals, teams or departments cannot obtain what they want to achieve with what they have and the negative emotion experienced after these beliefs (Koc, 2008, p. 122).

Since conflicts can cause negative emotions such as anxiety, stress, tension, hatred, aggression and hostility in employees, they cause a decrease in business performance and results that may prevent enterprises from competing in dynamic competitive environments. While these results are not reflected on the customers in the production enterprises, they are directly reflected on the customers in the service enterprises through the attitude and behaviour of the service providers (Robbins & Judge, 2011; Koc, 2008).

In conflict management, there are methods called win-win and win-lose. Win-lose method can be observed in short-termism enterprises commonly seen in Turkish culture and in the relationship between people. In this approach, it is obvious that the losers develop negative emotions such as hatred, and thus this approach leads to an increase in success in the long term and a decrease in gains rather than a decrease (Koc, 2008).

Conflicts can be settled with the win-win method. In this method, it is necessary for the parties to not to see each other as competitors. According to Sherif (1956), while the competition increases the conflict, the top targets desired to be reached by both parties increase the cooperation among the groups. Therefore, while competition causes conflict, cooperation reduces conflict and helps to achieve organizational targets.

Luthans, (2007) mentioned four important issues in win-win method as “separate the problems with people”, “focus on interests rather than positions”, “generate multiple solutions before making a decision” and “make sure that the results are based on objective standards”.

There are other methods called differentiation and integration in conflict management. How the conflicts are settled at the stages of differentiating and integrating is described below (Folger, Poole & Stutman, 2013, pp. 241-243).

1. Setting the Issues

The parties investigate and set the underlying issues of the conflict. The following questions shall be discussed for this:

What are the issues between us?

The parties share what their perceptions are on the main issues of the conflict and their own positions. They also share how others see the main issues which often prevent possible misunderstandings.

Do we have motivation to do something about these issues?

A common understanding to sit together and discuss the issues should be established between the parties. This means that the same issues should have equal importance for everyone. While one issue is very important for one party, it can only be regarded as a matter of discussion if the other party considers this as a legitimate issue.

What do we feel about these issues?

The parties share their feelings on the conflict and the behaviour of the other party. They do not try to change each other's feelings, they change it themselves if they want to do so but this does not mean that emotions dominate instead of experiencing this process. Instead, this means the acceptance of emotional reactions in order for the parties to explain each other what the issues are.

What is the source of the conflict?

The parties try to identify the reasons of the problems or issues on which the conflict is based. The deductions made at the first sight are usually very shallow and superficial. When parties carry on some investigation on them, they should be able to see what the main problem is in order to settle the conflict.

Only after this stage the parties will be able to develop a common understanding of the issue.

It is important for this first step to be completed before proceeding to search for other solutions. The issues and problems should be discussed only as an issue and a problem without focusing on the solution. If solutions are included at this point, they will shape the identification and analysis of the issues and since they will focus on the solution-related matters, they will not be able to see the main issue.

2. Vision

At this stage, the parties develop a vision of what the future will be if they solve the conflict completely. They address the following questions in order to achieve this:

What will our relationship/group/organization be like, if we solve this conflict?

The parties visualize what will happen if they effectively address the conflict. They can do this by focusing on what might have been changed in case the conflict is settled. They can also do this by visualizing how everything would be like, if there was no conflict at all.

How will we feel if we settle this conflict?

The Parties visualize how they might feel when they effectively settle the conflict. For that, they also visualize what they might have felt for each other if there was no conflict.

If we were not dealing with this conflict at the moment, what would we be doing instead?

The parties visualize what they might have been doing if they would not use their energy and time to settle this conflict. It is very important to consider not only the time spent during conflict, but also the time spent while thinking on the conflict and the time spent for what is going through their minds. Therefore, the parties have

the opportunity to think about the other possibilities and opportunities to come towards their ways, if they can handle the conflict effectively.

If we limit our thoughts to only by issues and problems, we face a negative scene, which means we begin to look at this by focusing on what is wrong. On the contrary, when we start to develop a vision, we focus our attention on what will happen in the future so that we can deal with the issues by addressing those issues accordingly. Having a vision often creates a positive motivation and energy to manage the conflict.

3. Generating a Solution

Parties usually can generate many different solutions that are possible. In order to do this, it is necessary to do some research and think over it. It is very important to create as many options as possible. At this point, it is very important to stand against the tendency to take immediate assessment of the solutions found. In case of failing to do this, there will be a decrease in the contribution to be made and a decrease in creativity because the parties are afraid that their opinions will be negatively evaluated or rejected without consideration.

4. Assessing the Solution and Making a Choice

The parties consider the possible options they find and finally decide on one of them. While making final decisions, they may combine the elements of different options, in return one of them gets something that he/she wants and the other one also gets something that he/she really wants in return.

Dividing the issues into pieces is often very important for finding the subjects to be given as a response because when a large issue is divided into pieces, it becomes possible to work with each one separately.

The two-column method is a very useful technique that can be used to assess a solution found. For each option, the parties list their own pros and cons. They can also do this by sharing it with each other, or they can then do it for themselves in order to use it as a reference when assessing the options and making a choice.

5. Realization

The parties plan how they are to realize the solution they find, how to evaluate it and how effective it is. Here, it is important for the parties to do a follow-up study to ensure that all of the parties do their part and to make sure that there are no unforeseen obstacles.

Sometimes it may be necessary to reconsider what was done in the previous steps while working on the last steps. For example, when trying to generate an option, new ideas may be ignited on how to define the issue in a better way. In such a case, the issues are reconsidered by going back in the process cycle, and if necessary, the vision and options are also reconsidered. It is important to be flexible while working in this process since each conflict itself and its parties are very different.

Negotiation is one of the methods used to solve conflicts. Mood and emotions affect the negotiations. In distributed negotiations, among the negotiators those, who are angry and have equal status, obtain successful negotiation outcomes because their anger allows the other party to compromise. On the other hand, those, who are relatively weaker, get worse outcomes when they are angry. So if you are a boss and you are negotiating with a subordinate

or a colleague, anger may help whereas if you are negotiating with your boss as a subordinate, this may cause you damage. On the contrary, in integrative negotiations, positive mood and emotions lead to more integrative agreements (Robbins & Judge, 2011, p. 473).

The following matters are also important to solve conflicts in organizations. (Akkirman, 1998, pp. 6-9)

- Setting top targets in the organization
- Identifying the damages of conflicts
- Identifying differences within the group
- Eliminating the negative prejudices between the parties
- Rewarding interaction and communication
- Referring to third party arbitration
- Making changes in organizational structure such as rotation, specification of job descriptions and expansion of the organizational boundaries.

Management of stress which is the predecessor of negative emotions in organizations

A person tends to have negative emotions when there is a difference between what he/she expects and what he/she has. These negative emotions often cause stress. In this respect, stress management is of great importance for enterprises as well (Colten & Gore, 1991).

When mentioning the mind body relationship and stress, the most appropriate word is “emotion”. This is because the emotions can be considered as stress or energy with a certain direction in a sense. For example, if the emotion experienced is fear, the threatening elements are avoided through energy exposed. If the emotion is anger, moved forward with energy to eliminate whatever threat it is. If the emotion is disgust, the contact is avoided. If it is worry, it is avoid to move forward or backward but remain alert. If it is sadness, you turn inward and go deep and if it is pleasure, you get closer for integration (Sahin, 2015; Panksep, 2008; Tobby & Cosmides, 2008).

The symptoms of stress can be listed as psychological, physiological and behavioural. In this study, the ways of coping with stress to reduce or eliminate the psychological symptoms of stress will be focused on.

Psychological symptoms of stress

- Anxiety, distress, feeling of loneliness and depression,
- Extreme emotional sensitivity and irritability,
- Difficulty in decision making,
- Decrease in self-esteem,
- Decrease in trust of individual in himself/herself and other people,
- Frustration, anger, aggressive behaviour and hostility in interpersonal relationships,
- Job dissatisfaction,
- Loss of concentration,

- Loss of spontaneity and creativity (Solmus, 2004; Rice, 1999; Hepburn, Loughin, & Barling, 1997).

There are two ways of coping with stress (Solmus, 2004; Lazarus, 1993)

1. Problem-oriented coping: In problem-oriented coping, which is an active strategy, the individual decides that the state of stress can be controlled and takes action. Receiving information and problem-solving behaviours are within the scope of this strategy.
2. Emotion-oriented coping: In emotion-oriented coping, which is a passive strategy, the person decides that the situation cannot be controlled thus it should be accepted. He/she tries to control the negative emotions caused by stress and focus on a positive aspect. Examples such as “Experience was painful, but I learned a lot”, “Every cloud has a silver lining” represent emotion-oriented coping.

The following organizational studies can be conducted in order to prevent stress in organizations;

Selection, training and development of suitable personnel,

The job description should include the organization’s policies, objectives and strategies and the purpose of the organization. The managers should be able to transfer the policies and objectives of the enterprise to their personnel through regular training programs and make them feel that the employee is important for the enterprise,

Strategies should be set in order to reorganize to focus on business demands, information and objectives,

An effective communication network should be established between managers and personnel.

In stress management, we should consciously ask some questions to ourselves: How much will we allow our unconscious to manage our consciousness as we continue our lives? For how long will we activate our consciousness and try to realize what our unconscious does? How automatic will we live our lives (change, stress)? How conscious will we manage? How old the brain circuits will we deal with? How much new circuits and new programs will we create? In other words, not about not being angry, sad or afraid but about listening to this emotions of anger, sadness and fear is mentioned. If these emotions mean something for living things and if there are parts managing these emotions in the brain, then the questions necessary for us ask ourselves are: “What does my anger, fear and sadness say? What kind of meaning do I place on this event? Is there any chance that this meaning is wrong? What need does it indicate that I cannot meet? Are they really vital needs for me? Or are they my wishes?” By asking these questions, we can activate our conscious awareness and get out of the automatic mode. Depending on the emotions of anger, sadness, fear we experience, we can try not to accumulate the hormones, which are automatically released in our blood, such as adrenaline, cortisol, thyroid, etc. and thus manage our stress. (Sahin, 2015). Employees’ stress can be reduced by paying attention to individual-work harmony. When an individual does the work he/she does not like, this increases his/her stress. There should be a harmony between interests and skills of the employees and the business requirements (Riggio, 2014, p. 271). Those, who experience stress in the organization, may sometimes be the newcomers. At this stage, what needs to be done is to conduct on-the-job training and orientation programs. In this way, a skilled and productive new labour force is created and the employee is prevented from quitting the work because of stress (Karakas, 2014). As the communication among employees gets better, stress caused by misunderstandings will decrease. Employees may experience stress when they are not aware of the work being done in the organization and when they are not informed. Therefore, the employees’ knowledge on the work and workplace processes helps to reduce stress (Riggio, 2014, p. 273). Another way of

reducing stress is to improve physical conditions. Lighting, noise level, air temperature, humidity, pressure, feeling sunlight in the workplace and ergonomics can be considered as physical conditions. Importance should be placed on physical conditions in order to prevent health problems and tensions of the employees (Ornek & Aydin, 2011).

In coping with stress, biofeedback is used in developed countries. This technique clearly reveals the relationship between thoughts, emotions and the body. This is a method, where people become aware of their normal and abnormal reactions and the physiological reactions, which they are unaware of, through a tool and where they learn to regulate their autonomous activities (body temperature, sweat, etc.) as desired within a training program (Baltas & Baltas, 2013). It is important to seek social support to reduce or prevent stress. Social support is the person being in contact with other people or groups. People, who live by themselves or are not accepted by society or groups, are more exposed to stress. The level of support provided to the individuals by their family, society and others, whom they are together with during the business life, their rate of sharing and the pleasure they get from association increase their level of success in combating stress and enables them to get less harm due to stress (Guney, 2007).

Managing the motivation as a result of positive emotions in organizations

Emotions also play an important role in the motivation of the employee about the job. Leaders, who have an understanding of emotions, motivate their subordinates to work more effectively and efficiently. It is assumed that effective motivation increases the level of optimism and determination (Dubinsky, Yammarino, Jolson, & Spangler, 1995).

Motive refers to working conditions that drive behaviours in the direction desired. Motives may be unconscious as well. It is called the power that directly causes, continues or directs behaviour of individuals (Tarakcioglu, Sokmen, & Boylu, 2010).

Thus, the use of this power in organizations is valuable. Motives have four different functions (Arik, 1996):

- 1. Function of initiating behaviours.** Refers to taking action of the individual or the change in direction of behaviour.
- 2. Function of determining the level of volume and energy of behaviours.** Refers to the amount of effort spent and the speed, sharpness and amount of behaviours.
- 3. Function of directing the behaviours.** Refers to the relationship between a particular object-organism-situation-behaviour, which means a specific target due to the individual's action.
- 4. Function of ensuring continuity.** Refers to the duration and resistance of behaviours tended to a specific target.

When looking at the motivation literature, it is classified as process (cognitive) and scope (requirement) theories. However, the part, which is emphasized in this study, is managing motivation status. Followings are the things that should be carried out by the managers to motivate employees in organizations; (Solmus, 2004)

- To create a suitable working environment
- To implement a motivating disciplinary system

- To provide promotion opportunities
- To give initiative
- To implement an open management policy
- To provide social rights and opportunities

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33

THE IMPACTS OF SOCIAL MEDIA USE OBJECTIVES ON CONSUMERS' PURCHASING BEHAVIORS

Hatice Elanur KAPLAN¹

Introduction

Many aspects of social and economic life are exposed to the influences of improvements and innovations brought about by today's constant changes.

In courtesy of the Internet, which we can be characterized as the most popular technological development throughout the last three decades, communication among individuals and institutions have been facilitated, and many transactions in commercial life have been shifted to electronic environments. Along with the development of the Internet, the concept of social media has emerged. Social media is, in the broadest sense, an interactive platform that provides people with the opportunity to virtually meet other individuals with whom they share opinions over the Internet. This platform is also utilized by individuals for purposes such as shopping, trading, as well as entertainment, socializing, and self-expression.

Especially in recent years, increasing numbers of social networks and users have led the marketing departments toward the social media environment. Upon examining social media statistics for Turkey in 2018, it is detected that 54.3 million people out of the total population of 81 million are social media users, and 51 million of them actively use the social media. Those users spend approximately 2 hours 48 minutes on social media a day. The most widely used social media platforms are YouTube (55%) and FaceBook (53%), followed by Whatsapp (50%) and Instagram (46%) (<https://dijilopedi.com/2018-turkiye-internet-kullanim-ve-sosyal-medya-istatistikleri/>).

As can be seen from the figures, social media use in Turkey has become a fairly common activity. Companies that wish to take advantage of this situation have created corporate social media websites, and some have shifted their sales transactions in the social media environment.

In the social media, institutions and organizations are able to inform their target audiences about their activities. While the consumers perform many functions related to commercial life from social media to shopping and banking transactions, they can also perform their daily activities with social media such as ordering food, reading newspapers or listening to the radio. At the same time, consumers may be able to exchange ideas with other consumers, and their contacts on social networks in online communities before or after purchasing a product or service, and they can differentiate their potential purchases being influenced by comments and sharings (İşlek, 2012, p.1- 2).

In this research study, the pre-purchase and post-purchase impacts of such widespread and functional social media use on consumer behaviors are examined.

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2. Consumer Behaviors in Social Media

2.1. Definition of Social Media

The concept of social media has emerged with the presence and development of the Internet, and it is a widely used environment as of today. Social media is defined as “a general concept which involves the networks having wide ranges on the Internet which provide the users with multilateral sharing facilities” (Oğuz, 2012, p. 1157).

In other words, social media refers to “a broad-based platform which enables the individuals to express ideas and opinions over the Internet regardless of temporal and spatial constraints in courtesy of the existing interactive environment with seemingly unlimited multimedia features for exchanging and sharing views with other individuals ” (Bulunmaz, 2011, p.29).

Sharing, as one of the emerging phenomena in the origin of collective living, strengthens the foundation of the society along with the individuals who constitute it. In this context, social media plays an important role for individuals in contributing to their surroundings within the society in which they dwell (Kırıcı, 2014, p. 14).

Utilization of Web 2.0 technology has been a major contributor to the declaration of users' dominance in the means of networked communication. Web 1.0 technology, which emerged over the period 1993-2003, served only as a means of reading and doing research. In 2004, with the realization of the Web 2.0 revolution, ordinary users of the Internet became able to write, send and publish contents without the need for specific software. Today, almost all of the internet websites, including popular social networking sites, are the outputs of this technology” (Laughey, 2010, p.162-163).

It is the distinctive feature of social media, providing individuals with the opportunity to express themselves and their opinions in an online environment, that makes it different and popular, and it is predicted that social media would also be the key to future marketing (Harres and Rae, 2009, p. 28).

2.2. Consumer Behavior and Factors that Affect Consumer Behaviors

Consumer behavior is defined as the assessment that consumers make before purchasing a good or service, the manner in which the products are used by consumers, and the attitudes and behaviors that consumers exhibit after purchase (Erdem 2006, p. 43).

Consumer behavior tends to respond to a variety of questions. These questions include what consumers purchase, as well as from where, how, when, and why they purchase it (Akturan, 2007, p.238).

Solomon (2009, pp. 34-35) defines consumer behavior as the preference, use, and sometimes abandonment of certain products and services in order to meet the needs, demands, and expectations of individuals or groups.

“Consumer behavior is a process that starts as soon as the needs occur, includes the use of the purchased goods or services to meet the needs, and the assessment of the obtained benefit” (Altunışık et al., 2004, p. 67). Throughout this process, it is possible to mention the existence of many factors that affect the consumers' purchasing behaviors. Basically, it is possible to consider these factors in three sub-chapters. While some of these are internal factors, whereas others are external factors. Internal factors are the ones affecting the personality characteristics of the individuals, while external factors develop outside the control of the individual and affect them (Durmaz, 2008, p.28):

Table 1 presents the factors affecting consumer behavior.

Table 1 : Factors that Affect Consumer Behaviors

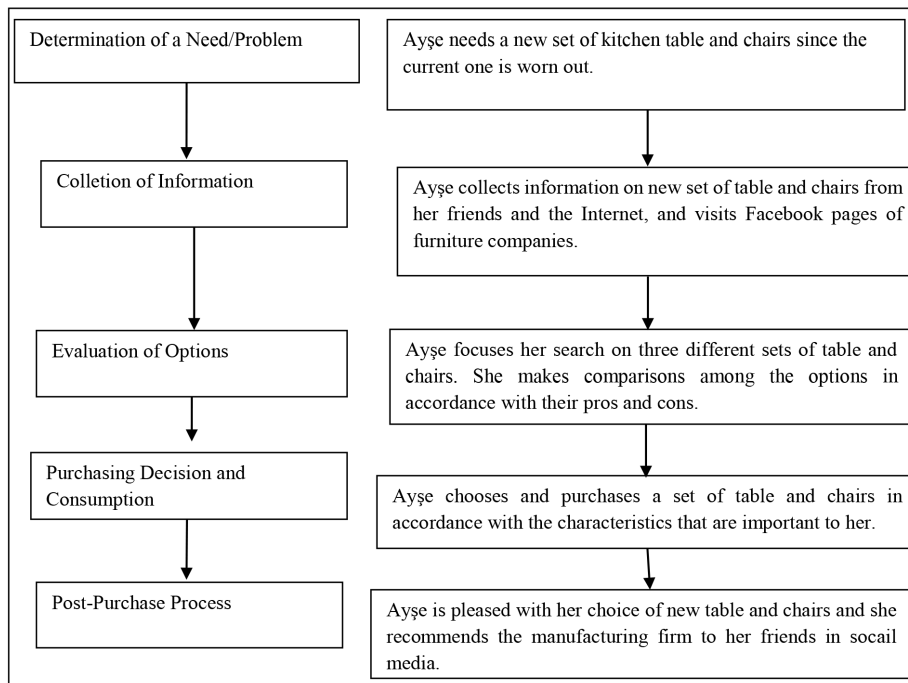
| PERSONAL FACTORS | PSYCHOLOGICAL FACTORS | SOCIO-CULTURAL FACTORS |
|---|--|---|
| <ul style="list-style-type: none"> • Age • Gender • Profession • Educational Status • Life Style | <ul style="list-style-type: none"> • Motivation • Learning • Perception • Attitude | <ul style="list-style-type: none"> • Family • Cultural Structure of Community • Social Class • Reference Groups |

Source: *Odabaşı and Barış, 2007, p.71*

2.3. Consumer Purchasing Decision-making Process

Consumers are in pursuit of answers to such questions as “What to purchase?”, “how many of it to purchase ?”, “from where to purchase it ?”, “when and how to purchase it ?” in making purchasing decisions (Koç, 2013, p. 456). Due to these questions, the phases through which the consumers should pass in the process of purchasing a product are summarized under five main headings: determination of a need/problem, a collection of information, evaluation of options, purchasing decision and consumption, and post-purchase. In Figure 1, the purchasing decision process is progressively introduced along with a sample decision-making process. Accordingly, it is shown that post-purchase consumer attitudes, behaviors, and feedbacks can steer the process again.

Figure 1. Consumer’s Purchasing Decision-making Process



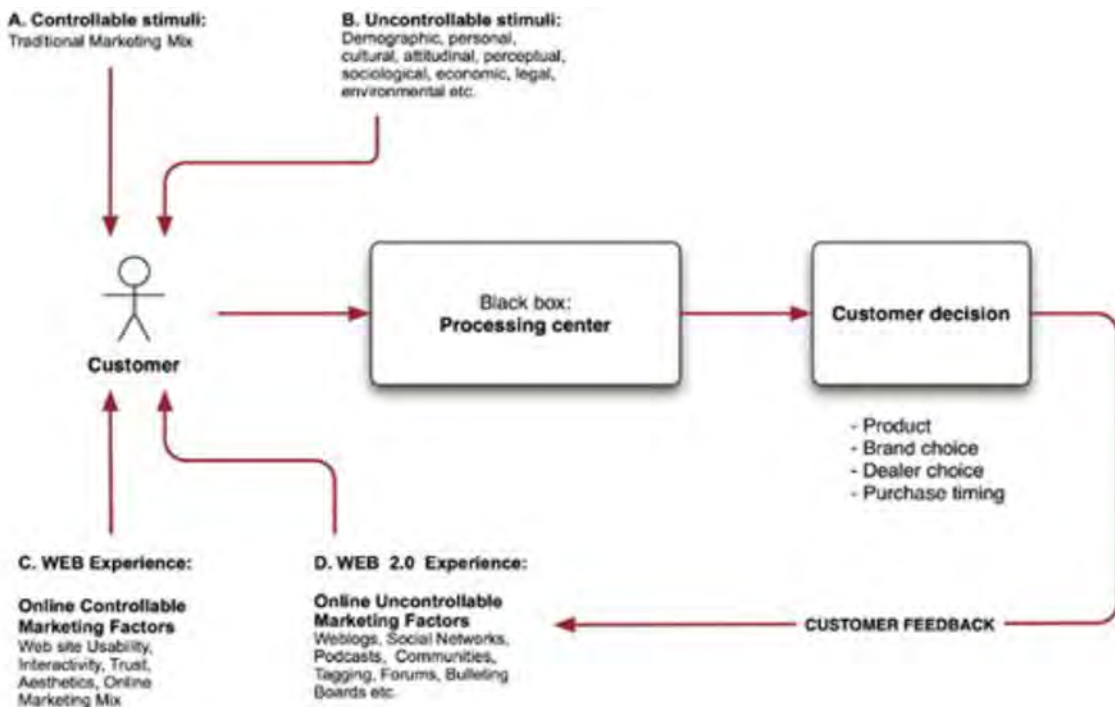
Source: *Okumuş, 2013, p.181.*

2.4. The Impacts of Social Media on Consumer Behaviors

Traditional media and promotion efforts within the “consumers’ decision-making process” are still influential.

Today, however, consumers are not satisfied with the information provided by advertisements alone or with the content created by businesses. They tend to enrich the information search processes with other consumers’ experiences shared on social media (Constantinides and Fountain, 2008, p. 240). Figure 1 below indicates how the social media and the content created by consumers play a role in the consumer’s purchasing decision-making process.

Figure 2. Factors that Affect the Consumer’s Purchasing Decision-making Process



Notes: A and B: Factors affecting the purchasing decision-making process in traditional shopping environments. A, B and C: Factors affecting the purchasing decision-making process in an Internet (Web 1.0)-mediated environment. A, B, C and D: Factors affecting the purchasing decision-making process in an Internet (Web 2.0)-mediated environment

Source: Constantinides and Fountain, 2008, p. 240.

Consumers in social media tend to use online resources that include social networks to find other people’s opinions. When the consumers wish to purchase goods and services, it is seen that they research for the opinions of others many times. Consumers can make purchasing decisions in this direction since they are often influenced by the opinions of those individuals upon purchasing the products which they like, share and comment on.

The users would make suggestions and share ideas on social networking sites. It seems that the consumers repeatedly explore the ideas of others upon considering the purchase of goods and services. In fact, 78% of the global consumers believe and rely on other people’s recommendations about goods and services relative to another dimension. The ideas of others are seen as more objective than the companies’ own marketing messages. Consumers use online

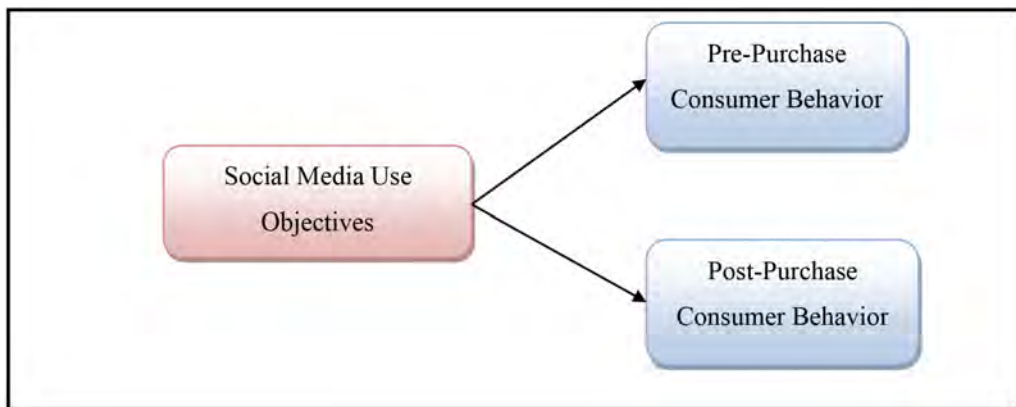
resources that include social networks in order to find the ideas of others (Akar, 2010: 115). This indicates that users are present in social media with their consumer identities. Considering this, it can be said that social media has become an important factor that has been adopted by large masses and influenced the purchasing behavior (Constantinides and Stagno, 2011, p.9, as cited in İşlek, 2012, p.81-82).

3. Methodology

3.1. Research Model

This research study is conducted to examine the impacts of social media use objectives on pre- and post-purchase consumer behavior in a survey model. Regarding its purpose and scope, the research study is carried out in a relational survey model which is a type of survey model (Karasar, 2012, p. 79). The schematic model of the study is illustrated in Figure 3.

Figure 3. Schematic Research Model



3.2. Population and Sample

The population of the study is constituted by the social media users over 18 years of age in Turkey as of August 2018, whereas the sample is determined by convenience sampling method including 612 social media users who volunteered to participate in a research study.

3.3. Data Collection Tools

The data of the research are collected by survey questionnaire method. The questionnaire includes seven descriptive questions. A 5-point Likert-type scale consists of 15 items (10 items for determining pre-purchase consumer behavior and nine items for post-purchase consumer behavior). The items have been selected to be 1-never, 2-rarely, 3-occasionally, 4-frequently, and 5-always.

Items regarding the determination of pre- and post-purchase consumer behavior are obtained from the master's thesis of İşlek (2012) entitled "The Effects of Social Media on Consumer Behaviors: A Research on Social Media Users in Turkey." Other questions in the questionnaire are prepared by the researcher.

Reliability and factor analyses related to the scales used in the research are performed. The reliability of the 15 items in the social media use objectives scale is calculated by using the internal consistency coefficient “Cronbach Alpha.” The alpha value of the scale is found to be very high at 0.920. An explanatory factor analysis method is applied to reveal the construct validity of the scale. The results of the Barlett test ($p = 0.000 < 0.05$) indicate that there is a correlation between the variables analyzed by factor analysis. The result of the test ($KMO = 0.905 > 0.60$) determines that the sample size is sufficient to perform factor analysis. In the factor analysis application, the Varimax method is chosen so that the structure of the relationship between the factors remains the same. As a result of the factor analysis, it is determined that the variables be accumulated under three factors with the total variance of 67.909%. The factor structure of the scale is as follows.

Table 2 . Factor Structure of Social Media Use Objectives Scales

| Scales | Item | Factor Load | Explained Variance | Cronbach's Alpha |
|---------------------------------------|---|-------------|--------------------|------------------|
| Socializing (Eigenvalue=7.115) | I invite my friends to become members of the groups | 0.877 | 23.290 | 0.862 |
| | I create groups as their administrator | 0.844 | | |
| | I become a member of the groups | 0.808 | | |
| | I make new friends | 0.606 | | |
| Entertainment (Eigenvalue =2.014) | I follow the blogs of TV series and programs | 0.754 | 23.152 | 0.867 |
| | I listen to music | 0.737 | | |
| | I play games | 0.660 | | |
| | I search for information on an issue about which I wonder | 0.659 | | |
| | I shop online | 0.640 | | |
| | I become a member of my favorite brands' and companies' webpages | 0.541 | | |
| Self-Expression (Eigenvalue=1.058) | I upload pictures and videos to social websites | 0.821 | 21.467 | 0.854 |
| | I update my status | 0.719 | | |
| | I follow status updates and content sharing of my friends | 0.687 | | |
| | I exchange messages with my friends | 0.639 | | |
| | I make comments on status updates and content sharing of my friends | 0.616 | | |
| Total Variance 67.909% | | | | |

Scores of the factors in the scale are calculated by dividing the sum of item values of the factors by the number of items (arithmetic mean).

The overall reliability of the Pre-Purchase Consumer Behavior Scale in the Social Media is found to be very high at alpha = 0.921. Explanatory factor analysis is conducted to reveal the construct validity of the scale. The sample size is found to be sufficient for factor analysis to be applied ($KMO = 0.923 > 0.60$), and it is determined that

there is a correlation between the variables analyzed by Barlett test ($p = 0.000 < 0.05$). Varimax method is chosen for the factor analysis so that the structure of the relationship between the factors is kept the same. The variables are accumulated under the single factor with the explained variance of 72.477%. The factor loadings of the scale are shown below.

Table 3. Factor Loads of the Pre-Purchase Consumer Behavior Scale in Social Media

| | Factor Loads |
|-----|--------------|
| s7 | .900 |
| s9 | .896 |
| s8 | .888 |
| s5 | .873 |
| s3 | .854 |
| s6 | .840 |
| s1 | .828 |
| s4 | .827 |
| s10 | .804 |
| s2 | .796 |

Analyses performed on the Pre-Purchase Consumer Behavior Scale in the Social Media are also applied to the Post-Purchase Consumer Behavior Scale in the Social Media. The overall reliability of the Post-Purchase Consumer Behavior Scale in the Social Media is found to be very high at $\alpha = 0.944$.

As the result of the factor analysis, the variables are collected under a single factor with a total explained variance of 69.391%. The factor loads of the scale are shown below.

Table 4. Factor Loads of the Post-Purchase Consumer Behavior Scale in Social Media

| | Factor Loads |
|----|--------------|
| s5 | .877 |
| s6 | .876 |
| s4 | .873 |
| s3 | .861 |
| s7 | .838 |
| s8 | .835 |
| s9 | .808 |
| s1 | .766 |
| s2 | .755 |

In accordance with the reliability and alpha and the explained variance values, it is understood that social media use objectives, pre-purchase consumer behavior and post-purchase consumer behavior scales in social media are valid and reliable measurement tools.

3.4. Statistical Data Analysis

The data obtained in the study are analyzed using SPSS (Statistical Package for Social Sciences) for Windows 22.0 software. In the evaluation of the data; the descriptive characteristics of the participants are determined by frequency and percentage; while mean and standard deviation values are used in determining social media use objectives, pre- and post-purchase consumer behavior levels. The relationships between social media use objectives and pre- and post-purchase consumer behaviors are detected by performing correlation analyses; whereas the impacts of social media use objectives on pre-purchase and post-purchase consumer behavior are examined by regression analysis.

4. Findings and Comments

The data on the descriptive characteristics of the participants are presented in Table 5.

Table 5. Distribution of the Participants' Descriptive Statistics

| | Groups | Frequency(n) | Percentage (%) |
|-----------------------------------|-----------------------------------|---------------------|-----------------------|
| Gender | Female | 309 | 50.5 |
| | Male | 303 | 49.5 |
| Age | 18-25 Years of Age | 360 | 58.8 |
| | 26-35 Years of Age | 171 | 27.9 |
| | 36 Years of Age and Above | 81 | 13.2 |
| Marital Status | Married | 210 | 34.3 |
| | Single | 402 | 65.7 |
| Educational Status | Secondary School Degree and lower | 84 | 13.7 |
| | High School Degree | 117 | 19.1 |
| | Associate Degree | 210 | 34.3 |
| | Undergraduate Degree and higher | 201 | 32.8 |
| Monthly Income | 1-1000 TL | 282 | 46.1 |
| | 1001-2000 TL | 99 | 16.2 |
| | 2001-3000 TL | 87 | 14.2 |
| | 3001 and above | 144 | 23.5 |
| The frequency of Social Media Use | Always online | 186 | 30.4 |
| | Regularly | 276 | 45.1 |
| | Occasionally | 102 | 16.7 |
| | Rarely | 48 | 7.8 |
| Duration of Social Media Use | 2 Years and Less | 123 | 20.1 |
| | 3-4 Years | 219 | 35.8 |
| | 5 Years and More | 270 | 44.1 |
| Total | | 612 | 100.0 |

The participants of the research study consist of 309 females (50.5%), 303 males (49.5%). 360 participant (58.8%) are between the age range of 18-25 and 171 (27.9%) are between the age range of 26-35, and 81 (13.2%) are older than 36 years of age. 210 of the participants (34.3%) are married, and 402 (65.7%) are single. 84 participants (13.7%) have secondary school degree or lower, 117 (19.1%) are high school graduates, 210 (34.3%) have an associate degree, and 201 (32.8%) have an undergraduate degree or higher. 282 of the participants (46.1%) have a monthly income level between 1-1000 TL, 99 (16.2%) have between 1001-2000 TL, 87 (14.2%) have between 2001-3000 TL and 144 (23.5%) have more than 3001 TL. 186 of the participants (30.4%) always keep social media online, 276 (45.1%) follow social media regularly, 102 (16.7%) follow social media occasionally, and 48 (7.8%) follow social media rarely. 123 (20.1%) participants use the social media for 0-2 years, 219 (35.8%) for 3-4 years, and 270 (44.1%) for five years and over. Table 5 presents the data on participants' social media use objectives.

Table 6. Social Media Use Objectives

| | N | Mean | St. Dev. | Min. | Max. |
|-----------------|----------|-------------|-----------------|-------------|-------------|
| Socializing | 612 | 2,395 | 0.915 | 1,000 | 5,000 |
| Entertainment | 612 | 2,922 | 0.923 | 1,000 | 5,000 |
| Self-Expression | 612 | 3,008 | 0.824 | 1,000 | 5,000 |

According to Table 5, the mean values of social media use objectives are as follows: The mean value of "socializing" is weak ($2,395 \pm 0,915$) (Min = 1; Max = 5); the mean value of "entertainment" is medium ($2,922 \pm 0,923$) (Min = 1; Max = 5); and the mean value of "self-expression" is medium ($3,008 \pm 0,824$) (Min = 1, Max = 5). Table 6 presents the data on participants' pre- and post-purchase behaviors.

Table 6. Pre-Purchase Consumer Behavior and Post-Purchase Consumer Behavior in Social Media

| | N | Mean | St. Dev. | Min. | Max. |
|------------------------|----------|-------------|-----------------|-------------|-------------|
| Pre-Purchase Behavior | 612 | 2,590 | 1.070 | 1,000 | 5,000 |
| Post-Purchase Behavior | 612 | 2,330 | 1.021 | 1,000 | 5,000 |

According to Table 6, the mean values of the participants' "pre-purchase behavior" ($2,590 \pm 1,070$) and "post-purchase behavior" ($2,330 \pm 1,021$) are determined to be low (Min = 1, Max = 5). Table 7 contains the data about the correlation analysis on the relationship between the participants' social media use objectives and pre- and post-purchase consumer behaviors.

Table 7. Correlations between Social Media Use Objectives and Pre- and Post-Purchase Consumer Behaviors

| | | Socializing | Entertainment | Self-Expression |
|------------------------|---|-------------|---------------|-----------------|
| Pre-Purchase Behavior | r | 0.297** | 0.506** | 0.359** |
| | p | 0.000 | 0.000 | 0.000 |
| Post-Purchase Behavior | r | 0.379** | 0.423** | 0.367** |
| | p | 0.000 | 0.000 | 0.000 |

Upon examining the analyses of correlation between socializing, entertainment, self-expression and pre- and post-purchase consumer behaviors in Table 7, it is determined that there are positive correlations between;

- Pre-purchase behavior and socializing ($r=0.297$, $p=0.000 < 0.05$),
- Pre-purchase behavior and entertainment ($r=0.506$, $p=0.000 < 0.05$),
- Pre-purchase behavior and self-expression ($r=0.359$, $p=0.000 < 0.05$),
- Post-purchase behavior and socializing ($r=0.379$, $p=0.000 < 0.05$),
- Post-purchase behavior and entertainment ($r=0.423$, $p=0.000 < 0.05$),
- Post-purchase behavior and self-expression ($r=0.367$, $p=0.000 < 0.05$),
- Post-purchase behavior and Pre-purchase behavior ($r=0.575$, $p=0.000 < 0.05$).

Table 8 presents the regression analysis of the data for the impacts of social media use on pre-purchase consumer behavior.

Table 8. The Impacts of Social Media Use Objectives on Pre-Purchase Consumer Behaviors

| Dependent Variable | Independent Variable | β | t | p | F | Model (p) | R ² |
|-----------------------|----------------------|---------|--------|-------|--------|-----------|----------------|
| Pre-purchase behavior | Constant | 0.884 | 5.999 | 0.000 | 69.731 | 0.000 | 0.252 |
| | Socializing | 0.024 | 0.479 | 0.632 | | | |
| | Entertainment | 0.588 | 9.325 | 0.000 | | | |
| | Self-Expression | -0.023 | -0.352 | 0.725 | | | |

The results of regression analysis conducted to determine the causal relationship between social media use objectives (socializing, entertainment, and self-expression) and pre-purchase consumer behavior is found to be statistically significant ($F = 69.731$, $p = 0.000 < 0.05$). 25.2% of the total variance in pre-purchase behavior level is explained by socialization, recreation, and self-expression ($R^2 = 0.252$). Socializing, as one of the social media use objectives, do not affect the level of pre-purchase consumer behavior ($p = 0.632 > 0.05$). Entertainment, as one of the social media use objectives, increases the level of pre-purchase consumer behavior ($\beta = 0.588$). Self-expression does not have an impact on pre-purchase consumer behavior ($p = 0.725 > 0.05$). Table 9 presents the regression analysis of the data on the impacts of social media use on post-purchase consumer behaviors.

Table 9. The Impacts of Social Media Use Objectives on Post-Purchase Consumer Behaviors

| Dependent Variable | Independent Variable | β | t | p | F | Model (p) | R ² |
|------------------------|----------------------|---------|-------|-------|--------|-----------|----------------|
| Post-Purchase Behavior | Constant | 0.659 | 4.555 | 0.000 | 54.617 | 0.000 | 0.208 |
| | Socializing | 0.219 | 4.471 | 0.000 | | | |
| | Entertainment | 0.266 | 4.297 | 0.000 | | | |
| | Self-Expression | 0.123 | 1.880 | 0.061 | | | |

The results of regression analysis conducted to determine the causal relationship between social media use objectives (socializing, entertainment, and self-expression) and post-purchase consumer behavior is found to be statistically significant ($F = 54.617$, $p = 0.000 < 0.05$). 20.8% of the total variance in post-purchase consumer behavior is explained by socializing, entertainment, and self-expression ($R^2 = 0.208$).

Socializing, as one of the social media use objectives, increases the level of post-purchase consumer behavior ($\beta = 0.219$). Entertainment, as one of the social media use objectives, increases the level of post-purchase consumer behavior ($\beta = 0.266$). Self-expression does not affect the level of post-purchase consumer behavior ($p = 0.061 > 0.05$).

5. Conclusion

Social media, as a commonly used concept today, is widely accepted in the Turkish society. 612 social media users participate in this survey which examines the impacts of social media with increasing number of users on consumer purchasing behaviors day by day.

In the research, social media use objectives of the participants are examined first. It is determined that participants mostly use social media for expressing themselves, followed by entertainment and socializing purposes.

Consumer purchasing behaviors of the participants are examined separately as pre- and post-purchase behaviors and it is determined that pre-purchase behavior levels are higher than post-purchase behavior levels. Thus, it can be stated that consumers are more benefited or influenced by social media in the pre-purchase period. Nonetheless, they may express views and suggestions, help other consumers in getting ideas about the products they purchase and the manufacturing companies, and provide feedback for those companies to improve their products and brands in the post-purchase period.

In the study, consumers' social media use objectives are analyzed by performing correlation analysis between pre- and post-purchase consumer behaviors. Positive relationships are detected between all social media use objectives and pre- and post-purchase behaviors.

In other words, the increase or decrease in the level of social media usage for whatever reason increases or decreases the level of pre- and post-purchase consumer behavior in the same direction.

The impacts of consumers' social media use objectives on pre- and post-purchase consumer behavior is examined by regression analysis in the study. As a result of the analysis, it is determined that the social media use for socializing and self-expression does not affect pre-purchase consumer behavior. Pre-purchase behavior levels of those using social media for entertainment purposes are found to be positively affected. Upon examining the impacts of social media use objectives on the post-purchase consumer, it is found that self-expression does not affect post-purchase

consumer behavior and, however, that socializing and entertainment have a positive impact on post-purchase consumer behavior. In other words, following the web pages of the TV series in social media, listening to music, playing online games, researching, online shopping, signing in as a member of the web pages of favorite brands and companies, affect consumer's pre- and post-purchase behavior positively. Similarly, it is determined that social media use for self-express objective (uploading pictures and videos into social networking sites, updating the status, following/commenting on other's updates and exchanging messages with the friends) has a positive impact on consumers' post-purchase behavior levels.

As a result of the research; it is asserted that social media has a significant impact on consumers' purchasing behaviors and the increase in any social media use objectives has affected consumer behavior positively in pre- and post-purchase periods.

Today, social media has become a communication medium which is extensively used by consumers. Consumers' social media use objectives are parallel to their purchasing behaviors. In this respect, social media especially emphasizes its importance regarding marketing activities for all companies that wish to maintain their communication with consumers in many aspects. The research is limited to only 612 social media users. Research can be conducted on a larger number of sample groups to reach more general data.

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CONSTRUCTIVE DEVIANT WORKPLACE BEHAVIOURS

Duygu UYSAL¹, Esra ERENLER TEKME²

Introduction

Regardless of the area of activity, one of the most important challenges of management in all organizations is to be dealing with “human beings”. Therefore, it is important to reveal the effects of both human behaviour and behaviours on organizational processes and outcomes. In this context, one of the subjects that has recently become the centre of interest is the deviant behaviour at work. The driving force of increasing interest in deviant behaviour is the social, economic (Galperin, 2002) and psychological costs (Tziner et al., 2010) as well as the increasing prevalence of such behaviour at workplaces (Peterson, 2002).

Deviance is considered to be non-functional in the field of sociology (Galperin, 2002; Mertens, Recker, Kohlborn & Kummer, 2016). It is seen that the concept, which has been increasingly studied in the context of the workplace (Mertens, et al., 2016), was previously considered to be a behaviour that harms the organization in the management literature (Warren, 2003). This point of view assumes that deviant behaviours either cause harm or have the potential to cause harm (Galperin, 2002). Early studies of deviance seem to be focused on social phenomena which can be termed morally offensive, prohibited, disadvantaged and also aggressive (Spreitzer & Sonenshein, 2004). The recent studies show that a small number of researchers point out that there are functional aspects of deviance as well as destructive aspects (Galperin, 2002; Warren, 2003). In other words, employee deviance may be associated with desirable behaviours as well as undesirable ones (Warren, 2003). However, relatively little is known about the positive nature of deviant behaviours (Mertens et al., 2016; Narayanan & Murphy, 2017).

Workplaces are units where many different behaviours are exhibited, each of which causes different results on both individuals and the whole organization (Appelbaum, Iaconi&Matousek, 2007). While many employees mostly prefer to behave in compliance with the norms of the organization, it can sometimes be seen that some employees behave in contradiction with the norms and violate the rules of the organizations they work for (Appelbaum et al., 2007). Some researchers argue that deviance from norms shows the destructiveness of behaviour (Warren, 2003). According to them, deviating from norms negatively affects organizations in many ways, including decision making processes, productivity, financial costs, financial and economic objectives (Appelbaum et al., 2007). However, it should be acknowledged that although setting up rules for everything is important in terms of quality and order of activities, strict adherence to the rules may not always lead to desired results.

When the literature on deviant behaviour is reviewed, it is seen that deviance is often used for behaviours that violate important norms and harm the organization (Galperin & Burke, 2006). Basically, intentional violation of the norms, policies or rules of the organization by a person or group is considered as a “deviant behaviour” (Robinson & Bennett, 1995). It is seen that, in addition to behaviours that may have serious consequences such as sexual harassment, physical assault, sabotage, theft, sample of behaviours such as manipulation of information,

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absenteeism, work slowdown, defamation, verbal assault, gossip, using the goods of the organization for personal purposes, damaging organizational property, malpractice, etc. are widely discussed in this context in the literature (Bayın & Terekli Yeşilaydın, 2014).

Since deviant behaviours cannot be detected in most cases or not confronted when they are detected, they form the dark side of the organizations and cause various losses (Arbak, Şanlı & Çakar, 2004). Some of the destructive deviant behaviours directly target the organization while some of them target employees (Bayın & Terekli Yeşilaydın, 2014). These behaviors may be a reaction given by employees to job dissatisfaction (Muafi, 2011), may as will be caused by different reasons. Decrease in productivity, loss of labour force, damage to workplace resources, damage to the corporate image, legal problems are just few examples of the losses that an organization experienced as a result of such behaviours (Arbak, Şanlı & Çakar, 2004).

When a workplace has been observed, it has been seen that employees also exhibit various behaviours that can be considered both deviant and positive, (Mertens et al., 2016). What we mean here; of course, is not the deviance that has negative implications but the deviance that is somehow constructive. Constructive deviant behaviours are the kind of behaviours that go beyond the roles and target to violate the important rules and norms of the organization in order to benefit the organization (Yıldız & Yıldız, 2016). Acting unethically for positive reasons (Umphress & Bingham, 2011; Umphress, Bingham & Mitchell, 2010), challenging the current practices and norms for the benefit of the organization (Burris 2012; Deters & Burris, 2007; Dyne, Ang & Botero, 2003) displaying proactive behaviours although they are not approved by the superiors, (Grant, Parker & Collins, 2009) can be evaluated in the context of constructive deviance (as cited in Mertens et al., 2016). Herein, it appears that organizations may also need workers who exhibit constructive deviant behaviours.

As clearly be understood, even if they have a fundamental similarity like - deviance from the norms -, behaviours that violate social norms and rules for positive purposes are still different from the destructive deviant behaviours (Warren, 2003). However, they are interrelated. Furthermore, employees who engage in constructive deviance can also engage destructive deviant behaviours because the two forms of deviance do not exclude each other (Galperin, 2002).

Although deviant behaviours indicate divergence from norms, "divergence" accounts for the nature of the behaviour in a relatively limited manner. For example, "divergence from the workplace harassment norms" and "divergence from the workplace dress code" is not the same thing (Warren, 2003). For this reason, there is a need for comparable standards in order to determine whether deviance is functional. If the behaviour is intended to cause harm to the organization and employees and threatens their well-being (Warren, 2003) and if there is intentional violation of organizational norms, it is classified as destructive deviant workplace behaviour (Robinson & Bennett, 1995; Bennett & Robinson, 2000) while constructive workplace deviance encompasses behaviours that violate significant organizational norms in order to contribute to the well-being of the organization (Robbins & Galperin, 2010). As can be understood from definitions, exhibiting the behaviour consciously is not a criterion that separates constructive behaviours from destructive behaviours. However, such a distinction can be made: While destructive deviations threaten the welfare of the organization, certain deviant behaviours may be functional and contribute to the overall welfare of the organization. In addition, constructive deviant behaviours strongly match with organizational purposes (Galperin, 2002).

1. Concept of Constructive Deviance

Due to the need for employees who define their roles more broadly and to exhibit pro-active behaviours that exceed their job requirements (Galperin, 2002) in today's fast-changing job environment with increased competition, it becomes increasingly important to understand the dynamics that cause unusual organizational performance (Robbins & Galperin, 2010), to have employees willing to challenge current operations to create constructive changes (Morrison & Phelps, 1999). Although the interest in constructive deviant behaviours has increased recently due to these requirements, the studies conducted on the concept do not have a long history and hence little is known about the subject.

The concept of constructive deviance was first proposed by Hanke and Saxberg (1985). In the early studies on the subject, the concept refers to behaviours that cause deterioration in the control system of the organization as the employees act out of the ordinary in order to improve the organizational interests (Galperin, 2002). The scope of constructive deviance has expanded in the following studies (Spreitzer & Sonenshein, 2004; Warren, 2003).

Constructive deviant behaviours are "behaviours that contribute to the improvement of the organization or its members or both by intentionally violating organizational norms and rules" (Galperin, 2002). The actors of constructive deviant behaviours are aware of the fact that their behaviours are improper when they exhibit deviant behaviours (Arbak, Şanlı & Çakar, 2004). With another definition, constructive workplace deviance is "conscious behaviours that deviate from the norms of a reference group in a honourable way" (Spreitzer & Sonenshein, 2004). In this respect, constructive deviance refers to employees who do not obey or abide by social norms with the aim of benefiting the organization (Robbins & Galperin, 2010). While deviation from the norms of reference group is common in both conceptualizations, the difference emerges when Spreitzer and Sonenshein (2004) state that constructive deviance requires deviation in an "honourable" way while Galperin (2002) focuses on the benefit of the organization and employees. Warren (2003), who attempts to synthesize and explain the concept, defines constructive deviant behaviour as "behaviour that deviates from the reference group norms but comply with the hyper norms". Hyper norms are universally valid beliefs and values. In the following years, Vadera, Pratt & Mishra (2013) combined the definition as "behaviours that deviate from the group norms for the benefit of the reference group but comply to the hyper norms". With a more integrated definition, constructive deviant behaviours are "the intentional behaviours that deviate from the norms of a reference group but positive in terms of purpose and compliance with the hyper norms, leading to unexpected success or other results that deviate from expectations (Mertens et al., 2016).

Definitions differ in terms of (1) whether they refer to a behaviour versus outcome, (2) why behaviour or outcome is considered "positive", and (3) why behaviour or outcome is considered deviant (Mertens et al., 2016). In other words, some researchers focus on the outcome of behaviours such as unexpected performance or unexpected success (Pascale & Sternin, 2005) to define constructive deviance, while others focus on the behaviour itself (Spreitzer & Sonenshein, 2004; Galperin, 2012). At this point, it should be noted that the definitions focused on behaviour also differ according to the way they emphasize the positive aspect of constructive deviance. According to Spreitzer and Sonenshein (2004), the group's perception for evaluating a behaviour as constructive the perception of the group that the behaviour of the reference group is positively displayed is important for a constructive assessment of behaviour. Vadera et al., (2013) mentions that the behaviour should have a positive effect on the organization, the reference group and the members of the organization regarding the evaluation of the behaviour as deviant.

Seidman & Mc. Cauley (2008) emphasize that behaviour should have a strategic impact on performance or success (as cited in Mertens et al., 2016).

As stated above, deviant behaviours are informal behaviours that require deviation from the norms of a reference group, facilitating the achievement of organizational objectives, not under authorisation, unauthorized, in other words unofficial behaviours. Therefore constructive deviant behaviours may include examples like acting innovatively, criticising noncompetent superiors (Galperin, 2002), non-compliance to non-functional organizational policies or procedures to solve a problem or examples of a manager's violation of company procedures to solve a customer's problem (Robbins & Galperin, 2010).

Unlike most of those who exhibit non-functional behaviours such as antisocial behaviours and workplace aggression, constructive deviants are employees who do not comply with the rules and norms but intend to benefit the organization (Robbins & Galperin, 2010). While such employees accept the critical values and objectives of the organization, they selectively comply with the methods in which they reach the results. Selective conformity is considered to be the centre of constructive deviant behaviour. Constructive deviants that occasionally deviate from the organizational norms may use discrepant cognitions or behaviours for the advantage of the organization (Galperin, 2002).

Some researchers suggest that a number of optional and positive behaviours, such as taking responsibility, extra-role behaviour, creative performance, voice, issue selling, whistle-blowing, pro-social behaviour, pro-social rule breaking can be considered as constructive deviations. The common point of these behaviours is that although they deviate from the norms of the group, they benefit the group or the organization and they comply with the hyper norms (Vadera, et al., 2013).

Some other researchers (Galperin & Burke, 2006; Spreitzer & Sonenshein, 2004) argue that constructive deviant behaviours are different from the behaviours that do not require a real deviation from the norms or that deviate to some extent (as cited in Mertens et al., 2016). At this point, it may be useful to examine the spectrum of behaviours at work and to compare some of the behaviours that conceptually overlap with constructive deviance. Like other prosocial behaviours (e.g. organizational citizenship behaviour, whistle-blowing, corporate social responsibility, and innovation), constructive deviant behaviours are also considered in the category of pro-social behaviours (Spreitzer & Sonenshein, 2004; Galperin, 2012). However, although they take place in the same category, constructive deviant workplace behaviour differs from them in some respects. For example, although organizational citizenship behaviour and constructive deviant workplace behaviour similar in terms of their qualifications, the organizational citizenship behaviour that goes beyond the existing role expectations has a passive nature. In other words, constructive deviant workplace behaviour requires employees to act proactively in terms of norm violation while organizational citizenship behaviour requires compliance with organizational and administrative norms and rules (Vadera et al., 2013). While organizational citizenship behaviours aim to increase the performance of the organization, constructive deviant behaviours may or may not realize such a goal (Spreitzer & Sonenshein, 2004).

Similarly, whistle-blowing can be perceived as destructive or may be perceived as constructive. This perception is widely dependant on the circumstances surrounding the disclosure of organizational offence by the employee in question (Appelbaum et al., 2007). Many employees may avoid revealing unethical, corrupt practices usually with the worry of losing their job, friends or the opportunities of promotion even though they are aware of them. However, some whistle-blowers can act with a sense of personal duty without taking the organizational and

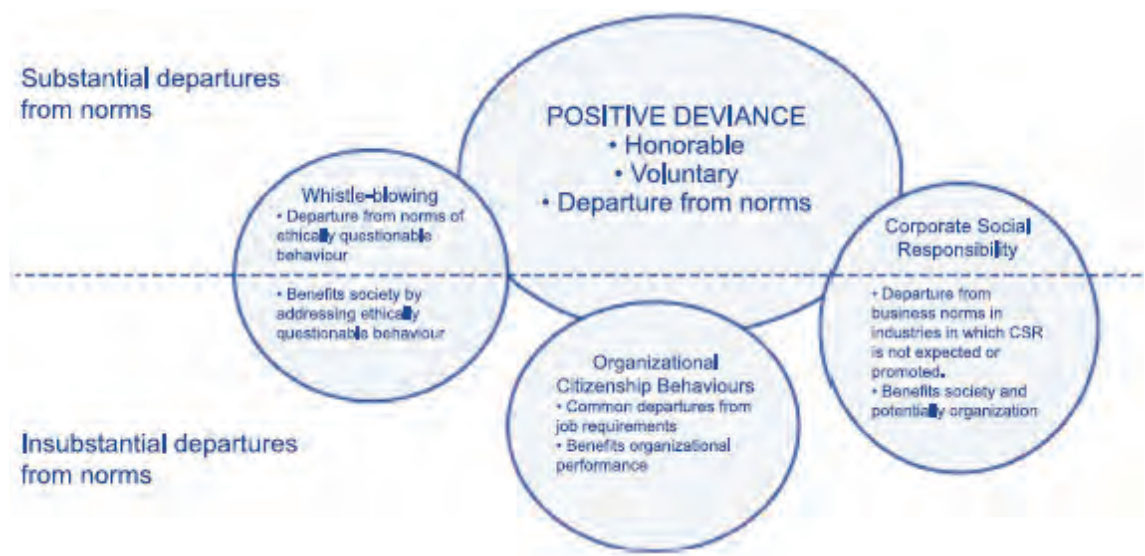
situational pressures into account (Appelbaum et al., 2007). For example, a drug investigator may prevent a serious problem that the organization or society may face by voicing concerns about the dangerous side effects before a new drug is put on the market. In this case, despite the violation of the norms of the organization, behaviour can be evaluated as positive deviant behaviour since it will benefit both the organization and society (Warren, 2003). In this respect, whistle-blowers can be beneficial to the organization, even though they seemingly violate organizational norms (Galperin, 2002). However, it is not possible to consider it positively if the employee exposes illegal or unethical practices to take revenge on his/her employer (Spreitzer & Sonenshein, 2004). Therefore, all of the acts of whistle-blowing cannot be considered as a constructive deviation.

Social responsibility includes the behaviours of organizations to benefit the society and their responsibilities to fulfil in relation to their target groups. Corporate social responsibility activities may or may not conform to organizational norms, but constructive deviant behaviours require deviation from organizational norms or work norms (Spreitzer & Sonenshein, 2004).

Another pro-social behaviour is innovation. Innovation involves the creation and development of new ideas not dealt with by the majority. By its very nature, innovation requires at least some deviation from accepted organizational norms (Galperin, 2002). Therefore, employees who display innovative behaviour can be considered as constructive deviants. However, it should be noted that some of the behaviours that aim to result in creativity and innovation cannot be regarded as constructive deviance. For example, an innovative and creative employee can develop a virus spreading software. However, although this behaviour requires deviation from the norms of the organization, it cannot be considered a constructive deviant since it is a behaviour that cannot be considered as honourable (Spreitzer & Sonenshein, 2004).

The typology of the constructive workplace of Spreitzer and Sonenshein (2004) is shown in Figure 1.

Figure 1: Typology of Positive Deviant Behaviour



Constructive deviant workplace behaviour is a multidimensional and complex phenomenon. A comprehensive literature review suggests that optional and positive behaviours, such as taking responsibility, extra-role behaviour, creative performance, voice, issue selling, whistle-blowing, pro-social behaviour, pro-social rule breaking can be considered as constructive deviations.

2. Approaches to Deviant Behaviours

To understand possible constructions of positive deviance for organizations, it is useful to consult other attempts at constructing a definition of positive deviance. In general, approaches to constructive deviant behaviours are examined in four groups. These are statistical, reactive, supraconformity, and normative approaches (Spreitzer & Sonenshein, 2004).

Seidman and McCauley (2008) consider the concept of constructive deviance in a statistical sense. According to them, behaviours that are not exhibited by the majority or that differ significantly from the average can be considered as constructive deviance. This approach is based on the assumption that variance in behaviour and variance in outcomes follow a normal distribution. Based on this distribution, thresholds are set above (or below) which an outcome or a behaviour is considered positively (or negatively) deviant from what is considered to be normal (as cited in Mertens et al., 2016). The statistical approach allows for a very clear definition of deviance, demonstrates the existence of a positive deviation but is not capable of explaining why and how the deviation occurs (Mertens et al., 2016).

The reactive approach focuses on how the audience reacts to behaviour. Reactive deviance considers a behaviour (traditionally) deviant if a negative condemnation by an audience occurs such as publicly labelling a behaviour as depraved or punishing an individual for engaging in a behaviour. Absent any such negative reaction, no deviant behaviour has taken place (Spreitzer & Sonenshein, 2004).

Another perspective contends that positive deviance is supraconformity or excessive conformity to norms. This kind of behaviour is conceptualized as pro-normative, but becomes deviant because it extends beyond the bounds deemed appropriate by a referent group. According to the supraconformity approach, becomes problematic, leading to dysfunction such as addiction. Put another way, supraconformity positive deviance collapses into traditional deviance, as overly eager participants are actually dysfunctional because their addictions dominate their life (Spreitzer & Sonenshein, 2004).

In the literature on organizational behaviour in which deviance is defined as intentional behaviour that is significantly deviated from norms, it is common to approach deviations from a normative perspective (Spreitzer & Sonenshein, 2004). The normative approach, which presents a different perspective on deviant behaviours, examines behaviours, norms, those exhibiting deviant behaviours, reference groups and facts in order to determine what can be considered deviance (Mertens et al., 2016). In defining positive deviance, Spreitzer and Sonenshein argue for a normative approach, which implies the evaluation of conduct (that ought or ought not to occur) by a specific body of people (a referent group) whose expectations determine regular or typical behaviours. In addition, the researchers say, positively deviant behaviour must be something others would extol or commend, if aware of it, and must focus on actions with honourable intentions, independent of outcomes. The normative approach to constructive deviation focuses on the nature of behaviour, namely, whether behaviour is separated from norms (Spreitzer & Sonenshein, 2004). The disadvantage of this approach is that conclusions based on it can typically not

be generalized across people and contexts: it focuses on specific instances of deviance within a substantive domain and does not attempt to measure or test aspects of its nature, determinants, or outcomes (Mertens et al., 2016).

3. Dimensions of Constructive Deviant Workplace Behaviours

Constructive deviant workplace behaviour is a complex and multidimensional phenomenon (Vadera, et al., 2013). The concept of constructive deviance can be divided into two main categories as “interpersonal constructive deviance” and “constructive deviance for the organization”. Constructive deviance directed towards the organization can be examined under two headings: innovative behaviours aimed at benefiting the organization and challenging behaviours that challenge existing norms to benefit the organization (Bodankin & Tziner, 2009).

Interpersonal deviant behaviours are the kind of behaviours that have the potential to affect individuals, groups and interpersonal relationships. Such behaviours include good actions (Galperin, 2002) directed towards individuals (Bodankin & Tziner, 2009).

Challenging organizational deviant behaviours refer to behaviours that counter the current norms or rules of the organization, but for the benefit the organization (Galperin, 2002). Some of these behaviours include the violation of organizational norms by breaching or stretching the rules to solve problems of the organization or customers and to provide benefit to the organization.

Innovative organizational constructive deviant behaviours describe “the actions that directed to the organization, innovative and create out of the ordinary added value, useful” (Galperin, 2002). Such behaviours which can contribute to the welfare of the organization in unusual ways (Yıldız et al., 2015a), may cause positive changes and play a central role in initiating possible positive changes (Robbins & Galperin, 2010). Some examples of such behaviour include developing new methods for routine tasks and finding unusual solutions to problems that arise during work. Given the impact of innovation on the competitive advantage, the behaviours in this category become more important for organizations (Howell, Shea & Higgins, 2005).

Employees, who tend to exhibit constructive deviant behaviours in order to be innovative and produce creative solutions, notice the performance gaps that cannot be easily seen by their colleagues. Innovative deviants break important norms and rules because they wish to perceive performance gaps and want to solve problems. Innovative constructive deviance requires a proactive point of view so it cannot be considered without risk (Yıldız, 2015).

Interpersonal and challenging constructive deviant behaviours seem to involve more compelling behaviours as compared to innovative deviant behaviours. The actors of interpersonal and compelling behaviours are willing to dissent and to express their views to improve the existing system. Unlike the other two factors, innovative constructive deviant behaviours express useful actions that focus on creativity. Given the importance of innovation for organizations, innovative constructive deviants can be seen less threatening than the other two forms of constructive deviance (Galperin, 2002).

4. The Importance of Constructive Deviant Behaviours

While constructive deviant behaviours sometimes require deviation from norms and rules (Galperin & Burke, 2006; Robins & Galperin, 2010), violating generally accepted norms may not always harm the organization

(Dehler & Welsh, 1998). In this respect, such behaviours may provide benefit to working groups and/or to the overall organization (Galperin & Burke, 2006; Robins & Galperin, 2010), and thus be functional (Bodankin & Tziner, 2010). Different types of constructive deviance can lead to different results (Galperin, 2002). For example, interpersonal deviant behaviours can increase the harmony among employers and help integration (Robinson & Bennett, 1995).

Innovation literature suggests that employees who struggle with procedures that are thought to be dysfunctional and who voluntarily violate organizational norms may be important sources of innovation (Dehler & Welsh, 1998). Constructive and productive deviants can contribute to the overall welfare of the organization by developing innovative processes / products and services (Galperin, 2002). As innovativeness is related to the introduction and application of new ideas, innovation, by its nature, requires deviation from the existing processes adopted by the majority. However, there are bureaucratic and social strategies to reduce the potential of deviation and control the work processes in many organizations. Adherence to organizational routines (Galperin, 2002) may hinder innovative and creative business ideas that the employees could come up with (Appelbaum et al., 2007). However, creative and innovative employees who consciously violate organizational norms may develop techniques and technologies that can be useful for the company and thus contribute to the competitive advantage (Appelbaum et al., 2007; Bodankin and Tziner, 2009; Tziner et al., 2010). Organizations that cannot tolerate deviation are often unable to adapt to the happenings in the environment, which makes them more likely to fail. For example, Motorola, who steered the car radio, walkie-talkie, and mobile phone market, lost their competitive position against Nokia and Ericsson due to institutionalized bureaucratic procedures (Galperin, 2002). Another problem that may be encountered at this point is that when jobs are bound to strict rules, employees are less likely to think of and try alternative ways to reach an result. Employees who are expected to follow detailed work procedures may also become increasingly indifferent to the changes and innovations in their environment. Therefore, employees who exhibit innovative behaviours can be deemed as constructive deviants as they act in ways that initiate a process deviated from the established routines or systems of the organization (Galperin, 2002).

While it is important for employees to comply with organizational norms, procedures and policies to facilitate organization, strictly implementing procedures and policies can challenge the organisation's financial welfare (Appelbaum et al., 2007).

Employees who display productive or creative forms of deviant behaviours can integrate different perspectives more effectively and build more harmonious structures or processes (Galperin, 2002). This may help to promptly implement appropriate solutions by alerting the organization to the problems that may arise (Robinson & Bennett, 1995). In this respect, constructive deviant behaviours have the potential to create positive changes and serve as future change agents (Robbins & Galperin, 2010).

Constructive deviant behaviours have a positive effect on increasing the diversity of views of majority and minority, rather than polarizing them as opposed to destructive deviant behaviours (Galperin, 2002).

Constructive deviance provides alternative norms to the group that can serve as catalysts for change (Dahling & Gutworth, 2017) and may lead to better performance of groups (Vadera et al., 2013).

However, it should be noted that the consequences of constructive deviance are widely dependent on situations. For example, constructive deviant behaviours that benefit a work group may cause disturbance in another group (Vadera et al., 2013).

5. Factors That Are Effective on The Formation of Constructive Deviant Behaviours

It is inevitable that deviant behaviours arise in organizations with people who have different goals, expectations and characteristics. Related sources generally suggest that constructive deviant behaviours provide positive benefits to organizations and be useful to organizations. However, our understanding of the precursors of these behaviours is limited.

In various studies in relation to this topic, it is emphasized that individual factors and interpersonal differences play an important role on the tendency of employees to exhibit constructive deviant behaviours (Bodankin & Tziner, 2009; Galperin, 2002). Individual factors include individual differences that affect the tendency and potential of the employees to exhibit constructive deviant behaviours. One of the individual factors that increases the tendency to exhibit constructive deviant behaviour is the role breadth self-efficacy. RBSE represents the belief that an individual can undertake holistic, interpersonal and proactive tasks such as implementing new business practices. Employees with a high level of RMSE rely on themselves to undertake new roles and duties in their work units and to contribute to the objectives of the organization (Kanten, 2016). In this context, also Galperin (2002) stated that the confidence of the employees in fulfilling broader roles will have an effect on the tendency to exhibit constructive deviant behaviours (Galperin, 2002).

One of the factors mentioned in the literature, which has the potential to influence the tendency of the employees to exhibit constructive deviant behaviours, is the risk taking tendency (Galperin, 2002; Morrison, 2006; Vadera et al., 2013). In this context, Morrison (2006) points out that there is a statistically significant and positive relationship between the high level risk taking tendency and the violation of rules. Similarly, Howell and Higgins (1990) stated that employees who has tendency to take risks are more likely to violate rules (as cited in Yıldız et al., 2015a).

It has been stated that empowerment is one of the important determinants of constructive deviance in a study by Appelbaum et al (2007). According to Bowen & Lawler, empowerment enables employees to participate in decision making, helping them to break out of stagnant mindsets to take a risk and try something new. Similarly, Spreitzer and Doneson (2005) emphasize that empowered employees may have a higher tendency to take risks and violate rules to the benefit of the organization.

Networking ability is another determining variable in exhibiting constructive deviant behaviours (Galperin, 2002; Vadera et al., 2013). According to Vadera et al. (2013), the perception of constructive deviant behaviours as positive or negative depends on the action owner's ability to create a network (as cited in Yıldız, 2015).

It is stated in the literature that individual determinants such as machiavellism, ethical orientation, idealism, extraversion, proactive personality, self-esteem may have an effect on constructive deviance (Vadera et al., 2013). However, it is clear that deviant behaviours cannot be solely attributed to personality traits (Appelbaum et al., 2007). Many researchers in the field of organizational behaviour agree that behaviours occur as a result of the interaction between personality traits and environmental characteristics (Peterson, 2002; Bodankin&Tziner, 2009). In other words, it is predicted that the conditions related to the organizational environment as well as individual

differences will have an impact on the tendency to exhibit constructive deviant behaviours. One of the variables that can be considered in this context is business autonomy.

Job autonomy refers to the level of independence and freedom of decision-making provided to the employee in the planning and execution of a work. Innovation literature suggests that autonomy can facilitate constructive deviant behaviours. A high level of autonomy can increase the tendency of employees to exhibit constructive deviant behaviours, as it gives them the opportunity to deviate from routines and procedures. In a study conducted by Galperin, it was found that work autonomy was related to innovative organizational constructive deviance while in the same study no relationship was found between business autonomy and interpersonal and challenging deviant behaviours (Galperin, 2002).

Another factor considered to be associated with constructive deviant behaviour is access to information. Employees become better equipped to conduct activities that benefit the organization when they have knowledge about organizational strategies and objectives. Based on these reasons, information sharing behaviour can be expected to be related to constructive deviance (Galperin, 2002).

There are also researchers who have dealt with the main causes of deviance in terms of task and contextual features (relations with colleagues, leadership characteristics, institutional regulations, etc.) (Mertens et al., 2016). In this context, organizational culture and climate, supervisory behaviour (Appelbaum et al., 2007), leader support (Galperin, 2002), transformational leadership (Vadera et al., 2013) are some of the factors that increase the likelihood of the employees to exhibit constructive deviant behaviour in organizations.

Conclusion

In this study, constructive deviance subject; which has become increasingly important in today's business world and which can be accepted as one of the pro-social behaviors, has been discussed. Employees usually prefer to behave in compliance accordance with organizational norms and follow the rules as organizations expect from them. However, in some cases, the rules and procedures created to regulate functioning and ensure predictability may transform to obstacles in achieving the objectives of organizations. At this point, it can be seen that some employees are bending the rules time to time and exhibiting behaviors that do not comply with procedures. As the situation in question will not always cause a problem for the organizations, but sometimes it can be extremely functional to break away from existing structures and routines and proceed to the result through another way.

As stated earlier, even though the deviant behaviors are often dealt with their destructive side, there are also evidences that they can be functional and useful. In the current dates that factors such as quality, customer satisfaction, flexibility and creativity are transformed into critical concerns for organizational performance, constructive deviant behaviors can contribute to the effectiveness of organizations by simplifying and improving business processes and by making innovations.

Constructive workplace deviance is emerging as innovative, challenging and interpersonal constructive deviance. Deviant behaviours that can arise due to different motivations can create a competitive advantage as a source of innovation, cause integration among employees and contribute to the welfare of organizations with their similar aspects. It is clear that constructive deviant behaviors are an important issue for organizations but more studies are needed to understand them.

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35

EMOTIONAL INTELLIGENCE IN ORGANIZATIONS

Sabahattin ÇETİN¹

1. Introduction

Emotional intelligence, which is a psychology-based concept, is one of the most important issues dealt with in the organizational field. Studies on the impact of emotions on people and how emotions in working life affect employees continue to be carried out intensively. This section contains the latest information on the concept of emotional intelligence, its development and emotional intelligence models. In addition, it gives information on the studies and their results about emotional intelligence in the organizational field.

2. The concept of emotional intelligence and its development

The concept of emotional intelligence is a concept that attracted the interest of researchers in explaining human behavior in recent years. Although the concept of emotional intelligence has been used at intervals after the 1960s, the first use of this concept appears in the PhD thesis written by Wayne Payne in 1986 (Ashkanasy & Daus, 2005, pp. 442). However, researchers' interest in emotional intelligence began after Salovey and Mayer's study (1990). The concept has become a major topic of interest widely recognized in various circles since the publication of the book by Daniel Goleman in 1995 called *Emotional intelligence: Why it can matter more than IQ for character, health and lifelong achievement* (Keskin, Akgün, & Yılmaz, 2016, p. 57).

Salovey and Mayer (1990) describe emotional intelligence as the ability to monitor emotions, discriminate among them and use these emotions in guiding one's thoughts and actions. Salovey and Mayer (1990) mention three skills regarding emotional intelligence in their first study. In their later work, however, they add the fourth to these skills to identify emotional intelligence as the ability to perceive how people feel, to use these feelings to help in thinking, to understand the causes of emotions, and to manage emotions in making the right decision (Caruso & Salovey, 2007, p. 62).

According to Goleman (2011, p. 393), who has a great influence on the spread of the concept of emotional intelligence, emotional intelligence is the ability "to recognize ourselves and others' feelings, to motivate ourselves and to manage well within us and our relationships. Emphasizing the importance of emotional skills, Goleman (2010, p. 65) states that emotional skills are a meta-talent, that is determinant in how well other capabilities can be used, including raw wisdom.

Bar-On (2007, p. 2), dealing with emotional and social intelligence together, states that individuals having this intelligence have the ability to understand and express themselves, to understand others and to establish good relations with them and to cope successfully with the needs of daily life. Emotional and social intelligence are built on the ability to recognize emotions, understand its strengths and weaknesses, and express emotions in a way that does not harm relationships. In addition, being emotionally and socially intelligent, means to be aware of the feelings and needs of others and to establish and maintain constructive and mutually satisfactory relationships in cooperation. Finally, emotionally intelligent individuals can effectively manage personal, social and environmental

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change in a realistic and flexible way. According to Bar-On (2007), in order for these to happen, emotions must be managed effectively and sufficient optimistic, positive and intrinsic motivation must be available.

Table 1: Definitions of Emotional Intelligence

| Researchers | Definitions |
|---------------------------------|--|
| Mayer and Salovey (1990) | The ability to monitor emotions, make distinctions between emotions and use these feelings in thoughts and activities. |
| Cooper (1996) | Emotional intelligence is the ability of the individual to understand the power of emotions as a source of energy, knowledge, confidence, creativity as well as influencing others and to apply these feelings effectively. |
| Bar-On (1997) | Emotional intelligence reflects one's ability to cope with everyday environmental challenges and helps to predict his/her life success, including professional and personal endeavors. |
| Daniel Goleman (1998) | It is the ability to recognize ourselves and others' feelings, to motivate ourselves and to manage well within us and our relationships. |
| Freedman (1998) | Emotional intelligence is a way to understand how we think, feel, and how we choose our behavior. Emotional intelligence shapes our interaction with others and our understanding of ourselves. It explains what we have learned and how we learn them, allows us to decide our priorities and determines the majority of our daily movements. |
| Singh (2003) | Emotional intelligence is the ability of an individual to respond appropriately and successfully to a wide range of emotional stimuli generated by internal and environmental factors. Emotional intelligence consists of three psychological dimensions: emotional sensitivity, emotional maturity and emotional competence. |
| Mohan (2003) | Emotional intelligence consists of a positive combination of emotional and cognitive capacities of the individual and of such as skills as communication, empathy and motivation. |
| Sanwal (2004) | Emotional intelligence is the consciousness of utilizing and using emotions in the cognitive process that an individual uses to overcome any situation and problem. |
| Chadha (2005) | All intelligence has an emotional basis. Using emotions as a source of energy to achieve its own goals is what emotional intelligence is. |
| Chabungbam (2005) | Emotional intelligence is the individual's ability to control his/her impulses and his/her persistence against frustration. |
| Bangar (2005) | Emotional intelligence is the capacity of the individual to create the best results in his/her relations with himself/herself and with others. |
| Malekar (2005) | Emotional intelligence is a set of factors including management of selfness and emotions, self-development with empathy and motivation as well as establishment of strong relationships with people. |

Source: Singh, (2006, pp. 36-37)

Cooper & Sawaf (1997) describe emotional intelligence as the ability to sense, understand and use effectively the power of emotions and their quick perception as a source of human energy, knowledge, relationships and influence (Keskin et al., 2016, p. 60).

In studies conducted on emotional intelligence, a number of similar definitions have been made on the definition of emotional intelligence (Table 1). When the approaches about emotional intelligence are examined, it is seen that the most important factor that comes to the forefront in emotional intelligence is to understand the individual's

own feelings and to realize how their behavior is shaped by these feelings. It is not possible for an individual to understand the emotions of others effectively if he/she does not have sufficient knowledge about his/her feelings. In this sense, emotional intelligence is a mental skill. It is not only having feelings, but also understanding what they mean. The concept of emotion requires reason, but what brings the person to the mental system and that creates creative thoughts is still the emotions (Sudak & Zehir, 2013, p. 146). Hence, emotions play an important role in every stage of an individual's life.

3. Models of Emotional Intelligence

With the increasing importance of emotional intelligence over time, many models have been proposed by the researchers on emotional intelligence. As the core of the subject lies in the emotions, these models have some common features but some aspects are also separated from each other.

There are two main models in emotional intelligence approaches. The first one is the "Talent Model" based on the assumption that emotions are determinant about relationships. Mayer and Salovey's model of emotional intelligence is considered within this model. The second model of emotional intelligence is the "Mixed Model". In this approach, the definitions of emotional intelligence, which comprise skills such as social skills, personality traits and behavior are included. Emotional intelligence models of Goleman, Bar-On and Cooper-Sawaf are evaluated within mixed models (Aslan, 2013, p. 51).

3.1 Mayer and Salovey's Emotional Intelligence Model

Mayer and Salovey's work on emotional intelligence can be examined in two distinct chapters. The studies of Salovey and Mayer before 1997 are evaluated within the framework of a mixed model approach. However their studies after 1997 are evaluated as a talent model approach. In their early study on emotional intelligence, Salovey and Mayer state that mental processes also involve emotional knowledge. According to this, mental processes includes understanding and expressing the emotions of oneself and others, regulating the emotions of oneself and others, and using emotions on the way of regulation and compatibility. In 1997, Salovey and Mayer revised their model of emotional intelligence and dealt with emotional intelligence based on talent. According to the researchers, emotional intelligence consists of four basic abilities. These skills; 1) Defining emotions, 2) Using emotions, 3) Understanding emotions and d) Managing emotions (Eröz, 2011, p. 58).

a. Identifying Emotions: Emotional intelligence begins with perceiving and expressing emotions. This skill is about understanding an individual's deep feelings and expressing these feelings naturally. What is discussed here is to feel the emotions in the facial expressions, tone and art objects and to perceive and express them (İsmen, 2001, p. 114). People with a great talent in this field perceive and accept emotions earlier than most people (Wong & Law, 2002, p. 246). This ability emphasizes emotional awareness (Keskin et al., 2016, p. 61).

Being aware of what you feel in a particular situation or moment is the basis of emotional intelligence. It is a very important requirement to be aware of emotions at all times in order to gain insight and understand self. People who know their feelings are aware of their moods, they can make healthier decisions in situations requiring personal decision, they can be more autonomous, they are confident in their own limits and they can look at life positively (Tugrul, 1999, p. 15).

b. Using Emotions: This ability affects how we feel and what we think. Emotions direct our attention to important events and affect our perspective on events (Caruso & Salovey, 2007, p. 11), contribute to problem-solving ability

and the power to reason by increasing the value of our thoughts (Keskin et al., p. 61). The ability to use emotions allows us to look at the world from a different perspective and to feel the emotions of others within ourselves (Caruso & Salovey, 2007, p. 61). Therefore, such highly skilled people are more sensitive to reading others' feelings and minds (Wong & Law, 2002, p. 246).

c. Understanding Emotions: Emotions have their own language and logical functioning. The ability to understand emotions is to determine how emotions are felt and what will happen after these feelings (Caruso & Salovey, 2007, p. 61). This ability is beneficial in order to regulate the emotions of people and to get rid of the psychological distress quickly (Wong & Law, 2002, p. 246)

If we have a right assumption about people and a good vision about what they feel, we know how to behave towards people and communicate with them in a better way. If we want to fully understand ourselves and the people we communicate with, we must have an advanced emotional knowledge infrastructure. Thus, we can understand the reasons of emotional changes and understand the development process of events and can predict what a person feels (Keskin et al., 2016, p. 61).

d. Managing Emotions: This ability is related to individuals' ability to use their feelings towards constructive activities and personal performance (Wong & Law, 2002, p. 246). The ability to manage emotions means to integrate our emotions with our decisions and behaviours in way to increase life quality of ourself and those around us (Keskin et al., p. 61). Therefore, being open to our feelings and using this information to make the right decisions has an important value (Caruso & Salovey, 2007, p. 61).

Table 2: Mayer and Salovey's Dimensions on Emotional Intelligence

| Dimensions | Ability |
|--|---|
| Perception, evaluation and expression of emotions | <ul style="list-style-type: none"> To understand and express their feelings To recognize and express other people's feelings Accurate expression of emotions and feelings related needs To make a distinction between different emotional expressions. |
| Using emotions to facilitate thinking | <ul style="list-style-type: none"> Emotions direct attention and preferential thinking on thinking The mood changes a person's perception and may lead to an understanding of different perspectives. Emotional situations encourage problem-solving approaches. |
| Using emotions in understanding and reasoning | <ul style="list-style-type: none"> To define emotions and understand the relationships between different emotions and their meanings To understand the meanings of emotions and the knowledge they transmit in relationships. Interpretation of complex emotions and understanding of combinations of different emotions (eg experiencing joy and fear at the same time) To understand the transitions between emotions |
| Managing and regulating emotions | <ul style="list-style-type: none"> Open to unpleasant and unpleasant feelings To reflect emotions depending on whether they are used for mental or emotional development To manage emotions for yourself and others through alleviating negative emotions and increasing positive emotions |

Source: Sharma & Sebrawat, (2014, p. 11)

Salovey and Mayer's model is an approach that brings together different concepts under an umbrella (Ismen, 2001, p. 114). Each skill can be handled independently. At the same time, however, these capabilities are built on each other. Although it is possible to assess alone, learn and develop, the relationship between talents requires each to be considered as an integral whole when solving important problems (Caruso & Salovey, 2007, p. 11).

3.2 Goleman's Model of Emotional Intelligence

Goleman, in his study published in 1995, stated that emotional intelligence consists of five components under the main dimensions of self-management and managing relations with other individuals. Self-awareness, self-control and motivation are the dimensions of self-mangement. The dimension of relationship management and empathy is related to managing relationships with other individuals. The definitions and distinguishing features of these dimensions are given in Table 3.

Table 3: Dimensions of Goleman's Model of Emotional Intelligence

| Dimensions | Definition | Distinguishing Features |
|--------------------------------|--|--|
| Self Awareness | The ability to understand and accept the human's own mood, emotions and motives, as well as their impact on others | <ul style="list-style-type: none"> • Self-confidence • Realistic self-assessment • A sense of humor based on self-disregarding |
| Self Control | The ability to control or divert destructive impulses and moods, Proximity to thinking before the act, (avoiding hasty decisions) | <ul style="list-style-type: none"> • Reliability and honesty • Comfort in the face of uncertainty • Openness to change |
| Motivation | The passion for work due to reasons beyond money and status The tendency to the pursuit of goals with perseverance | <ul style="list-style-type: none"> • The impulse of powerful success • Optimism even in the face of failure • Adherence to the organization |
| Empathy | The ability to understand other people's emotional structure The ability to treat people according to their emotional reactions | <ul style="list-style-type: none"> • The expertise in developing and keeping talented people • Sensitivity to cultural differences • Serving for customers and buyers |
| Relationship Management | The competence in conducting relationships and establishing networks The ability to find common grounds and provide proximity | <ul style="list-style-type: none"> • Efficiency in leading the change • Credibility • The,expertise in team building and management |

By dealing with dimensions of emotional intelligence in the light of new findings in his later studies, Goleman put forward a new model for management and business life in his work published in 2002.

The model consists of components of self-consciousness and self management which express personal competencies as well as social consciousness and relationship management which constitute social competence (Keskin et al., 2016, p. 63).

Self Consciousness: It is the ability of a person to read his own feelings. It gives people the opportunity to know their strengths and limitations. It enables people to feel self confident about the values they have (Goleman, Boyatzis, & McKee, 2016, p. 49).

Self-Management: It is the ability of a person to keep his / her own emotions under control and act reliably and consistently (Goleman et al., 2016, p. 49). Self-management is the ability to use awareness of emotions to maintain mobility and to positively direct behaviors (Bradberry & Greaves, 2009, pp. 32).

Social Consciousness: Social awareness is the ability to correctly identify other people's feelings and to understand what is really happening. This skill usually means that these emotions are perceived even if people do not feel the thoughts and feelings of others. It is easy to get caught in your own feelings and forget to take into account the perspective of the other side. Social awareness provides focus and critical information (Bradberry & Greaves, 2009, p. 38). Individuals with this skill know well what they say and do forms the feelings of others. In addition, they are sensitive enough to change words and actions if the effect is negative (Goleman et al., 2016, p. 48).

Relationship Management: Relationship management allows you to be aware of your own emotions and other emotions to manage their interactions successfully. This skill ensures effective communication. Relationship management is the link you establish with others over time. People who manage relationships well can benefit from establishing relationships with many different people, including things they do not like (Bradberry & Greaves, 2009, p. 44). Individuals who possess this skill often use it in transferring their enthusiasm in a witty and polite way to others and in solving conflicts (Goleman et al., 2016, p. 49)

3.3 Bar-on's Model of Emotional Intelligence

Bar-On's emotional intelligence model was built to explain why some people are emotionally good or why they succeed in life. In this respect, the model focusing on non-cognitive intelligence factors includes both emotional intelligence and social intelligence. It is considered as a mixed model, as it combines individual characteristics of mental abilities such as self-awareness with mental abilities such as independence or self-esteem (Gursoy, 2014, p. 92).

Table 4: Bar-On's Dimensions of Emotional Intelligence

| Factors | Definitions |
|-------------------|---|
| Intrapersonal | Knowing and understanding his/her own emotions, feelings and ideas <ul style="list-style-type: none"> • Emotional awareness- recognizing and understanding his/her own feelings • Self-confidence- expressing feelings, beliefs and thoughts clearly • Self respect- self-awareness and self esteem • Self actualization- actualizing the potential of the person and performing activities that he/she likes • Independence-self-directedness and self-control in thoughts and actions |
| Interpersonal | Knowing and understanding emotions and feelings of others <ul style="list-style-type: none"> • Empathy- recognizing and appreciating others' feelings • Interpersonal relations- establishing mutual satisfactory relations showing intimacy • Social responsibility- Being a helpful and constructive member of a group for its interests. |
| Adaptability | Being flexible and changing the person's feelings with changing situations• <ul style="list-style-type: none"> • Problem solving- identifying personal and social problems and producing solutions to these questions • Reality testing- the assessment of the appropriateness between the perception and reality of the person • Flexibility- adjusting feelings, thoughts, and behaviors against changing situations |
| Stress Management | Coping with stress and control of emotions <ul style="list-style-type: none"> • Stress tolerance – confronting negative events and stressful situations • Impulse control- resisting or controlling impulses and delaying impulses |
| General Mood | Feeling and expressing positive emotions, being optimistic <ul style="list-style-type: none"> • Happiness- being satisfied with one's life and expressing positive feelings • Optimism- looking at the bright side of life and showing a positive attitude |

Source: Sharma & Sehwat, (2014, p. 14)

Bar-On's model of emotional intelligence includes models related with emotional and social intelligence (Somuncuoglu, 2005, p. 282). The model consists of five dimensions: the intrapersonal, inter-personal, adaptability, stress management and general mood. Intrapersonal refers to knowing and understanding one's emotions, feelings and ideas, and has five sub-dimensions: emotional awareness, self-confidence, self-esteem, self-actualization and independence. Inter-personal is about knowing and understanding others' emotions and feelings. This field consists of empathy, interpersonal relations and social responsibility sub-dimensions. The adaptability which is related to being flexible and changing the person's feelings with changing situations consists of problem solving, reality testing and flexibility dimensions. Stress tolerance and impulse control form stress management, while happiness and optimism dimensions constitute the general mood (Sharma & Sehwat, 2014, p. 14). The explanations regarding the dimension are given in Table 4.

3.4. Cooper and Sawaf's Model of Emotional Intelligence

In the 1997 in their book entitled *Emotional Intelligence in Leadership* Cooper and Sawaf explained emotional intelligence in a model called four corner stones. The four cornerstones of emotional intelligence consist of emotional literacy, emotional fitness, emotional depth and emotional alchemy.

Table 5: Cooper and Sawaf's Dimensions on Emotional Intelligence

| Dimensions | Sub Dimensions |
|--------------------|--|
| Emotional Literacy | <ul style="list-style-type: none"> • Emotional honesty: Acting with real emotional knowledge • Emotional energy: Understanding the connection between emotion and energy. • Emotional feedback: Evaluating emotion as a sign • Practical intuition: Evaluating intuition as an emotional knowledge and act intuitively |
| Emotional Fitness | <ul style="list-style-type: none"> • Authenticity: Listening to person's own feelings, evaluating his own beliefs and thoughts • Trust Radius: Trusting oneself and another and to be reliable by other people • Constructive discontent: Creation of productive ideas from different views • Resilience and Renewal: Renewing person's own perspective in situations out of his/her control |
| Emotional Depth | <ul style="list-style-type: none"> • Unique potential and purpose: Deciding who the person is and what his/her purpose • Commitment: : Motivating the person with emotions, positive contribution to the intelligence • Applied integrity: Strict adherence to integrity and moral values • Influence without authority: Behaving in a manner that takes into account the emotional potential rather than authority |
| Emotional Alchemy | <ul style="list-style-type: none"> • Intuitive flow: Devoting oneself to an event and force oneself to overcome a difficult thing • Reflective time shifting: Superior performance against the uncertainty of the future in thoughts and feelings • Opportunity sensing: Being aware of present time and future and feeling them • Creating the future: Being able to enter into a productive change process different from the past |

Source: Aslan (2013, p. 67)

Emotional Literacy: The first cornerstone of the model includes developing a clear and useful vocabulary for emotional learning and understanding, and understanding of the wisdom of emotions, respecting and valuing emotions. Emotional honesty, emotional energy, emotional feedback and practical intuition constitute emotional literacy (Cooper, 1997, p. 33). Emotional literacy is the awareness of the individual's emotional potential and uses this awareness in individual relationships. In order for an individual to have emotional awareness, he must be able to perceive the emotional reality as neutral, to perceive the connection between his energy and emotions, to have emotional feedback and practical intuition (Keskin et al., 2016, p. 66).

Emotional Fitness: The second cornerstone of the model is emotional fitness. Emotional fitness enables the ability of recognizing emotions to put into practice by improving confidence and credibility. It improves effort and flexibility, contributes to resilience by providing a constructive force against challenges and changes (Eroz, 2011, p. 71).

Emotional Depth: The third cornerstone of the emotional intelligence model is the emotional depth. This dimension refers to the individual's self-awareness of his / her potential and dedicates himself / herself to these goals and aligns them with the objectives of the organization. The individual should treat according to truth and

moral values and his / her influence on others should exhibit behaviors that take into account emotional aspects rather than establishing authority (Keskin et al., 2016, p. 66).

Emotional Alchemy: Alchemy is defined as “the power or process of converting a simple substance that is considered to be of little value into something more valuable “. With emotional alchemy we are aware of the feelings we feel in ourselves and in others, and we learn to regulate and direct them. This dimension focuses on the feature of emotional intelligence that increases the creativity (Keskin et al., 2016, p. 67

4. Emotional Intelligence in Organizational Studies

Emotional intelligence is considered as a performance criterion in terms of organization activity and customer expectations in business life. The focus of research on emotional intelligence is the idea that emotions are the determinants of individuals' behaviors. Therefore, it is stated that there will be some positive contributions if the emotions are managed well (Gürbüz & Yüksel, 2008, p. 178).

Emotional intelligence can be mentioned in every area where the individual is and where the individual is influenced. Therefore, the business environment in which individuals spend most of their time is one of the important areas where the effects of emotional intelligence can be measured. Accordingly, various studies have been conducted on the effects of emotional intelligence in the business environment. In Table 6, some issues and case studies are discussed along with emotional intelligence.

Various studies have been carried out on the effect of emotional intelligence on performance and different results have been found. In some studies, while there is no relationship between emotional intelligence and performance (Gurbuz & Yüksel, 2008), it is stated that emotional intelligence is effective in performing superior performance in a number of studies. Emotional intelligence has a positive effect on business performance by improving the quality of business life. According to Goleman, who has important research on emotional intelligence, emotional intelligence gives competitive power to employees and contributes to them to be more successful in their jobs (Sudak & Zehir, 2013, p. 142). Employers with high levels of emotional intelligence show better work performance and are particularly prone to perform better in the high emotional work sharing (Schutte & Loi, 2014).

Besides influencing performance, emotional intelligence also affects some skills that have an impact on performance and has a positive effect on superior performance. The ability to use emotions, to use positive and negative emotions in performing tasks, to use an individual's own emotions effectively, to understand the feelings of other individuals and to establish effective communication (Zeidner, Matthews, & Roberts, 2009, p. 261) contribute to superior performance. Therefore, this may be the reason why there are different results for the relationship between emotional intelligence and performance.

Table 6: Studies on Emotional Intelligence in Business Environment

| Issues dealt with on Emotional Intelligence | Conducted Research |
|---|---|
| Job Satisfaction | Wong and Law, (2002), Sahin et.al. (2011), Sudak and Zehir, (2013), Gurbuz and Yuksel (2008) |
| Stress, Exhaustion | Genç et al. (2016), O'Connor et al. (2017), Ramesh (2017), Ranasinghe et al (2017), Deniz and Yılmaz (2006), Nikolaou and Tsaousis (2002), Gulluce and Iscan (2010), Ju et al. (2015), Aslan and Ozata (2008) |
| Leadership | Bassem, (2017), Kusakli and Bahcecik, (2012), Khalili, (2017), Erkus and Gunlu, (2008), Sharma and Sehwat (2014), Ozdemir and Ozkul (2016), Delice and Gunbeyi (2013), Edizler (2010), Hutchinson and Hurley (2013), Hotamisli and Efe (2015) |
| Performance | Muchhal and Solkhe, (2017), Onay, (2011), Clarke and Mahadi, (2016), Weinzimmer et al. (2017), Castillo and Valle (2017), Sony and Mekoth (2016), Lu and Fan (2017), Singh and Mahmood (2017), Côté and Miners (2006), Gürbüz and Yuksel (2008) |
| Problem Solving, Decision Making | Ismen (2001), Karabulutlu et al (2011), Livesey (2017), Baba and Siddiqi (2017), Koksall and Gazioglu (2007) |
| Organizational Citizenship Behavior | Anwar et al (2017), Hj. Yunus et al.(2010), Carikci et al. (2010), Côté and Miners (2006), Gurbuz and Yuksel (2008), Ismail et al. (2013) |
| Organizational Commitment | Gecici et al. (2016), Arslan et al. (2013), Nikolaou and Tsaousis (2002) |
| Communication | Demir and Demir, (2009), Cetinkaya and Alparslan (2011), Eroz (2011) |
| Conflict Management | Sharma and Sehwat (2014), Yaslioglu et al. (2013), Gunkel et al. (2016), Atay (2002), Demir (2006) |

Leadership is one of the most discussed issues together with emotional intelligence. Goleman (2016, pp. 8-9) states that the skills that distinguish great leaders from ordinary leaders are emotional skills. While a person is equipped with a good education, a sharp and analytical mind, and a source of new great ideas, he/she cannot become a great leader when he lacks emotional intelligence skills. Some emerging leadership theories confirm Goleman's claim. In studies on leadership, it is stated that emotional and social intelligence are important for leaders and managers. Because cognitive and behavioral complexity and flexibility are important features of talented leaders (Wong & Law, 2002, p. 244).

Leadership is about the interaction of leaders with other individuals. Once social interactions are in question emotional awareness and emotional regulation become important factors that influence the quality of interactions (Wong & Law, 2002, p. 244). Leaders with emotional intelligence skills are able to regulate perception, comprehension and emotions more effectively. Leaders demonstrating these skills create a positive atmosphere in their environment (Hj. Yunus, Ishak, Raja, & Othman, 2010, p. 14), which is effective for employees to perform more effectively. Emotional intelligence is extremely important in the business world, but in an institution where people with lack of emotional intelligence skills constitute a majority, the performance cannot be increased by only enhancing the leader's emotional competence. In addition, employees should have efforts to increase their emotional intelligence skills.

When the relationship between emotional intelligence and perception of problem solving skill is examined, it is stated that as the level of emotional intelligence increases, the perception of problem solving skill will increase (Ismen, 2001). By understanding the emotions of himself and his / her surroundings, the individual can use these emotional data to solve the problems he / she faces. Individuals who know and control their emotions better can cope more easily with the problems they face (Karabulutlu, Yılmaz, & Yuttaş, 2011). In addition, individuals with high emotional intelligence can use this to facilitate creative thinking and decision making (Köksal & Gazioglu, 2007).

Efforts have also been made on the relationship between emotional intelligence and organizational issues such as organizational citizenship, organizational commitment and job satisfaction. It was also found that organizational citizenship behaviors of individuals with high emotional levels were high (Anwar, Osman-Gani, Fontaine, & Rahman, 2017). It is also stated that high emotional intelligence increases their job satisfaction (Sudak & Zehir, 2013)

Emotional intelligence makes people active in two areas including social and personal. The individual who is emotionally intelligent can effectively deal with the emotions and thoughts in his / her personal field. In the social sphere, the individual understands his/her impact on others as well as how he/she manages others' emotions and how he/she can deal with their emotional reactions (Barutcugil, 2004, p. 284). Therefore, the development of emotional intelligence skills affects person's individual, social and business relations.

Conclusion

The issue of emotional intelligence has been used extensively in organization studies. The aim of this study is to explain how emotional intelligence is developed over time and how it is used in organizational studies. In this context, the conceptual development of emotional intelligence and what models are proposed are discussed. In addition, studies on the use of emotional intelligence in organizations are also discussed.

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THE EFFECTS OF INTELLECTUAL LEADERSHIP FEATURES OF THE UNIVERSITY RECTORS IN MID-SIZED CITIES ON THE LOCAL COMMUNITY

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Introduction

As a result of the rapid technological progress, communication opportunities have been diversified and the speed of reaching global information has increased considerably. This situation led to the transformation of countries into markets as a result of the increase in global economic competition and social structure and demographic changes caused by migration and high urbanization rate.

The need for qualified and well-equipped managers who meet the demands of the citizens and act based on the satisfaction of the society and carry their institutions to the future is increasing day by day. The differentiation in people's consciousness and expectation levels necessitated the change in the management and leadership approaches adopted in public administration and especially in local government institutions as well as in private sector institutions. Intellectual leadership emerges as the understanding that emphasizes the academic accumulation and social sensitivity of the leader among the leadership approaches revealed by the need for change.

It can easily be said that universities, one of the local government institutions, have an important social impact and transformation power thanks to their academic expertise and intellectual accumulation. In particular, universities in medium-sized provinces (in our study the population is considered to be below 500.000) with provincial municipalities have a more advantageous position and influence / directing power in terms of openness to the effects and ease of communication with citizens. At this point, it is clear that the intellectual leadership practices of the rectors, who are the managers of these universities, are important for the correct and effective use of this position and power.

Leadership

When the academic studies are examined, it is seen that almost every researcher has a different definition about leadership. This situation can be the natural result of the versatility of the concept, but it can also be result of the fact that every human being is a combination of mental-emotional complex properties.

Another reason for this situation is that leadership should be applied differently for each person, situation and environment (Pfeffer, 2002: 27). As a matter of fact, it is seen that Stogdill, who works on leadership theories, has expressed that the concept of leadership has as many definitions as the number of people who define this concept (Bass, 1990:7; Bakan ve Bulut, 2004: 153).

It can be thought that giving some of the definitions made by focusing on the different aspects of the concept of leadership will be useful to reveal the general characteristics of the concept. In this respect, leadership is seen as the art of making others to do the works that they believe should be done (Lewis, 2007: 29); the ability to think

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by putting himself in the position of others (Erçetin, 2000: 15); to actualize the objectives of the organization and to meet interests of the employees in the best way (Schermerhorn, 2009: 9); under certain circumstances, the process of influencing and directing the activities of others in order to achieve specific personal or group objectives (Koçel, 2010: 583); the art of influencing people (Drucker, 2000: 40); to create synergies with individuals in accordance with common goals (Tekin, 2008: 11); being responsible for the effective and efficient use of resources and organizational goals (Lussier, 2008: 6); to perform impressive behaviors for subordinates in accordance with the functions of the organization or the group it is headed (Üçok, 2006: 4); a complex process of relations between the audience and the situation (Maxwell, 1999: 21).

Again, in line with the common characteristics of the definitions made, it can be said that leadership is a political and cultural concept independent of formal positions and not being genetic or aristocratic (in terms of belonging to the nobles) (Bulut & Uygun, 2010: 33).

Intellectual Leader

The French word “intellectuel” means “literate, cultured person”. Etymologically, it means “mind, understanding.” This word is derived from the words “intellectus” in Latin and “intellect” in French. “intellectual”, defined as “intellectually enlightened, enlightened in different branches of science, technique and culture, in the dictionary of the Turkish Language Society” is the person who follows the world and interprets events with concepts and historical developments in a universal sense (Anar, 2017). Also it is defined as a knowledgeable person who has a mission to lead the society, oriented towards intellectual or mental activity, and has high evaluation and criticism skills (<https://www.turkcebilgi.com>).

Intellectual leaders also have knowledge and experience in management and guidance, together with their academic expertise (Akgemci, 2011). Leadership ability, social and cultural sensitivity, adaptability and flexibility, language and persuasion ability, maturity, coordinated work, openness to different ideas and visionary can be stated as the main characteristics of these leaders (Akdemir, 2008: 135). High institutional representation ability, reasoning, decisiveness and consistency in behavior, analytical thinking and a high general knowledge of culture can be listed as the other characteristics of the intellectual leader (Macfarlane, 2011).

The intellectual leader does not satisfy his / her official / institutional duties and encourages the learning of the people he manages, as well as those outside the institution (Akdemir, 2002). For these leaders, continuous learning and teaching has become an aim and they make efforts to specialize in more than one field.

The intellectual leader is a person with a social sensibility that can be defined as the attitude of trying to overcome the problems of the social environment outside the institution and the effort to eliminate these problems (Akdemir, 2008: 134), because the intellectual leader is brought up with a common cultural understanding that will enable the integration of the national values, which are the common heritage of all, with international values (Macfarlane, 2011). In this sense, it can be said that the intellectual leader is interested not only in institutional development and progress but also in a fast and effective effort to solve social problems (Macfarlane and Chan, 2014: 90).

Intellectual leader shows effort and desire to affect both the organization s/he works and external environment of the organization (Akgemci, 2011). In this respect, it is possible to talk about the different functions of intellectual leadership which are outside and inside the organization.

These functions can be listed as being a role model, guiding, protection, activation, defense and embassy (Macfarlane and Chan, 2014; Uslu, 2015: 85). According to this;

Being a role model is related to the knowledge that these leaders have with their personal characteristics. Those people influence others with their expertise and knowledge in their fields of study / interest as well as their moral, hardworking, energetic, humorous, relevant and determined attitudes and behaviors (Macfarlane, 2012). These leaders are exemplary and respected for people both inside and outside the organization.

Guidance can be defined as ensuring that employees reveal their potential and protecting them from internal and external pressures (injustice, mobbing, irregularity, etc.) and not making concessions to enable them to develop themselves in a comfortable and peaceful working environment.

Protection function refers to the establishment of a kind of guardianship for the development and control of all activities carried out in the institution in order to increase the efficiency of the institution's activities and the employees of the institution (Macfarlane, 2011). Here, the guardianship is not intended to pass a strict audit of the activities carried out, but rather to ensure that it is carried out freely but legally, duly and meaningfully. In this way, institutions and employees will be able to progress more effectively.

Activation is to value new ideas and their owners (Macfarlane, 2012). The intellectual leader evaluates and activates the idea by enabling these ideas to be promoted within and outside the institution and put into practice in the institution (Akdemir, 2008: 134). On the other hand, intellectual leaders support these people and encourage them and other employees.

Defense function is related to respect for corporate culture, corporate values and universal working principles (merit, fairness, fair management, etc.) and takes them into consideration in all decisions and practices (Macfarlane & Chan, 2014). Intellectual leaders protect the culture, values and principles against the negative impacts on the inside and outside of the organization and prevent them from being damaged. This, of course, is directly related to the personal characteristics of the leader as well as its authority within the organization and its socio-political reputation and effectiveness outside the organization.

Embassy function encompasses the social worries of the intellectual leader and their social influence / transformation efforts and their personal abilities (Macfarlane, 2012). There will be efforts to protect universal spiritual values as well as academic and socio-cultural awareness efforts. In this sense, this function of the intellectual leader, whose purpose is to present his / her academic knowledge to the service of the society, especially with his / her expertise, is carried out with the activities outside the institution rather than within the institution.

Establishing relations with civil society organizations and participating in their activities; using social sharing platforms effectively; being a speaker at national and international seminars and conferences; coordinated work with official-political administrators; creating or participating in social responsibility projects; promoting and organizing scientific, cultural and artistic activities within and outside the institution are the tools that the intellectual leader can use in the sense of functions of intellectual leadership.

University and Local Community

It is possible to say that universities influence the local community defined as (Mowforth ve Munt, 1998; Richards ve Hall, 2000; Aslan, 2008: 73) the whole of the people living together in a certain geographical area in the provinces where they are established (Erdem, 2005; Yıldız, 2016: 77).

Education is the main field of activity for the students to come to the university. In this context; some of the students work part-time and meet a certain part of the need of local commercial enterprises. In addition, after graduation, students staying in the province where the university is located will contribute to the local economy as qualified staff or entrepreneurs. In addition, students keep the local economy alive through the local housing market and the daily expenses they make. Through social activities, carried out with the local community and local civil society organizations, they contribute to the efficiency and development of the socio-cultural life of the local community and also bring diversity and richness to the demographic structure.

In addition to these, for the universities with effective and successful education activities, students can contribute to the physical development of the province by triggering the number of investors and the increase in the population due to migration due to the advertisement of the job success they will naturally do after graduation.

Research and publication is an activity carried out by the academic staff of the university. In these researches and publications, giving priority to the problems of the local community and their solutions is a necessity of social responsibility. In addition, addressing local problems in graduate thesis studies, working in coordination with non-governmental organizations in these studies and giving the samples on the province can enable solutions to these problems in the country or even internationally.

Similarly, companies and centers that will operate within the scope of technopark, technokent and technology transfer offices to be established within the university will be able to contribute significantly to the development of the local community (Çetinsaya, 2014). National and international congresses and symposiums can be counted as other activities that benefit the promotion and development of the province. In summary, universities can direct the economic and socio-cultural development of the province they are located in, by establishing bridges between local, national and international community, institutions and organizations (Taşçı et al., 2011: 134).

The provision of social services is the third main field of activity of the universities. Within the scope of these activities, universities, with their students, organize courses such as foreign language, music, painting and sports open to the participation of the local community; they carry out cultural activities such as festivals, concerts, theaters and sporting activities, tournaments and competitions on different scales. In this way, they contribute significantly to the economic and socio-cultural development of the local community.

Universities, besides these basic activities and their components; in line with the social changes experienced on a global scale; undertake responsibility for the activities such as;

- Being actively involved in the solution of major global, regional and local problems such as poverty, hunger, ignorance, social exclusion, and international and national inequalities,
- working to promote intellectual and moral solidarity by the help of alternative suggestions and recommendations, sustainable human development, universal respect for human rights, equal rights for women and men, application

- of justice and democratic principles in the university and society, understanding among nations, ethnic, religious, cultural and other groups and a non-violent and peaceable culture,
- working on promoting intercultural understanding and adaptation, cultural diversity and enrichment of cultures,
 - helping students comprehend the knowledge, skills, values and abilities that will enable them to be guided as responsible and committed citizens,
 - changing and transforming themselves, strengthening ties with different levels and forms of education, improving the quality of the educational process and increasing its effectiveness (UNESCO, as cited in Başkan, 2000).

Activities carried out by universities in small cities, are more important in terms of the impact on the development of the local community and the necessity of this effect compared to the universities in metropolitan cities.

Indeed, the studies (V. and VI. Development Plans, 1987; Castells, 2005: 510; Gökgür et al., 2016) conducted for the universities in the middle-sized cities with population less than 500.000 (In the literature, different numbers are given in terms of the population of medium-sized cities. However, 50-000-500.000 population classification, which is considered to be the most suitable for the existing urban population structure, was preferred), it is determined that local community expects universities to carry out researches to solve their problems, to carry out projects with public institutions and other non-governmental organizations which have an investment task in the province to contribute to the economic development of the province, to establish departments that will improve the region in terms of culture and tourism and to carry out studies (Akçakanat et al., 2011; Öztürk et al., 2011; Özdem & Sarı, 2008).

In Turkey, there are 38 provinces which are defined as the city in the medium scale. According to the Turkey Statistical Institute's data for the year 2017, the population of these provinces (10,574,844) corresponds to approximately 13.1 % of the country's total population (80,810,525). Considering that there is a university in all of these cities, if the university is managed with an appropriate leadership approach and opportunities is used positively and effectively, the size of the contribution to be provided directly or indirectly to the development of the country as well as the development of the local community emerges.

Intellectual Leadership and Rector

It is seen that one of the new leadership approaches that emerged in the direction of the managerial needs brought about by the rapid economic, technological, cultural and social change and transformation that intellectual leadership has experienced in the recent period, and in which the leader has the most emphasis on the social influence, the academic accumulation and the orientation ability. In this sense, considering the academic accumulation and social impact potential, it can be said that there is a desired and expected leadership style in university rectors.

The Rectors, Article 13 / b of Higher Education Law No. 2547,

- (1) To preside the university committees, to implement the decisions of the higher education institutions, to review the decisions of the university committees and to ensure regular work between the institutions affiliated to the university,
- (2) To inform the Interuniversity Board about the education, scientific research and dissemination activities of the university at the end of each academic year and if necessary,

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(3) To prepare and submit to the Higher Education Council the investment programs, budget and staff requirements of the University, after receiving the opinions and suggestions of the affiliated units, the university board of directors and the senate,

(4) To change the positions of the academic staff and other personnel in the organizations and units forming the university or to assign new tasks to them,

(5) In the form of general supervision and supervision on the units of the university and its staff at all levels, and after the assignment of the institution in the form of lendiril ... education-teaching, scientific research and extension activities in line with the state development plans, principles and objectives ... they are firstly authorized and responsible.

This situation shows that in our country, the state has not only looked at university rectors as an ic educational institution manager ıg and has also given them a national mission as kurum social and economic development advocates Bu.

The fact that the rectors have an intellectual leadership understanding is an important factor factor in order to ensure that the universities they manage manage their activities and roles effectively and effectively, and to carry out their national missions successfully with their legal duties within and outside the organization. In addition to the management of the institution, this leadership approach, which aims to reflect the knowledge and experience it has outside the institution, has the status of protocol especially in medium-sized cities, physical proximity (related to the relative physical smallness of the province), academic reputation with administrative independence, and in this respect, the socio- It is thought that the rectors of the city university, which has the potential to directly influence the cultural, political and economic development, can enable them to best “kinetise” (conversion to kinetic energy) their potential.

Intellectual Leadership Practices of Rectors Effective to Local Community: Nevşehir Hacı Bektaş Veli University Example

In this part of the study, it is aimed to examine the social, cultural and economic effects of a university which is managed by intellectual leadership. In this context, the activities and activities of the rector of Nevşehir University Hacı Bektaş Veli University (NEVÜ), which was chosen during the term, were evaluated in terms of the basic characteristics of the intellectual leader within the context of the functions of the university towards the local community.

TABLE: *The Functions Of The University Towards The Local Community And The Intellectual Leader Characteristics Of The Rectors*

| Functions of the University towards Local Society | Activities (2017-2018) | Related Feature of Intellectual Leadership |
|--|---|---|
| Education and Training Activities | <p>Associate Degree and Undergraduate:</p> <p>2.1% increase in the number of programs 7.4% increase in the number of students</p> <p>Graduate:</p> <p>28.6% increase in the number of programs, 21.9% increase in the number of students 81.3% increase in the number of foreign students</p> <p>Establishing 2 new faculties, 2 new vocational schools and 3 new research center</p> | Protection Activation |
| Research Activities And Scientific Studies | <p>Establishment and commissioning of Technopark, Incubation Center and Technology Transfer Office for the promotion of the research and development activities of the citizens living in Nevşehir by supporting them financially, commercially and academically.</p> <p>Organizing meetings for the purpose of coordinating with public institutions and industrial organizations in Nevşehir,</p> <p>Signing of cooperation protocols for companies operating in Nevşehir and their fields of expertise,</p> <p>23 times; organizing national / international academic congresses and seminars, organizing trips to promote the Cappadocia region in Nevşehir,</p> <p>20 times; Preparing a graduate thesis in Nevşehir with the findings and recommendations in the fields of tourism, agriculture, trade, history and economics,</p> <p>By appointment by the Rector, by faculty In-service training seminars for personnel in public institutions in Nevşehir,</p> <p>Constitute of special academic research groups about “Bims”, it’s a mine of Nevşehir,</p> <p>Establishing a “research and development laboratory” for “potato”, it grown in Nevşehir,</p> <p>Establishing a “research and development center” for “tourism”, which is the biggest source of income of Nevşehir</p> | Activation Embassy |

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| | | |
|----------------------------------|--|--|
| <p>Social Service Activities</p> | <p>In addition to the university students, all citizens living in Nevşehir also participated;</p> <p>26 times; foreign language, photography, mountaineering, diction, body language, cv preparation, basketball, football course with the provision of summer school for children and young people,</p> <p>7 times; organization of theater show organization,</p> <p>8 times; organization of concert organization,</p> <p>17 times; Arrangement of national-sized football, basketball, handball, kick bocks, taekwondo, climbing, chess, tennis and table tennis tournament organization,</p> <p>57 times; establishment of event clubs for different subjects and local/national problems by university students,</p> <p>Establishing “Children University” in order to increase the knowledge and skills of children living in Nevşehir within the university campus,</p> <p>Awareness-raising activities (seminars, events, conferences, etc.) for the citizens of Nevşehir within the university about women’s rights,</p> <p>Awareness-raising activities (seminars, events, conferences, etc.) for the citizens of Nevşehir within the university about disabled citizens,</p> <p>Speakings, interviews, interviews and interpretations on current issues and the promotion of the university in the events organized by the Rector, national television channels and non-governmental organizations,</p> <p>Providing informative seminars on the current and historical developments at the local / national level as a result of the cooperation with the non-governmental organizations by the Rector.</p> | <p>Being a role model Guidance Embassy</p> |
|----------------------------------|--|--|

Conclusion

The rapid development of information communication technologies, human-oriented differentiation in public administration understanding and public services revealed a need for leaders with qualified and professional equipment who act based on the principle of citizen satisfaction and capable of guiding the society in which they live. In line with this need, many leadership approaches have emerged and defined recently. Within these approaches, each focusing on the different aspects of the concept of leadership, intellectual leadership is seen to have a different position because it has the academic accumulation and the institutional and social orientation power it brings.

In addition to their academic expertise, these leaders have a say in management and guidance with their knowledge and experience. These leaders, who draw attention with their social sensitivities, persuasive abilities, charisma and visionary perspectives, have the ability to think institutionally and analytically and have a wide range of scientific and cultural backgrounds. In addition, since such leaders have the habit of continuous learning and teaching, they are seen to have a guiding and role-modeling effect.

In terms of being an intellectual leader, one of the most advantageous groups is seen as the university rectors in terms of the intellectual accumulation gained by their professions, the effectiveness of their duties and the legislative powers they possess. Indeed, higher education legislation in Turkey, not only give broad powers to the rector but also has identified significant responsibilities in terms of the province's socio-economic and cultural development.

In order to fulfill these responsibilities, the rectors of low-populated city universities have a more effective activity potential than their counterparts. The number of high-ranking officials in these cities is relatively small, and one of these officials is undoubtedly the rector of the city university. Similarly, the dignity of the academic identity of the rector and the physical proximity of the university with the city center and the relatively low urban population are factors that increase the socio-cultural and economic impact of the local community. All these influences make it easier for the rector to be recognized by the local community and gain a qualification as a leader in the city, increasing the potential to influence the local community.

It is a very important factor to have an intellectual leadership understanding in order for the rectors to properly carry out both their internal duties and their mission towards the local community. With the support of managerial independence, a city university rector with intellectual leadership characteristics will not have difficulty in directing the local community with his/her activities and practices. An intellectual leader who are capable of reflecting his or her knowledge and experience to the outside of the institution he / she work with, can have enormous benefits for his/her institution and other shareholders. Thanks to the leadership of the rectors, the contribution of the university to the socio-cultural, political and economic development of the local community will increase to the highest levels.

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THE ADVANTAGES THAT ARE BROUGHT IN TO ENTERPRISES BY TRANSFERRING FROM TRADITIONAL MARKETING (MARKETING 1.0) TO DIGITAL MARKETING (MARKETING 4.0)

Murat TOKSARI¹

In today's world where global competition environment is experienced, determining the consumer wishes and needs and producing products and services in this direction have become an important marketing phenomenon for enterprises. In particular, all enterprises have focused on producing policies that will focus on marketing activities due to changes in information technologies. In line with this, the use of internet and social media, which is now used by everyone, has enabled companies to develop new strategies that will integrate with marketing. Now, internet is a very important tool in terms of leading consumers to interaction about product and service and giving information to enterprises about producing innovative products by considering the values coming from consumers. Because objects' communication is intended with digital technology process which also referred as artificial intelligence. Today, the use of industry 4.0 (innovative technologies, three-dimensional printers, big data, simulation, autonomous robots, intelligent factories, cloud information system, system integration, etc.), which integrates with marketing 4.0, gives enterprises a great advantage in the global competition environment.

This study will examine the marketing periods from 1.0 to 4.0 by taking into account the companies that want to be the best at the global level. In addition, it will try to determine the necessity of developing tactics appropriate to the digital technology process by the enterprises that want to enable consumers to interact with the Internet and find ways to achieve this.

Introduction

From the past to the present, the demands and needs of consumers have changed continuously and every business that wants to meet these demands has developed effective marketing strategies to gain competitive advantage. In the 1800s, consumer demands and needs were not very important for businesses. During this period, the production concept came to the forefront and the businesses taking action with the understanding of I sell what I produce developed that the product-oriented strategies. In recent years, especially with the emergence of internet and digital social networks, there have been many changes in marketing. All these new changes have made it necessary to revise marketing concepts and tools, and to change the traditional marketing model for businesses.

In the 1930s, people became impoverished by the global crisis, and the messages misleading consumers were implemented by the businesses rather than the consumers' needs and needs, I sell what I produce as long as I produce understanding went on. This understanding, which continued until the 1950s, has shifted to a new phase with marketing approach. It is now important to answer the questions of consumers' wishes and needs and how to convince consumers in gaining competitive advantage and making profits for businesses. In this period, businesses are now focused on consumers and determine their marketing policies accordingly. The basic focus of businesses is on the concept of I sell whatever I produce as long as I make a profit. In the following periods, social marketing

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concept which adds value to consumers has been started. Considering that the demands and needs of the target consumers vary according to the society and socio-cultural structure they live in, companies have divided the market into homogeneous markets with the same characteristics as customs, traditions, lifestyles, personality traits etc. and have formed marketing policies accordingly. After the 2000s, the companies entered the digital marketing period with the internet technology. In today's world where brand wars are experienced, consumers prefer businesses that respond very quickly to their demands and needs. This has led enterprises to develop strategies to minimize time and costs. This situation has led enterprises towards a more personalized marketing approach that offers tailor-made products and services rather than a mass marketing approach through standardized products. Nowadays, different demands and needs of societies are possible with changes in the world of enterprises. In particular, these changes have been made by the intensive use of internet technology by companies and with Marketing 4.0, the interaction between products and consumers has become tighter thanks to technological support and internet. Marketing and promotion have gained a new dimension with the changes in information technologies and digital world and social media has been intensively used by consumers. In particular, businesses that use social media actively to promote their products and services have seen social media as the most effective marketing strategy in reaching consumers. Nowadays, businesses create content for their products and services through social media and reach their target consumers.

The Strategies That Businesses Follow From the Marketing 1.0 Period to the Marketing 4.0 Period

The internet and social media, which are used by everyone today, have created companies that want to gain competitive advantage the necessity to develop new strategies that will integrate with marketing. Now, internet is a very important tool in terms of leading consumers to interaction about product and service and giving information to enterprises about producing innovative products by considering the values coming from consumers. But businesses have gone through a number of ways until they come to digital marketing.

In the 1800's, enterprises formed the marketing philosophy with the understanding that the products and services flow from the producer to the consumer. In this period, the consumer demands and needs were not taken into consideration, and it was acted with a product-oriented understanding in which consumers had to buy whatever businesses produced. This period corresponded with industry 1.0, the period in which production systems transformed from workshop to factory, from piece work production to mass production and water / steam power machines were used in production (Wayer et.al. 2015).

In the marketing period 1.0, businesses have presented consumers a relatively small number of products based on the idea of product and production. In this period, providing sales was the first priority for the enterprises and the focus was only on the sales of the products without considering the demands and needs of the target market (Jara, et al., 2012). At the time when Marketing 1.0 was first established, there were very few enterprises operating in the market and these enterprises were trying to produce high production at low cost (Kotler and Keller, 2006), using undeveloped machines and producing collectively uniform products (Nowacki, 2015).

Marketing 1.0 period is a period in which there was not enough link between production and marketing, and businesses were generally carrying out activities focused on products (Tarabasz, 2013). For this reason, during the marketing period 1.0, enterprises were trying to produce products that would provide functional benefits only to consumers with product-oriented marketing approach (Kotler, 2011; Başyazıcıoğlu and Karamustafa, 2018). The best example of this idea is the T-type car model designed by Henry Ford.

In 1900s, Henry Ford set up the assembly plant and headed towards mass production. During this period, transportation was provided by people with carriages. Henry Ford produced a T-type black car and stated that people would not prefer a car other than this type of car (Fuciu and Dumitrescu, 2018).

The second evolution of the idea of marketing is the marketing 2.0 period, which is reached with the first step of the contemporary information age. In this period, technology, socio-cultural structure, demographic structure of consumers and rapid changes in the economy have fundamentally changed the commercial strategies of enterprises (Tarabsz, 2013). After the economic crisis of 1929, together with people's reaching prosperity, consumers' purchasing power began to increase due to economic conditions. This information age was reached after the development of information technology and communication. In this period, consumers became valuable and information about similar products and services was started to be investigated by consumers (Kotler et al., 2010). Thus, with the marketing period of 2.0, consumer-oriented marketing approach was introduced. Now, competition for businesses is seen as an important criterion in marketing activities. In the event that businesses want to gain competitive advantage, they should first determine the needs and needs of the target consumers and produce products and services accordingly. During this period, the enterprises made radical changes in the marketing of their products. Because, consumers began to be conscious and started to tend to choose the best available choice offered to them. When the age of information and communication gradually started to develop in this period, consumers started to compare the similar products offered to them according to their functional characteristics and turned to the most sensible products (Jara et.al., 2012).

The third evolution of the idea of marketing is the 3.0 period of marketing, which acted with a value-focused approach to conscious consumers. The consumer-oriented approach of the Marketing 2.0 period was the basis of the marketing 3.0 period. With marketing 3.0 customers were not only consumers but also complex multi-dimensional people. Consumers had already started to select businesses and products that met deeper needs for participation, creativity, society and idealism. In marketing 3.0, a new benefit was added as emotional benefit (Erragcha and Romdhane, 2014), and businesses turned to create value to address consumers' feelings. Environmental and social factors that emerged as a result of industrialization and globalization changed the view of conscious consumers to brands. For this reason, the enterprises trying to make the world a better place in terms of social responsibility tried to develop strategies that could touch the feelings of consumers (Nowacki, 2015).

In this period (Marketing 3.0), a strong relationship was established between consumers, brands, products or services and businesses. Because of this strong tie, in the marketing period 3.0 consumers wanted to feel the feeling that they are the owners of the brands. Therefore, enterprises focused their missions, visions and goals on this emotional value of consumers. In this way, consumers had a strong relationship with the brand and the enterprise and felt themselves worthy.

Businesses that develop marketing strategies with a value-based approach have developed policies that can improve their internal customer motivations and have enabled their internal customers to act with a sense of corporate belonging (Fuciu and Dumitrescu, 2018). Since the consumers had different opinions during the marketing period, the companies made market researches and identified policies that could be problematic and posed policies to be positively positioned in their minds (Erragcha and Romdhane, 2014). During this period, consumers had the advantage of demanding products and services that fulfilled their personal and social demands, needs and desires (Kotler et.al., 2010).

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In 2010, Kotler et al., with marketing 3.0, they argued that products and services should be produced according to both functional and emotional values and stated that enterprises should improve their performance in this direction. The Marketing 3.0 period not only served the needs and needs of loyal consumers for businesses, but also helped to make the world a better place. The Marketing 3.0 period aimed to save money in the long term and to increase productivity by listening to customers' voice (Susilo et al., 2015). Nowadays, businesses are much more interested in the 3.0 period of marketing and marketing 3.0 activities are supported by more businesses. This rapid rise goes back to the emergence of new wave technologies and to the implementation of computers and the Internet that significantly change the way in which information is gathered, the realization of the communication and the organization of advertising (Başyazıcıoğlu and Karamustafa, 2018).

Table 1: 7 P How did the Marketing Mix from Marketing 2.0 to Marketing 3.0?

| | Marketing 2.0 | Marketing 3.0 |
|--------------------------|---|---|
| Product | Products that fulfill individual needs and requirements | Products that fulfill individual and social needs, desires and desires. |
| Place | Online sales | More switch to online sales |
| Price | High price competition | Price advantage for well-known brands |
| Promotion | Individual value, mass communication | Horizontal communication, train about sustainable behavior |
| Process | Process efficiency | Integrate sustainability across the supply chain |
| People | Fair behavior of stakeholders | Share a sustainable corporate vision among employees |
| Physical Elements | Creating a brand | Create characters for brands, accept corporate social responsibility |

Warrink, D. (2015) *The Marketing Mix in a Marketing 3.0 Context*, Retrieved from: [HYPERLINK "http://essay.utwente.nl/67347/1/Warrink_BA_MB"](http://essay.utwente.nl/67347/1/Warrink_BA_MB) http://essay.utwente.nl/67347/1/Warrink_BA_MB . Pdf.

In Table 1, while 4P (product, pricing, promotion, distribution), one of the marketing mix components in marketing 2.0, was effective in the marketing strategies of the enterprises, in marketing 3.0 period, three more mixes (human, physical elements, process) were added to the marketing mix (7P) and it has been effective in the marketing strategies of the enterprises.

Marketing that entered a new era with Industry 4.0, have brought a new perspective to machines and robots by combining the virtual world with the real world. With the help of internet connection and machine learning algorithms, robots can learn and control. Production, logistics and service points communicate with each other and human participation in this process is minimal. Because cyber-physical systems monitor processes and take decentralized decisions. The human input on the production line is a factor that increases human mistakes and replaces them with robots, and it will increase productivity and reduce human costs (Nuroğlu, 2018).

The fourth evolution of the marketing idea is the marketing 4.0 period which occurs when the enterprises respond to the demands and needs of the consumers who become conscious by taking advantage of digital technologies. In general, the marketing 4.0 period can be seen as the Internet of objects. Entrepreneurs and marketers in this digital age are encouraged to act according to marketing 4.0 strategies to maintain their business and increase their earnings

(Kotler et.al., 2016; Başyazıcıoğlu and Karamustafa, 2018). In the era of digital transformation, marketing 4.0 is the next generation of marketing approach. Economic activities have changed due to transformations in global technology (Rahayu et.al., 2018), as the interaction between man and computer increases, marketing strategies have turned into digitalization (Vassileva, 2017). Technology is constantly advancing and affects both business and social life. For this reason, the main reason for the 4.0 period of marketing is to predict the developments in the market. In particular, consumer trends, data management and advanced analytics have come to the fore as the main factors of marketing 4.0 to predict future trends.

Digital technologies have been consistently integrated with marketing activities or marketing 4.0, the next generation of marketing approaches (Jara et al., 2012). With globalization, technologies, growth in the country's economy, competition, innovation and the preferences of consumers have undergone an unprecedented change. With marketing 4.0 and the Internet, the interaction between products and consumers has become faster (Vassileva, 2017). The revolution of today's societies is the changes in the world of businesses. In addition to managers and staff, institutes and enterprises changed with it. Some important changes have occurred due to the intense use and development of the internet. These communication tools have made businesses closer to consumers. The vast majority of people have become more socially connected through media networks, e-mail, YouTube and many other channels of communication (Fuciu and Dumitrescu, 2018). In this context, the marketing period was changed to 4.0 and the content of brand interaction, brand integrity, brand image and brand identity in the virtual environment was started to be fulfilled by enterprises. In this context, the impact of marketing 4.0 on brands can be explained as follows (Jara et.al., 2012):

Brand identity; It is a situation where a brand revives in the minds of consumers. In order to create the identity of the brand in the minds of consumers, the strong differences from other brands should be supported. The brand needs to be unique in the mind of the consumer and it is necessary to produce policies that will be noticed from a lot of brands in marketing.

Brand image: It is about the gains in the mind share of consumers. Beyond the functional properties of the product, brand value also attracts consumers' emotional needs.

Brand Interaction: Marketing 4.0 period focused on consumer experiences and became widespread in a new dimension.

In addition, during the marketing period 4.0, businesses focused on product identity and this identity was based on some technologies such as barcode, matrix barcode and RFID tags. The Marketing 4.0 era is now shifting towards the idea of collaboration and value creation, where consumers can verify and control the actual dimensions of the brand. In this respect, thanks to digital Technologies, consumers either view the features of the product or scan and buy the matrix barcode, radio frequency identification (RFID) and near field communication (NFC) labels. In this case, it causes consumers to be more conscious (Tarabasz, 2013). Situations that enable consumers to be conscious can be briefly explained as follows (Wojciech, 2017);

Barcodes: Barcodes can be found in each product, so that they are identified. In particular, most mobile phones have a built-in camera. This allows bar codes to be scanned and identified for the product in the GS1-13 / EAN-13 system, which is particularly common in Europe and used to mark products for retail sale. This system uses a 12-digit code. Matrix codes: We can consider QR codes as the most popular two-dimensional matrix codes.

Compared to ordinary barcodes, they offer more information storage. We can provide not only our product identification number, but also a product description or a URL that will take us to the web page in them. This type of code includes modules arranged in a square grid on a white background (pattern of black squares). The information encoded in it may consist of four standard data types (numeric, alphanumeric, byte / binary, and Kanji) and the appended extensions may contain almost any type of data.

RFID / NFC tags: RFID: It is the main technology used in the Internet of objects and as a result, there is also an RFID version integrated with NFC on smartphones. NFC / RFID tags and cards used for identification originate from a new generation solution based on the Internet of objects. However, since RFID / NFC-equipped devices are not so common, the solution is sought in the use of older technologies, such as barcodes, because each product is labeled with them.

Nowadays, with the development of digital technology, various labeling technologies such as barcode, frame code and RFID code are continuously used. Different software scanning these labels provide businesses with information about qualification, price and availability of products. Businesses not only manage inventory management effectively from labeling technologies, but also take measures to address employees' deficiencies (Sun, 2012; Başyazıcıoğlu and Karamustafa, 2018). Another technological development used in the management of distribution channels is to monitor the position of the products with the general positioning service (GPS) technology. Thanks to satellite systems, the location of all vehicles can be monitored and businesses and consumers can be informed about the exact location of their products simultaneously. Technological developments not only improve stock management, but also reduce the number of channel members between manufacturers and consumers. Today, consumers can order their products from the web or from the mobile applications of businesses. This allows businesses to work with fewer agents and employees (Chen and Hsieh, 2012).

Now, through social media, consumers are aware of the experiences of other users, additional details about value-oriented actions, and product promotion sites for the widespread identification of the features of the product (Jara et.al., 2012). Nowadays, with the widespread use of social media, the introduction of products and services is made through this virtual communication. Social media application can be expressed as the activation of relatively passive Internet users with changes in ideas and continuous reactions. Businesses promote their products and services using social media tools such as Facebook, Instagram, Twitter, Blogs, microblogs, vlogs, podcasts, social networking sites, groups, forums, discussion lists, content and impressive sharing platforms (Tarabsz, 2013). These social media tools have significantly increased the communication between internet users and are presented to consumers by creating content related to products and services with different pictures and figures by businesses. (Cicarelli, 2013; Tarabsz, 2013).

The Advantages of Transition from Traditional to Digital Marketing from Past to Present For Businesses

In the 1800s, businesses were carrying out their marketing activities without taking into account the consumer needs and wishes. The producers acted with a product-oriented approach and did not offer alternative choices to consumer preferences. In the following years, people became poorer because of the economic crisis all over the world. In these years, businesses acted with the understanding of I sell whatever I produce as long as I produce and developed strategies of deception and deceit to influence consumer preferences. By the 1950s, with the awareness of the consumers, the enterprises had passed to the concept of marketing and developed new strategies.

Accordingly, they took into account consumer preferences and acted with a profit-oriented approach. Businesses shaped their marketing strategies around 4C (consumer value, consumer cost, consumer compliance, consumer communication) along with the marketing mix components 4P and directed their products to consumers through these strategies. By the 1980s, consumers had become valuable and businesses had developed strategies to add value to consumers while producing products / services. While creating their products and services, businesses took into consideration that the customs, customs, traditions and customs of the society were different and they developed strategies according to their lifestyles, personal characteristics and strategies by evaluating consumers from socio-cultural and demographic perspective. During this period, businesses identified the components of the marketing mix according to 7P (human, process and physical elements).

After the 2000s, businesses redefined their marketing strategies with the introduction of internet into people's lives. In fact, the internet began to be used by an application called ARPANET by three American scientists who helped to significantly change the communication between people in 1969. However, the beginning of the Internet can be given in 1989 as the period when military resources were allocated to civilian networks. At the same time, the Internet is proposed in Cern, where the project of creating a bridge document as www. The realization of the Internet in real terms can be given on 25 December 1990, when the connection between the server and the consumer is established due to the use of the Internet and the http protocol (Tarabsz, 2013).

Nowadays, digital marketing can be expressed as maintaining the commercial activities offered by using internet, mobile and other interactive platforms together with traditional media such as TV, Radio and Magazine to promote the business and brand. Digital marketing is also referred to as interactive marketing, online marketing, e-marketing and web marketing (Muhammed Altındal, [http // ab.org.tr / ab13 / paper](http://ab.org.tr/ab13/paper)).

In addition to this, digital marketing, which is the name given to the marketing process of an enterprise or brand in digital media, can be explained by the following techniques (HYPERLINK "<http://www.pazarlamasyon.com/pazarlama/dijital-pazarlama-nedir>" [http://www.pazarlamasyon.com/pazarlama/ digital-marketing-definition](http://www.pazarlamasyon.com/pazarlama/digital-marketing-definition)):

- Content marketing techniques (telling the story of the brand and the business)
- Social media tools (Effective strong digital marketing strategies, facebook, Instagram, twitter, linkedln, Google, pinterest etc.)
- Mobile tools (website designed for various mobile-format vehicles such as smartphones, tablets, etc.)
- In-site campaign (campaigns that enable users to be urged and shop)

In today's world, digital technology has entered a very fast process and businesses have entered big races to turn this into an advantage. From this point of view, businesses have begun to learn consumer demands and needs very quickly by using digital technologies through the personnel working in marketing unit and together with R & D department decided to do or not to do innovation. Because the consumer demands and needs are constantly changing.

Especially with the development of digital marketing, traditional marketing has been replaced by digital marketing. From this perspective, the differences between traditional marketing and digital marketing can be explained as follows "<http://www.dijitalpazarlamapkulu.com/geleneksel-pazarlama-ile-dijital-pazarlama-arasindaki-10-fark>" www.dijitalpazarlamapkulu.com/The ten differences between traditional marketing and digital marketing :

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- Cost (The cost of traditional marketing is higher than in digital marketing).
- Communication (In traditional marketing, there is a method of communication from the source to the receiver, and the receiver listens to the message. In digital marketing, consumers contribute to the business or brand by commenting on the advertisers, asking questions or sharing the advertisement).
- The concept of time (Traditional marketing is built on the campaign and it takes a long time to correct this mistake when it is done wrong. In digital marketing, expectations and satisfaction about product and service are learned very quickly).
- Consumer communication (In traditional marketing, consumers reach the business or brand by phone, by letter, in digital marketing, through social media).
- Scope (Traditional marketing is more narrow, digital marketing is more comprehensive).
- Availability (While in traditional marketing, consumers are able to reach businesses at certain times of the day, in digital marketing they constantly reach it).
- Experience and wealth (While in traditional marketing, marketing is based on specific molds, the digital marketing domain is very wide and innovations are easily tried).

Result

In today's world where brand wars are experienced, businesses have developed their strategies by following the innovations from past to present. In the early days, businesses acted with a product-oriented approach by placing consumers in the second plan (Marketing 1.0) and presented their products by misleading consumers. In the following periods, the companies switched from product-oriented to consumer-oriented (Marketing 2.0) approach with the increase in the competition and more conscious consumers, changed their competitive strategies and they produced their products / services according to the wishes and needs of the consumers. In the 1970s, the companies that changed their policies from year to year determined their marketing policies according to value-focused understanding (Marketing 3.0) and shaped their strategies in the manner that add value to their consumers. Nowadays, with the development of internet technology, businesses have developed strategies that can create value for consumers according to digital marketing and have attempted to reach consumers' wishes and needs very quickly. As the main target of the enterprises are loyal consumers, their wishes, needs and expectations were determined and products / services were produced accordingly, especially the strategies on service were determined and the satisfaction of the consumers was tried to be provided. Especially when the social media entered the lives of consumers, both brand and business information were immediately accessed by consumers and paved the way for comparison with other brands. For this reason, all enterprises have focused on innovation and determined their strategies to meet the expectations of consumers. In the world which is now moving towards marketing 5.0 period, it is thought that the human factor will be the management stage for the enterprises in the future and that the robots will replace the personnel working in this process and work is carried out on the period in which the products and services will be positioned by filling the gaps in the minds of consumers.

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IS CONSUMER MIND READABLE BY NEUROMARKETING?

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Introduction

With the rapidly developing technology, the needs of the consumers and accordingly, their demands are gaining more diversity every day. Firms try to meet this demand; on the other hand, they have to struggle with their opponents to break the slice larger than the cake. Why does a significant portion of the brands introduced to the market fail despite the large budgets allocated to consumer research? Companies, what the consumer is producing what it produces, and this interesting situation is because the companies do not know exactly what consumers want? Of companies; is it possible for consumers to understand what, why and how they buy? Or is it possible to read customers' mind? Can the companies be sent to the brain with communication channels such as advertising? Is there a buy zone in the brain? Can Neurology-Sociology-Psychology help us? Is neuromarketing looking for ways to enter the consumer's brain for sustainable and effective sales? Briefly; can consumer mind be read in terms of marketing? According to Gerald Zaltman, a professor of marketing at Harvard Business School; 95% of the thinking process takes place in the subconscious. Therefore, to be able to read the human mind, in a complex competitive environment of the company will undoubtedly be a situation.

Neuromarketing is the equivalent of marketing in the brain. It is the application of the techniques used in neuroscience to the consumers in order to understand the market behaviors of consumers. The dualistic nature of man, on the one hand, includes rational and sensible, on the other hand, emotional and unpredictable sides. The philosophers Plato, Descartes, Engel, Kollat, and Blackwell emphasized the rational direction of human emotions. It is easier to relate to rationality than to human's soul and emotions. Adam Smith assumed the consumer as a form of cognitive economic rationality. In other words, human beings are considered rational and non-sensory consumers (Lauri et al., 2012: 47).

When we look at the literature, neuromarketing has been described in many ways by many authors. Neuromarketing; using the advances in neuroscience, it defines a new field of research advocated by both academics and companies, which gives a strong perspective to the human brain's responses to marketing stimuli (Murphy et al., 2008: 293). Neuropsychology according to Morin (2011); while the relationship between the cognitive and psychological functions of the human brain is examined, neuromarketing shows the value of understanding consumer behavior from the perspective of the brain. (Morin, 2011: 132). Levy & Weitz (2009); it has emerged as a new branch of marketing that examines the subconscious responses of consumers to marketing materials, brands, products, and product groups. The methods applied in neurology are defined as a method used to produce solutions to the problems of the world of advertising (Levy & Weitz, 2009: 18). Neuromarketing according to Lee et al. (2007); it aims to understand how consumers think and select products by applying neuroscientific methods to analyze and understand consumer behavior in relation to market and market exchange (Lee et al., 2007: 200). Neuromarketing according to Berger (2011); identifying individuals with functional Magnetic Resonance Imaging (fMRI) and other similar methods used to subject automatic responses in the brain to specific stimuli; this is

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usually the consumer and it contains products and brands that are part of the culture (Berger, 2011:1040). Use of techniques in neuroscience to understand the response of the human brain to marketing stimulants (Senior et al., 2007: 153). Neuromarketing is the application of neuroscientific methods to understand and analyze human behavior associated with markets and market changes (Lee et al., 2007). Treutler (2010) defined neuromarketing as an attempt to understand the effects of the subconscious on behaviors and the use of the principles of neuroscience in marketing research (Treutler, 2010: 243).

Neuromarketing; it is an interdisciplinary field which combines psychology, sociology, marketing and neurology with different disciplines. These irrational decisions; it is based on emotional, impulsive and stimulants perceived by our five senses. Neuromarketing is trying to explain that people use not only the rational part of the brain in the decision-making process but also the emotional part and that consumer decisions are not only rational but also irrational (Yücel & Çubuk, 2013:174).

History of Neuromarketing

The real founder of neuromarketing is thought to be Gerry Zaltman (Harvard University) who first used fMRI as a marketing tool in 1999. But the German Professor Ale Smidts (Erasmus University) was the first to define the concept of neuromarketing in 2002 (Krajnovic et al., 2012:1148).

Paul Lauterbur and Peter Mansfield were the two names that were most noteworthy in the early 1990s with their studies using imaging techniques. Neuromarketing has become increasingly important especially in 1991. In these years, many global companies have invested heavily in neuromarketing. These companies; “Coca-Cola”, “L-mart”, “Levi-Strauss”, “Ford”, “Google”, “Frito-Lay” are multinational companies. The results of the studies of these firms related to neuromarketing were kept confidential and not disclosed to the public. However, the international symposium held in Baylor Medical School (Houston, USA) in April 2004 has a very important position in the history of neuromarketing. On the other hand, many investors and entrepreneurs such as Joe Rezman have left their current jobs and invested in this field. Examples include Brighthouse (1995) or the Brighthouse Neurostrategies group (2001). These companies aim to make the scientific infrastructure of the researches to be made stronger by forming a consortium with universities (Çakar, 2017).

Neuromarketing has emerged from the combination of neuroscience and marketing. The concept of neuromarketing could not be attributed to the studies that began in 2002 and could not be attributed to a person. Several US-based companies, such as Brighthouse and SalesBrain, advised on neuromarketing research and began to provide consultancy services in this area, using cognitive neuroscience. What does neuropsychology mean for psychology in general? Neuromarketing also refers to the meaning of marketing science. The neurophysiology; while examining the relationship between brain and human cognitive and psychological functions, neuromarketing allows to look at consumer behavior from a brain perspective (Morin, 2011: 133).

Since neuromarketing is a relatively new field of science, it is not mentioned that it has a long history. However, many studies have been carried out since the first emergence and continue to be done. One of the reasons why the studies in this area are limited; the high cost of research techniques. In addition, the devices used in the studies are not everywhere, or in areas where they are usually used for clinical research plays a role in this area to prevent enough neuromarketing studies.

Comparison of Traditional Methods and Neuromarketing Method

Traditionally well-known and frequently used methods often lead to misinterpretation of consumer behavior. Products and communications developed in accordance with these methods (surveys, etc.) are no longer addressed to consumers. In this respect, the failure of many brands despite the huge investments made by them is to be able to develop real insights about consumers. New methods are needed to uncover the hidden information in the consumer's mind, to understand consumer behavior and to analyze their minds.

Firms for years; to determine the needs and behaviors of consumers, such as surveys, experiments, focus groups, and in-depth interviews, and to rely on traditional research methods to determine whether marketing studies and advertising are effective (McDowell, 2013: 25-26; Bilgiç, 2014). The most important superiority of the neuromarketing studies according to traditional questionnaire and focus group interviews is measured by the answers and verbal responses of the respondents to the questions prepared on various scales and evaluated statistically. However, it is not possible to find out what the respondents really think. Neuromarketing and measurement methods eliminate the difference between the declared information and what the person actually thinks.

In the field of marketing, it is suggested that there are two reasons for the increase observed in the application of neuroscientific techniques. The aim of this course is to provide more rapid solutions than traditional market research techniques and provide additional information that traditional market research techniques cannot provide. Marketers often use classical methods such as surveys, observation target market analyzes, while investigating how consumers respond to products, brands or advertisements. Surveys and focus groups, which are widely seen in practice, are practical and cost-effective but include the possibility of including the respondents' prejudices. For this reason, it is not fast enough to predict the findings and the inferences may not reflect the truth (Ariely & Berns, 2010: 284). Because most of our ideas are unconscious, classical research methods overlook a variable that affects consumer behavior. During the research, some people give the answer that the researcher wants to hear, one of the group members may influence others, or they may be ashamed to share their original thought (Özdoğan et al., 2008: 2). With neuromarketing techniques, it is possible to understand what the consumer actually thinks.

Consumers, especially in the case of instant and habit, act by using their emotional processes instead of the cognitive processes of their brains in the process of decision-making and purchasing. Consumers who are directly questioned by traditional research techniques tend to give answers that will satisfy the researchers. The reason for this is that the brain uses the part of the brain that examines cognitive issues. Parts of the brain that control emotions and instincts tend to be hidden. However, there are data that purchasing decisions are taken in the supervising section of the brain's instincts. All this increases the importance of neuromarketing in order to obtain a more competitive and effective decision. What distinguishes neuromarketing from other techniques is that data that cannot be obtained by traditional techniques can be obtained by neuro-scientific techniques and that a better understanding of emotions is achieved. Neuro-scientific techniques against consumer responses provide direct and detailed information (Stipp, 2015: 121).

Advanced neurological measurements have led to the development of new research methods in marketing. Understanding how consumers make decisions, seeing how they live, what they are excited about, how they are motivated, and using methods other than traditional marketing research. Neuroscientists, psychologists, and psychiatrists have begun to implement the relatively new neuromarketing technologies to better understand the human brain, emotions, and behavior of individuals. Marketing experts have recognized the potential of such

technologies and have revealed the neuromarketing field in relation to neuroscience. Krajnovic et al. (2012) point out that when describing neuromarketing, it is a marketing field that uses neuroscientific methods and techniques to analyze and understand consumer behavior in the market and important marketing issues (Krajnovic et al., 2012: 1148).

Neuromarketing studies give more realistic and complex results about how consumers think and decide. In the neuromarketing studies, consumers are not asked to declare any opinion about their choices. The motivation behind consumers' purchasing and purchasing habits is understood by measuring the activity of a consumer's brain (Iorga & Pop, 2014: 636). Marketing research methods are generally intended to explain and predict the effectiveness of advertising campaigns. For this purpose, mostly traditional techniques have failed. Researchers were initially interviewed face to face or as a group to understand what consumers think about a particular advertisement. However, these methods had significant limitations. First; they assumed that people could actually define their own cognitive processes, although it was known to be many subconscious components. Latter; there were many factors that prevented participants from expressing their feelings explicitly, including time constraints or peer pressure. In this context, the emergence of brain imaging techniques has provided many methodological alternatives. Thanks to these techniques, marketers were able to obtain important information about the subconscious processes, which clarified the success of a message by investigating the brains of consumers. While the field of neuroscience has grown dramatically in recent times, it has not fully penetrated the dark and mysterious problems of advertising research. Very few marketing researchers have received formal training in cognitive neuroscience and marketing researchers fear the public's response to potential ethical and privacy issues that have arisen through the use of brain imaging technology for commercial purposes the reasons for this can be shown (Morin, 2011:133).

In recent years, neuroscience-based marketing research has become a widely accepted research tool rather than innovation. The Advertising Research Foundation (ARF) started research in 2010 in order to develop and evaluate the advertising tests. At that time, most of the traditional methods left marketers unsuccessful in their research. Moreover, these methods were not practical for the application and were much more expensive than the well-developed advertising test methods. Increasing interest in biometric and other neurological methods in the periods of 2010, advances in neurological science and neuroscience methods and tools triggered by technological advances. In short, these methods became more precise, more practical, faster and more economical. In this respect, neuroscience-based methods are rapidly developed and in recent years, neuromarketing researchers have conducted hundreds of advertising studies to expand and develop their skills and understanding. The development of neuromarketing was supported by the belief that marketers and researchers, practices, theories and models established in advertising emphasized cognitive processes. Previous studies have accepted this importance. as a result, consumers' interest in emotional and conscious responses to marketing messages increased in order to better understand the role that emotion plays in advertising activity (Stipp, 2015:121).

The researchers have two options for determining the emotional responses of the participants to visual stimuli. These consist of verbal reports of the respondents or analysis of nonverbal brain reactions. Although traditional data (questionnaires, focus groups, interviews, etc.) are very simple and easy to collect, they may be misleading by cognitive distortions specific to retrospective responses and rarely overlap with emotional reactions. Brain imaging methods; since the participants do not require verbal responses, they are not sensitive to such cognitive distortions (Ohme et al., 2009: 3).

Looking worldwide; companies spend an average of 400 billion dollars annually on advertising. However, it is known that the use of traditional methods has a high effect in the inability to take full account of the investments made in these studies. Traditional methods; how and to what extent the consumer expresses himself/herself and his/her emotions when exposed to the marketing message. On the other hand, neuromarketing; at this stage, it plays an active role. Thanks to the neuromarketing techniques, some data can be obtained directly from the mind of the consumer without needing mental or conscious participation (Rantalainen & Gurung, 2014:15). With neuromarketing techniques, what consumers actually want and what their minds about that product, advertising or service can be determined more smoothly and accurately than traditional methods. In order to use the billion dollars spent on investments in marketing research in a more planned and effective way, the methods of neuromarketing have become more important than traditional methods. Therefore, neuromarketing methods have been used in many fields and academic studies (Yücel et al., 2015a; Yücel et al., 2015b; Yağcı et al., 2018).

Usage Areas of Neuromarketing

Neuromarketing has a wide field of study. The neuromarketing research topics includes determining the relationship between the price perception of consumers and price-quality, measuring the trust in the enterprise and the product, effective store design selection of media tools, efficiency of product placement, effective conduct of sales negotiations, determination of factors affecting consumers' product and brand choices, product design, making packaging decisions, effect of taste and smell on brand and effect of music on advertising (Lee et al., 2007: 201; Varinli, 2012: 180; Treutler et al., 2010: 243-247; Reimann et al., 2011:616-618; Özdoğan et al., 2008:2; Legal, 2010: 169-173; Babu & Vidyasagar, 2012: 79; Yücel & Coşkun, 2018: 157-177; Yücel & Gür, 2017: 212-233; Demirtürk & Yücel, 2017: 58-69.).

With neuromarketing studies, businesses are looking for ways to increase sales efficiency in practice and quickly push the purchasing button in their customers' brain (Lee et al., 2007: 200). Neuromarketing, which has been preferred more frequently in recent years in order to evaluate the success or effectiveness of various marketing applications such as advertising, product development, customer relations, logo or brand design, media use, is a technique far beyond the traditional evaluation methods used in marketing (Ariely & Berns, 2010:284; Vashishta & Balaji, 2012:1034-1036).

Techniques Used in Neuromarketing Research

Brain-related research in the last 10-15 years, especially with the help of neuromarketing to try to unravel the passwords of the brain does not mean that all the secrets of the brain are solved. This makes it inevitable to reveal different dimensions of marketing relations with other disciplines. Neuromarketing is an area of the mixture of various disciplines in a certain proportion. According to Zurawicki, these fields are molecular biology, electrophysiology, neurophysiology, anatomy, embryology, developmental biology, cellular biology, behavioral biology, neurology, behavioral neurophysiology and cognitive sciences (Zurawicki, 2010:15). When the literature is examined, it is seen that neuroscience is gathered under three main branches: Marketing, neurology, and psychology. Marketing management and neurology try to predict human behavior by using different methods. Marketing management estimates consumer behavior by common techniques such as observations, surveys, and experiments. Neurology predicts behavior with psychological factors and somatic variables. Neuromarketing, as a combination of both

disciplines, attempts to reveal the relationship between consumer nervous system and decision making (Hubert & Kenning, 2008).

With marketing in every field, neuroscience in the field of Neurology and adaptation of this method to marketing. Neuromarketing has entered into literature as one of the marketing methods and understanding of the human brain's response to marketing stimulants used the techniques in neuroscience (Senior et al, 2007: 153). Neuromarketing uses medical technologies to measure the mental activities that consumers have shown against any marketing stimulus. These techniques and tools: Positron Emission Tomography (PET), functional Magnetic Resonance Imaging (fMRI), Electroencephalography (EEG), Galvanic Skin Response (GSR), Magnetoencephalography (MEG), Magnetic Resonance Imaging (MRI), Near-infrared Spectroscopy (NIRS), Steady State Topography (SST), Voice Pitch Analysis (VPA), Diffusion Tensor Imaging (DTI), Transcranial Magnetic Stimulation (TMS), Computed Tomography (CT), Galvanometer and Eye Tracking (Zurawicki, 2010:42-53; Ariely & Berns, 2010; Lauri et al, 2012:43-45).

Neuromarketing as a result of the interaction between marketing and neuroscience, analyzing the findings obtained by using neuroimaging tools with neurology and marketing experts and eliminating the suspicious results of traditional research methods to produce accurate results on behalf of marketing. Nowadays, many companies (For Example Brain Intelligence, Buyology, Forebrain, Institute of Sensory Analysis, Neurensics, NeuroFocus, NeuroInsight, Neurosense, NeuroSpire, Nielsen Neuro, MSW Research, Keystone Network, Mindlab International, Sales Brain, etc.) are using the neuromarketing methods in their marketing research and they offer many services (neurosciencemarketing.com).

Ethical Concerns in Reading Consumer Mind

It is suggested that neuromarketing techniques reveal emotional factors that affect the consumer's decision to reach the black box in the mind. At this point, some ethical concerns arose and criticism of the fact that neuromarketing was not ethical (Akin & Sututemiz 2014:72; Sebastian, 2014: 763-768). Neuroscientists are skeptical of the development of a sub-discipline in the form of neuromarketing and believe that the practice of neuromarketing is not ethical. According to neuroscientists, advertisers use neuromarketing to deceive consumers (Perrachione & Perrachione, 2008: 313). When the purchase button in the brain is discovered, it is thought that businesses can use this information to direct consumers to purchase their own products (Özdoğan et al., 2008: 7). In addition, the disclosure of emotions that people perceive as intimate is considered as disturbing for the consumer (Varinli, 2012: 180-181).

According to Lee et al., (2007); the main problem in the neuromarketing studies is the ethical concerns about the commercial gains for the data obtained from consumers as a result of the techniques used in practice. Efficacy research in advertising in marketing causes fears by the neuroscience circles and increases concerns about learning factors that influence the acquisition of a so-called black box in the brain.

Since neuromarketing uses predominantly brain imaging techniques, important data about the human brain are obtained with the data obtained. It is claimed that this information will cause consumers to exploit and harm their own actions. Concerns about the application of the neuromarketing techniques of the enterprises and the ability of the consumers to read their minds by violating the privacy of the ideas. It is questioned that neuromarketing and firms will cause the invasion of consumer privacy or manipulate their

decisions about consumer preferences (Akin & Sütütemiz, 2014: 72). Therefore, there is a need to tackle the moral problems associated with everything that can be seen as a violation of consumer rights and confidentiality. Those who have a tendency to look at the neuromarketing from the perspective of free will argue that the free will of individuals comes to an end with the spread of neuromarketing (Madan, 2010: 5). Under this claim, due to the end of free will, it is thought that consumers will be more exposed to the impact of companies' marketing strategies. However, no scientific study has been found on the level of neuromarketing techniques that affect free will (Akin & Sütütemiz, 2014: 72).

The concept of human dignity is one of the reasons behind the ethical concerns regarding the application of emerging technologies. The concept of dignity is increasingly central to the ethical debate and takes place in international conventions in the field of bioethics. This trend; it can be easily seen in universal documents on bioethics and human rights. The neuromarketing practices that cover the bioethical core values that underlie human dignity have a very important position since they cover a number of bioethical elements in connection with human rights. Therefore, brain imaging technologies used in neuromarketing research; firstly, the potential challenge to human dignity and integrity, bioethics principles and values must be questioned in terms of violating subjectivity, privacy, and privacy as fundamental values. But neuromarketing; although it can be defined as a type of marketing research carried out for commercial purposes rather than clinical research, applications with neuro devices; it has to be done in such a way that it does not disrupt the integrity of the human ethics and the identity of the business ethics. Human; it is not a consumer or a customer that can only be identified by brain imaging and brain mapping techniques. Human; decision-making represents a multi-faceted presence equipped with rational and emotional procedures. For this reason, human dignity must be protected by respecting the autonomous view of the human being (Ulman et al., 2015:1275-1276).

According to Olteanu (2015); the primary objectives of companies may not always be related to the interests of the consumer. For this reason, companies or institutions that implement each neuromarketing practice should determine and apply ethical standards. These standards can be listed as follows (Olteanu, 2015: 200):

- Neuromarketing researchers should define national and international laws relating to their work. In some cases, researchers have a national ethics committee that requires approval. Therefore, it is necessary to inform the authorities about the research in order to continue the research.
- Researchers must act ethically in all stages of a research. Deviation from this principle may damage the reputation of neuromarketing research.
- The subjects are obliged to confirm that they have participated voluntarily with the documents they signed after they have been fully informed about the purpose of the research project and the steps to be followed during the study. The subject should be released at any time to stop working. Procedures to be followed by the research participants should be determined and the rights of the volunteer subjects participating in the research should be respected.
- Since research procedures include monitoring of brain activity, the effects of participation in such a study must be signed after the subject is described and understood by the subject.
- Researchers should take into account medical restrictions when conducting research on any person, especially children.

- There are some companies that have developed their own models and algorithms after conducting research for many years. In order to ensure the internal validity of the study, the researchers must be careful not to produce a negative result when analyzing the brain regions of the subjects. Researchers should also provide complete information on the scientific procedures undertaken to externally validate the results and generalize the findings to the target population.
- The personal data collected during a study should never be used for any purpose other than the research that the subject agreed to participate in. In addition, researchers should not be allowed to benefit from certain neurological features found in a group of individuals.
- Neuromarketing researchers must ensure that their projects are designed, documented and documented in a transparent and objective manner. Because of the complex and technical nature of such research, there is a danger of reaching subjective conclusions and blind customers, as there is serious information asymmetry between researchers and their customers.
- Neuromarketing researchers should identify cases in which abuse and abuse of results may be and take measures to protect society, particularly the vulnerable population.

Advantages of Neuromarketing

Neuromarketing is suggested as an important and revolutionary formation of marketing research. Neuromarketing according to Fisher et al. (2010); it is a qualitative research type that produces graphical and quantitative results. Bercea (2013) explains that it is difficult to classify the research in this new field as qualitative or quantitative and that the types of equipment used and the research protocol adopted is decisive in this classification. However, neuromarketing; as it creates the ability to evaluate the emotional processes that take place in the mind, it becomes more important and access to richer and less biased marketing information than other traditional research techniques (Murphy et al., 2008: 297).

According to Ariely & Berns (2010), the most important advantage that neuromarketing can give to the marketing sector is; it is a tool that helps companies to differentiate consumers' desires, desires, and needs, and to discover what they will buy the most (Ariely & Berns, 2010: 291). Huszár & Pap (2016) suggests that neuroscientific methods contribute to a better understanding of consumer needs. Neuromarketing helps companies adapt their advertisements to their target groups, and emotions that can provide higher consumer attention can be measured. These emotions cannot be measured by traditional research methods such as surveys and interviews. However, the application of neuromarketing to the product development process will enable the identification of products that better fit the consumer needs to summarize these benefits, it can be concluded that neuromarketing is a wider acceptance in marketing than other disciplines and that it is difficult to measure emotions that were previously difficult to identify (Huszár & Pap, 2016: 163).

According to Fortunato et al. (2014); neuromarketing is a technique that identifies the brain areas activated during a marketing stimulus and the cognitive processes that occur in these areas, as well as various biological markers. Therefore, neuromarketing has the potential to determine the causes of purchasing disorders. In addition, other possible applications of neuromarketing provide the development of more effective social campaigns, such as encouraging the use of seat belts in cars or smoking cessation (Fortunato et al., 2014: 207).

Darren Bridger, who has been working in the field of neuromarketing for about 15 years and carried out numerous studies in different sectors, argued that the advantages of neuromarketing research are beyond those provided by conventional methods. Bridger argues that neuromarketing has seven main advantages (Bridger, 2015):

- *New perspectives:* Today, advertising elements are influenced by new thinking and new perspectives. Neuromarketing provides these elements because it has a very different perspective than traditional research methods. For example; low-level effects can be measured in terms of people's attention, emotion and memory responses in designs (such as print ads) and videos (such as TV and web ads). While many designers focus on the higher-order meanings of the projects they often put forward, the neuromarketing studies focus on more detailed subconscious meanings. These; it includes information on how to design images to better monitor attention, how to organize an ad to make its key information more memorable, and how to design elements to provide emotional participation in a product, service, advertising or package.
- *Reveals emotional and unconscious answers:* On an average day, most people go on a journey full of different emotions. Some of them are fast and short, but they are almost unnoticeable. However, these feelings and emotions can affect purchasing behavior. Neuromarketing methods often help to elicit the triggers that cause these emotional reactions.
- *It places measures on common scales:* Even though it is possible for consumers to define their conscious responses or determine their proportions, the way in which this is done shows many differences. It is very difficult to collect responses from more than one person in one example. For example; it is rather complicated to determine whether some consumers are aware of their feelings or are happy with any marketing stimulus. Some of these variations can be determined by taking the average of the data on a large sample. However, it is still not easy to evaluate consumer feelings on a scale. This must be done in the absolute right way. This problem is tried to be solved by comparing the cross-cultural results, but this means that there are more variations of expression differences.
- *Measures temporary reactions that people cannot remember:* In the course of watching a TV ad, experiences that develop over time can be recorded instantly through nerve measurements. This not only informs how to design an ad better but also offers a more perspective approach than traditional methods.
- *Asking people to think about how they feel about something can change emotions:* Just as a cell change, as a result of certain chemical reactions, conscious awareness can be changed when an emotion is emphasized. When people are asked to think about how they feel about something, people lose their original pure response value as they begin to review and rationalize their feelings.
- *Measures the effects of triggering:* When looking at an object such as a poster, logo, or package, a number of related ideas act in the mind. Some of these ideas, which can be measured by neuro techniques, relate to the emotions and concepts that an advertising or brand logo triggers in the individual. Some of them often include goals in the mind, without conscious awareness. For example; the behavior of a person buying a luxury product, a poster about that product and so on. Can be triggered by objects.
- *Extend Research Techniques:* Neuromarketing offers research techniques that allow companies to scale using comparable methods and obtain comparable results.

Disadvantages of Neuromarketing

When the neuromarketing literature is examined; it can be said that the negative results for this area are mainly composed of several headings. These titles are generally; ethical issues, characteristics of subjects, ability to predict consumer behavior, the establishment of cause and effect relationship, inadequately developed literature, criticism of costs, prejudices, difficulty in interpreting data.

Some critics have been alarmed by the efforts of marketers to explore the consumer subconscious by the methods of neuromarketing and the manipulation of the consumer mind by using this situation in favor of some commercial companies. These concerns were published in Vance Packard's (1957) best-selling book, *The Hidden Persuaders*. In this book; it has been suggested that consumers and advertisers, media and psychological techniques use their Android to brainwash consumers to search for or buy products they do not know. As stated in many studies nowadays; the exposure of individuals to many triggers aimed at promoting specific behaviors has led to increased concerns about mind control. In order to increase the buying behavior of the marketers who use the Android system widely, they have used a variety of tactics such as using larger shopping carts for consumers to choose more products through this system (Bakardjieva & Kimmel, 2017: 183). Neuromarketing; it is seen as a very complex science because it is made to understand the brain processes related to emotions. For this reason, very little of this area can be generalized or specified. The specificity of individuals affects the areas of processing specific emotions and how these areas are handled. The situation in which a consumer receives a marketing stimulus leads to a different way of processing the mind. For example, the areas of movement in the minds of the consumer receiving the warnings may vary according to the environmental factors such as the presence in a quiet environment such as a marketing research company's laboratory, the presence in the purchasing environment (store etc.). Therefore, one of the most important disadvantages highlighted in many studies related to this field; it is stated that individuals lack a model that stimulates the brain areas with the feelings they feel. (Fortunato et al., 2014: 216).

Conclusion

The human brain has been considered as a black box that has to be discovered by marketers for years. However, factors affecting consumer behavior, consumer choice and purchasing process, consumer experiences, the moment of choice (eg, the purchase of high-cost products), unconscious behavior are unclear issues (Oliveira et al., 2014: 97).

The findings obtained from the researches using traditional methods are interpreted according to the voices of the consumers. However, 95% of thoughts and feelings are realized in the subconscious (Varinli, 2012: 170). As the subconscious thought is the result of the thoughts we are aware of or partially aware of, in such research consumers can express different discourses. In addition, even in the best-designed behavioral experiments, individuals tend to always express what they want to hear, rather than the real reasons underlying their preferences (Venkatraman, 2010: 144). People may sometimes have difficulty in responding to "why" or "how much" questions, even if they can express what they like in a real way (Tretutler, 2010: 243). In a sense, this technique is used to discover the secret of the consumer's mind and the reasons for their emotions and behaviors (Aytekin & Kahraman, 2014: 50).

When a person looks back at himself, he cannot predict the reasons for many of his choices and cannot get a clear answer when he asks himself why he likes things. The main reason for this is that the source of decisions and especially purchasing behavior is the subconscious. There are more questions than subconscious answers. At this point, neuromarketing studies provide a short time and real answers to many questions by mirroring the consumer

out of consciousness. It allows the consumer to identify real thoughts outside the declaration. Brands are now seeking to understand consumers' unconscious experiences during shopping. The findings of cognitive psychology, neuroscience, and neuromarketing that develop in these two areas are important if they give light to them in this search. But neuromarketing; it is a field that combines psychology, sociology, marketing, and neurology, which are different disciplines. While the consumers decide to make purchases, the mystery about the path followed by the rational and irrational processes in the black box or the emotional decision-maker continues (Oliveira et al., 2014: 99). These irrational decisions; it is based on emotional, impulsive and stimulants perceived by our five senses. Neuromarketing tries to explain that consumer decisions are not only rational but also irrational effects, and they use brain imaging methods to show this connection (Yücel & Çubuk, 2013: 174).

The basis of neuromarketing is based on the claim that neuroscientist Antonio Damasio decides by using the emotional parts of the brains, not the rational parts of the brains of individuals. Damasio (2006) argues that the concept of emotion plays a role in the human mind. Neuromarketing is a neurological examination of the individual's reactions and mental state when faced with a marketing message. Researchers argue that the gap between enterprise and science is rapidly closing due to advances in neurology. Neuromarketing, looking at the human mind process by looking at the answer to the question of why and how to think in different situations and allowing the direct measurement of thoughts and emotions in the analysis of the brain and nervous system (Özdoğan et al., 2008: 2).

However, it seems partly possible to understand what a consumer actually thinks with neuromarketing techniques. Neuromarketing studies are evaluated within the scope of non-invasive research. Because the person does not interfere in the point of preferring something. Only at that moment it determines the response of the person to the present situation and is based on voluntarism. Murphy (2008); when a view is formed by the media that the neuromarketing can affect the human mind, it is reported that it will be met by the public (Murphy, 2008: 295). Currently, there are fears that the methods of neuromarketing in the near future will be developed enough to reveal more information that is hidden in consumers' brains. It appears that consumers; it is unlikely that the consumer culture escaped from the domain of marketers and brands and from advertisers targeting the subconscious mind.

The brain is such a complex organ that the brain is not yet sufficiently dominated by how the brain works. In general, experts - we know what the brain is doing but we do not know what to do - says. Therefore, neuromarketing only reveals the response of the person to the present situation, but it cannot determine the thoughts about what to do. Although neuroscience and neuromarketers try to reveal the brain's unknowns, there are insufficient efforts to analyze the human brain's reactions with more than 100 billion cells and a 1 million-kilometer fiber link, and this is not entirely possible (Renvoise & Morin, 2012). Marketers have solved their brains on a commercial level and can provide many tips. Some brain regions appear to be prominent in the studies conducted in the field of neuromarketing. This may be due to the lack of adequate studies in the field. However, it should be determined whether the brain areas that the marketing messages correspond to are limited to these regions. The marketing message to revive the intended "Amygdala" or to reach the "hippocampus" to be permanent? Or calling the subconscious to target the "prefrontal" region to rationalize the target audience or to revive the "Akuben Core"? (Sadedil, 2018: 197). Although brain-related research with the advances in the technology of the brain with a complex and mysterious structure has accelerated today, only some of these questions can respond to neuromarketing. Therefore, neuromarketers have not yet reached the desired position in reading the consumer's mind.

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MOVING FROM MULTICHANNEL RETAILING TO OMNICHANNEL RETAILING

Melih BAŞKOL¹

1. Introduction

Today's customers have different channel choice to contact companies to purchase products and services (Barwitz & Maas, 2018). In recent decades, the retailing industry has been reformed by the internet and the advent of innovative online channels. These new online channels change the way of the consumers' buying behaviors (Briel, 2018). Especially the Internet, mobile devices and social media have transformed the retail customer experience, allowing customers to research and shop anytime and anywhere (Hansen & Sia, 2015). Therefore, customers no longer depend on one channel during their shopping journey and they expect retailers to integrate online and offline experiences into a seamless omnichannel experience (Hilken et al., 2018). Changes in consumer behavior, as well as new technologies, have encouraged the evolution from multichannel to omnichannel (Berman & Thelen, 2018). The omnichannel concept is perhaps one of the most vital revolutions in a retail business model of recent years, with both practical and theoretical implications (Ana Mosquera, Olarte-Pascual, Juaneda Ayensa, & Sierra Murillo, 2018). Verhoef(2015) describe the omnichannel management "as the synergetic management of the numerous available channels and customer touchpoints, in such a way that the customer experience across channels and the performance over channels are optimized" (Verhoef, Kannan, & Inman, 2015). If retailers want to be successful and not to vanish from competition, they have to find a solution to get touch with the customer with all channel possibilities (Galipoglu, Kotzab, Teller, Yumurtaci Hüseyinoglu, & Pöppelbuß, 2018). Omnichannel retailing change the understanding that the online channels are separate ways to sell products and services and it sets new goals for the retailer to provide new ways to enrich customer experiences (Gao & Su, 2017).

Although omnichannel marketing has been seen future of shopping (Rigby, 2011) the effective implementation of the omnichannel retailing strategy is a new challenge for retailers (Bell, Gallino, & Moreno, 2014). It requires multifaceted establishment between distribution responsiveness, product variety, and convenience, and is dependent on information sharing through all part of the enterprise (Lim & Srai, 2018). Since omnichannel retail is largely driven by technological advances (Brynjolfsson et al., 2013), channel integration needs a high-cost infrastructure investment that becomes a key problem for managers (Cook, 2014).

Omnichannel is still in its early stages and academic research into omni-channel and its structure is only starting to emerge (Saghiri, Wilding, Mena, & Bourlakis, 2017). For this reason, this introductory study presents the main issues related to the omnichannel concept. This paper is organized as follows: first of all, the concept of multichannel which causes omnichannel to be explained the multichannel retailing concept. In the second part of the study, the concept of omnichannel retailing and its benefits to retailers as well as application difficulties and ways to overcome these difficulties have been tried to be explained. In the last part of the study, the differences between the concepts of omnichannel and multichannel retailing were tried to be revealed.

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2. Literature Review

2.1. Multichannel Retailing

Over the years, firms have had to increase product diversity in response to the growing needs of markets that are becoming more and more fragmented due to competition. Recently, companies have begun to increase channel diversity as the second strategy to better address these different consumer needs (Deleersnyder, Geyskens, Gielens, & Dekimpe, 2002). Nevertheless, Internet-based e-commerce, globalization, and intense international competition make marketing channel management more challenging and complicated than it is expected (Rosenbloom, 2007). Using diverse channels at different stages of decision-making and purchasing cycles is become more common for customers; for example, to use Web sites to get information, but to purchase offline. In the past, the customer usually acquired all channel services from a solitary channel at every phase of the decision process (Rangaswamy & Vah Bruggen, 2005). Traditional retailing has been facing fierce competition with innovative non-store formats. The acceleration of multichannel retailing has increased as the Internet further decreases blocks to access to retail (Dholakia, Zhao, & Dholakia, 2005). Traditional retailers have therefore switched to multichannel retailing. The main reasons for this transition are low-cost access to new markets, increased customer satisfaction, and loyalty and creating a strategic advantage (Zhang et al., 2010). Multichannel retailing allows consumers to shop comfortably in a number of modes including shops, catalogs, Web site, kiosks, and even PDAs that access the Web (Berman & Thelen, 2004) and permits consumers to interact with the company through more than one touchpoint of contact (A. Mosquera, Juaneda-Ayensa, Olarte-Pascual, & Sierra-Murillo, 2018). The main aim is in the multichannel retailing is to sell goods and services via more than one channel and this process requires the use of different activities (Galipoglu et al., 2018; Zhang et al., 2010). It is easy to touch different customer divisions by using different channels in this type of retailing (Hüseyinoğlu, Galipoglu, & Kotzab, 2017). Multichannel retailing arises from the need to meet customer demands through multiple, but different, distribution channels. The method of purchase and the choice of the fulfillment the delivery of the purchased product (for example, delivery at home or in the store) specifies the type of channels (Murfield, Boone, Rutner, & Thomas, 2017). Despite the benefits of multichannel retailing channel integration and logistical and operational complexity are challenging issues for retailers (Rosenmayer, McQuilken, Robertson, & Ogden, 2018). Every single distribution channels in a multichannel retailing are functioned in a parallel way that these channels do not communicate with each other and consequently, they are uncoordinated (Hüseyinoğlu et al., 2017). A multi-channel approach is not suitable for all retailer. The multichannel retailing approach requires extra financial and managerial resources to be successful, but not every retailer may have these additional resources. Another difficulty with multichannel retailing is that store loyalties of multichannel customers may be low due to the lack of channel integration. This type of customers will be able to start shopping at a new channel and store when they get the price reductions (Berman & Thelen, 2004). Functional integration, channel synergy, brand management, information management, logistics management, and customer management are factors for success in a multi-channel e-commerce strategy (Murfield et al., 2017).

2.2. Omnichannel Retailing

Today's consumers want to have the same brand experience regardless of the channel they choose; they do not take care of buying from the store, online or mobile. Traditional retailers will vanish from the market unless they have a fully different viewpoint that allows them to integrate different channels into one seamless omnichannel experience. Retailers have a faith that they easily access their customer because their customers will always be available to them. However, if customers feel comfortable to buy with omnichannel shopping they will not be a

tolerant customer as before against the circumstance that they encounter in the traditional shop (Rigby, 2011). Practitioners are the first people who describe the omnichannel concept from a customer viewpoint. With the omnichannel retailing approach, the customer could connect with retailers in every mode and from all locations (Saghiri, Bernon, Boursakis, & Wilding, 2018). *Omnis* is a Latin word for all or universal origin. For this reason, omnichannel means that all channels are together. In this context, in the omnichannel environment, the most critical interaction is with the channel, not the brand (Juaneda-Ayensa, Mosquera, & Murillo, 2016). Omnichannel retailing provides an opportunity for customers to move easily among channels (online, mobile devices and physical store) in a single process. Since the channels are managed together, the perceived interaction is more linked to the brand than to the channel. Therefore, the complexity of the purchasing process and customer is an essential element of the activities of the companies/brands using omnichannel retailing strategy. The Omnichannel retailing strategy aims to offer customers a consistent and integrated sales offer in many different sales environments (Kaczorowska-Spychalska, 2017). The evolutionary step of the multichannel and cross-channel model is accepted as omnichannel management. In fact, the omnichannel concept is completely eliminated by the obstacles between all channels and the touchpoints, compared to the concepts of multichannel and cross-channel (Mirsch, Lehrer, & Jung, 2016). The goal of omnichannel is to make multichannel models more effective and efficient in order to better fit customer needs in a progressively depend on the technology-based world (Larke, Kilgour, & O'Connor, 2018). Channel integration and cross-channel experience distinguish the multichannel traditional service from the omnichannel service. These two points are the main fact of the omnichannel strategy (Shen, Li, Sun, & Wang, 2018). Thus, omnichannel retailing is the full cooperation of different channels and touchpoints, resulting in the most appropriate experience between brand and customer. Such cooperation requires systematic arrangements for different retail strategies and operations that will ensure that the customer is locked into the retail brand whatever the touchpoints are. For this reason, Verhoef (2015) has defined the omnichannel concept as “the synergistic management of a large number of available channels and customer touchpoints, optimizing the customer experience and performance across channels” (Verhoef et al., 2015). Touchpoints can be described as the points or moments of interaction and/or communication between a retailer and the customer. In Omnichannel retailing, channels, such as the touchpoints, are also the key elements of the omnichannel strategy (Galipoglu et al., 2018). Companies that switch to the omnichannel retailing system collaborate with online and offline strategies, including all communication channels. These companies also use geolocation software to provide integrated services. In this respect, omnichannel retailing offers significant opportunities to develop a data-driven channel strategy (Taufique Hossain, Akter, Kattiyapornpong, & Wamba, 2017). Information, product, and money are the three fundamentals of the flow in the interaction between a customer and a retailer. The use of diverse channels for each movement supports to classify the components of omnichannel retailing. An omnichannel supply chain that has solid structure can be both cost-effective and responsive to customer needs by taking advantage of the harmonizing powers of both online and brick-and-mortar retailers. A blend of the two is more effective than either channel by itself (Chopra, 2016). Generating value for both customer and retailer is the main drive behind the omnichannel strategy. It can increase customer satisfaction by ensuring that consumer decisions are made by regarding their brand journey (Larke et al., 2018). Omnichannel is not about purchasing things online or offline, it is about putting customers back into stores. Today, the customer shares their knowledge with retailers. This sharing helps the omnichannel to grow by learning the customer shopping behavior and providing customers with what they want (Yadav, Tripathi, & Singh, 2017). Omnichannel retailers need jointly to address the impact of sales and branding. Sales performance and brand experience have to be assessed continuously at the same time by retailers.

They also should try to stay away from actions that provide short-term performance gains, which could affect negatively the customer brand experience (Blom, Lange, & Hess, 2017).

Omnichannel consumers exhibit very different buying behaviors than traditional retail customers. Behaviourally, these customer segments demand a relaxed and pleasant atmosphere for their time and space, where they can research about products/services. Omnichannel consumers have more expectation from those retailers and also they are more knowledgeable consumers than the others. If any retailer could provide the experience and meet their expectations, these customers turn into loyal and profitable customers (Cook, 2014). Studies show that omnichannel customers more valuable customers for retailers because they spend 15-30% more than traditional shoppers. Especially retailer that could provide powerful omnichannel customer service strategies has much better customer retention rate than those with weaker omnichannel strategies (Murfield et al., 2017). Although omnichannel customers are more loyal than the others, meeting the growing consumer expectations by implementing a satisfactory omnichannel strategy leads to more complexity in channel regulation for two main reasons. First, both the range of channel options is wide, and the natural structure of the channels is also very diverse including retail channels and mobile channels, social media, and customer touchpoints. The channels that will be used for omnichannel retailing should provide opportunities to the customers by adding and integrating channels to offer switching opportunities among them and eliminated the boundaries between the different channels and touchpoints (Picot-Coupey, Hure, & Piveteau, 2016).

A consumer-centered focus has crucial importance in the omnichannel retailing. For marketers, this requires three main priorities (Fulgoni, 2014):

1. Eliminate corporate channel silos that reduce marketing efficiency or upset today's digitally conscious and demanding consumers.
2. Increase the capacity of communication electronically with omnichannel consumers by finding the best way to deliver digital advertisement messages to mobile devices.
3. Consumer behaviors have to be measured by analytical systems through all available touch points and these systems should provide an integrated understanding to management about the drivers of consumer preferences.

A successful omnichannel strategy should not only guarantee the survival of a retailer but also create a kind of revolution in customer expectations and experiences. Retailers should understand that digital and physical fields are not competing with each other, rather they complement one another (Rigby, 2011). Although the omnichannel retailing one of the most powerful approach, integrated management of all the touchpoints on different channels is a critical issue to provide a unique customer experience. To overcome this critical issue the following can be done to improve the integrated omnichannel customer experience (Melero, Sese, & Verhoef, 2016):

- Companies should turn into customer-centric understanding
- Companies should connect all touchpoints across all channels
- It should be noted that the satisfaction of customers is vital
- Both traditional physical stores and digital channels play a key role in developing an omnichannel strategy

Similarly, (Kotler & Kartajaya, 2017, pp. 145–148) stated that there are three basic steps to be followed in omnichannel marketing. These are:

1. Mapping all possible touch points and channels on the customer path
2. Detecting the most important touchpoints and channels
3. Improvement and integration of the most important touchpoints and channels

2.3.Differences between Multichannel and Omnichannel Retail

Despite the fact, the concept of omnichannel evolved from multichannel still this two concept has been used interchangeably(Beck & Rygl, 2015). In order to understand the distinctive and basic structures of the omnichannel, there is a need to know the difference between omni and multichannel retailing(Shen et al., 2018). Verhoef (2015) shows these differences in the following table.

Table 1:Difference Between Multichannel and Omnichannel Management

| | Multi-channel management | Omnichannel Management |
|--|--|---|
| Channel focus | Interactive channels only | Interactive and mass-communication channels |
| Channel scope | Retail channels: store, online website, and direct marketing (catalog) | Retail channels: store, online website, and direct marketing, mobile channels (i.e., smart phones, tablets, apps), social media Customer Touchpoints (incl. mass communication channels: TV, Radio, Print, C2C, etc.) |
| Separation of channels | Separate channels with no overlap | Integrated channels providing seamless retail experiences. |
| Brand versus channel customer relationship focus | Customer - Retail channel focus | Customer - Retail channel - Brand focus |
| Channel management | Per channel | Cross-channel objectives (i.e., overall retail customer experience, total sales over channels) |
| Objectives | Channel objectives (i.e., sales per channel; experience per channel) | |

Source: (Verhoef et al., 2015)

The omnichannel focuses on real integration in all retail operations that provide an uninterrupted and seamless response to consumer experiences in all accessible shopping channels (mobile internet tools, in-store, television, and catalogs). However multiple channels concentrate on customers who contact with companies for the different transaction such as product research, purchase, product return through independent managed channels, including retail stores, online stores, mobile app stores and telephone sales (Hübner, Kuhn, & Wollenburg, 2016; Saghiri et al., 2018). Omnichannel gives more importance to the brand and customer value of retailing than channels. Therefore, it focuses on the inclusion of mobile and social networks and serving different customer needs and wants (Galipoglu et al., 2018).

Omnichannel retailing also aims the integration of all available touchpoints. Thus, sales increases based on improved customer interactions can be achieved. This fundamental goal distinguishes the omnichannel retailing from the multichannel retailing. Since omnichannel, retailing focuses on customer and integration, it represents a more advanced system than multichannel retailing (Larke et al., 2018). To establish the omnichannel retailing environment it is essential for a manager to create new marketing policies and strategies that consolidate both interactive retailing channels and traditional mass advertising channels. Combining both traditional and modern communication channels together will allow the enlargement of touchpoints towards consumers (Park & Lee, 2017). Compared to multichannel retailing, omnichannel retailing includes more channels. Another important change is that the channel distinctions are blurred as the natural borders between the channels begin to vanish. In multichannel retailing, the product/service research-oriented shopping attracts attention, while in the omnichannel phase, it is an important issue for consumers to buy products from online channels after trying in the store. At the same time, the opposite of this phenomenon has come forward in omnichannel retail. After consumers research on the product, favorable price etc. online, they can buy the product from a physical store (Verhoef et al., 2015).

Nevertheless, there are certain challenges of omnichannel retailing. These challenges are; the integration of the organizational structure, the formation of the information technology infrastructure to ensure data integrity, the difficulty in monitoring and measurement of customer loyalty and satisfaction and finally the difficulty in measuring the performance and effectiveness of the retail channels that have independent structure from each other, (Zhang et al., 2010). Omnichannel retailing is a social system like the distribution channels. Therefore, omnichannel retailing systems are affected by environmental behavior and conflicts. In omnichannel retailing, one of the most crucial challenges is to integrate the consumers' data in the entire channels and security of these data (Carvalho & Campomar, 2014; Chen, Cheung, & Tan, 2018). In addition to this, channel integration necessitates a high-cost investment that becomes a key problem for managers who will make the decision to accept the investment cost (Cook, 2014). Finding the best channel mixes, creating synergies among channels, building strategic alliances in an omnichannel environment, presenting more than one channel effectively to the consumer could be counted among other problems (Rosenbloom, 2007).

3. Conclusion

Nowadays, customers use both online and offline channels at the same time. In line with this development, retailers have to develop new strategies and models in order to gain a competitive advantage. Omnichannel retailing is seen as the most important and up-to-date strategy. Therefore, the purpose of the current study was to explain the omnichannel concept, which is shown as the future of retailing. This study was mainly conducted by following the current literature review and theoretical studies. An omnichannel retailing strategy based on the integration of

different online and offline channel, therefore, this new concept offers a seamless, integrated customer experience. Omnichannel retailing emerged as a result of the evolution of the concept of multichannel retailing.

Customers' intentions of integrated uses of offline, online, and touchpoints caused to shift from multichannel retailing to omnichannel retailing business model. This integrated approach provides various opportunities for retailers to create and offer new products and services to improve customer value in a cost-effective manner (Huré, Picot-Coupey, & Ackermann, 2017). Despite these benefits of the omnichannel retailing, this study shows that it is not an easy task to transform a traditional retailing to omnichannel retailing. To overcome this complex problem, the difference between multi and omnichannel retailing concept has to be well understood by managers. The study also show that the some solution and strategies for challenges and successful omnichannel retailing models.

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EVALUATION OF CULTURE POLICIES IN TURKEY'S DEVELOPMENT PLANS

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1. Introduction

Culture is the whole of moral and material values such as language, religion and history consciousness transmitted from one generation to another created by society in time (Poyraz, 2014, p. 210). At the same time, culture forms the living and thinking style of a society in addition to its common identity. Cultural development brings political, economic and social development with it. Art is another significant element of culture; art is the statement of a feeling, a work or a design (Papuççu, 2014, p. 391). Cultural heritage is transmitted to future generations through art. Existence of individuals with a strong sense of art and aesthetics will enable the support of a whole community. What makes human beings different from other living creatures is the culture it produces. Culture is a philosophy of life, a way of living it. Music, food, religion, belief, art, literature, technology and consciousness of history are the elements of culture. All these cultural heritages are the basic elements of development thrust. A development movement that is not based on national culture will surely fail. Stepping into the future with a society that has an identity, a personality, a national and moral consciousness will make things easier. Such a social form can only be accomplished with the contribution of a whole society. Thanks to the intense cultural activities, common moral values of a society will be supported and that society will get stronger as it will have a stronger common national identity and national solidarity. The goal of this article is to determine the state of culture and to draw a future road map in order to present future sense of movement.

2. Turkey's Development Plans

Five Years Development Plans, prepared by the Ministry of Development, former name: State planning Organization (SPO), are the basic policy documents that present economic, social and cultural developments targeted by Turkey in the long term. Ten different development plans for the years between 1963 and 2018 were prepared and practiced in Turkey in order to ensure a rapid industrialization in the country. The basic goal of all of these development plans is to ensure a fortunate and prosperous life for Turkish community and set conditions for a life that is compatible with human dignity. Solution suggestions that direct the nation are included in each development plan. Quantitative goals that are planned are also included in these five years development plans. One of the basic goals of development policies is to develop and extend national culture. The basic goal of culture policy is to ensure democratization and create a society that will set human beings free. It is significant to regard cultural richness as the main element of development thrust.

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2.1. The First Five Years Development Plan (1963 — 1967)

Handicrafts will be prioritized (SPO, 1963, p. 146). The important regions in terms of handicrafts are: Bursa: knife and rug, Kütahya: chinaware and weaving, Gaziantep: copper works, Sivas and Trabzon: silver works, carpet and rug, Erzurum: jewelry, jet works, Konya and Adapazarı: wood works, Eskişehir: meerschaum works, Kırşehir: carpet and rug, Kahramanmaraş: embroidery and hand-painted kerchief, Siirt: rug and etc. Necessary precautions will be taken in order to develop small arts that are specific to a region (SPO, 1963, p. 361). Putting goods to foreign markets will be supported in order to develop Turkish carpet-making and handicrafts. A central organization is necessary in order to be able to establish, direct and control financing, organization to ensure raw material, find market, make regulations and have quality control processes. Disorganized city development should be prevented by ensuring income to societies that deal with agriculture and handicrafts and production of touristic souvenirs should be supported in order to be able to export them (SPO, 1963, p. 363). Local production of souvenirs and other needs of tourists such as food and drinks should be supported and organized in areas with tourist facilities (SPO, 1963, p. 428).

2.2. The Second Five Years Development Plan (1968 — 1972)

Development of handicrafts can partially solve the problem of unemployment (SPO, 1968, p. 134). Teaching programs for each education level will be supported by art education (SPO, 1968, p. 159). In order to support and increase the level and position of Turkish cultural works, training and educating artists is the main goal. International culture festivals will be supported. Scientific researches, assessments and advertising activities will be supported in each branch of Turkish art and folklore (SPO, 1968, p. 187). Local administrations and voluntary agencies should be supported in order to be able to carry out cultural activities and protect cultural heritage. Advertising activities in order to promote Turkish culture will be supported. Regular programs will be formed and followed in order to be able to ensure other local citizens benefit from specific cultural activities such as state ballet, opera, orchestra and theatre. Protection of old pieces of art will be prioritized and precautions will be taken in order to prevent them from being smuggled (SPO, 1968, p. 190). Programs that will ensure young generation involve in cultural and artistic activities should be made (SPO, 1968, p. 257). Local small pieces of art will be analyzed and developed in terms of color, pattern and shape (SPO, 1968, p. 565).

2.3. The Third Five Years Development Plan (1973 — 1977)

Development of tourism ensured formation of a market for handicrafts that can be sold as souvenirs (SPO, 1972, p. 562). Handicrafts will also be used for employment; families will be able to gain income through these products as traditional art values will be developed and popularized (SPO, 1972, p. 563). Technical support and marketing products will be formed and an organization will be established in order to increase traditional handicrafts in the third plan period. This organization will especially give importance to export traditional products. Traditional, historical or regional patterns, color and shapes will be protected; some specific high standards for the art of tile-making, meerschaum, the art of weaving rug and carpet will be set. Necessary raw materials will be supplied and organized (SPO, 1972, p. 564). Precautions will be taken and studies will be made in order to protect and develop Turkish handicraft (SPO, 1972, p. 786). Concerts, theatres, cinema and other types of cultural activities will be organized in order to enable people benefit from them for free or on payment of a small fee. Turkish film-making will be developed (SPO, 1972, p. 787). Manuscripts will be collected and carefully protected in a center in order to be able to prevent them from decay and present to the public under better circumstances (SPO, 1972, p. 788).

2.4. The Fourth Five Years Development Plan (1979 — 1983)

Turkey has a rich cultural treasure thanks to its geographical location which combined various different cultures for centuries (SPO, 1978, p. 150). Attempts to protect historical monuments and works were limited. It is necessary to take steps in order to support private and state theatres. State conservatories are insufficient in terms of quality and quantity under current conditions, they aren't able to support artists in the country or to raise new ones (SPO, 1978, p. 152). Culture festivals and activities should be developed; thus, artists and public members will be socialized, cultural activities of different regions will be supported and cultural activities will be known by many people (SPO, 1978, p. 154). In the fourth five years development plan period, scientific cultural and artistic creations will be supported and precautions will be taken in order to protect them. Local administrations will be supported in order to have efficient roles in activities such as supporting theatres or establishing libraries and culture houses (SPO, 1978, p. 285). Musical instruments and necessary tools for making music will be produced in the country, domestic production will be prioritized. Necessary financial and legal precautions will be efficiently taken in order to protect historical cultural heritages. Historical artifact smuggling will be prevented and necessary precautions will carefully be taken (SPO, 1978, p. 286).

2.5. The Fifth Five Years Development Plan (1985 — 1989)

Culture and art are the basic elements of protecting and developing national values (SPO, 1984, p. 2). Sustaining our culture and keeping our values alive will be the main goals and necessary steps will be taken in order to involve them as a part of modern life. Protection of the richness of Turkish language and ensuring its continuation in its natural flow will be ensured through scientific studies on the issue. An incentive system that will ease purchasing of buildings that have historical value will be established in order to ensure private individuals buy, renovate and protect these historical values (SPO, 1984, p. 147). Our national culture's artistic and aesthetic style will be used while preparing new architectural structures, monuments etc. Museums will not be limited with exhibitions or advertising activities, conferences and seminars will be held in these places in order to attract the attention of the public, especially young individuals. Production of affordable books will be ensured, publishing and distribution of them will be supported. Literature, painting, theatre and different branches of art, which are significant in cultural life, will be supported and increased. Studies will be carried out in order to refunction different works, which reflect Turkish nationality and values, written in old Turkish and other languages; they will be carefully translated in order to be able to benefit from them (SPO, 1984, p. 148).

2.6. The Sixth Five Years Development Plan (1990 — 1994)

Developing and popularizing national culture is one of the basic elements of development plans. Contribution of foundations, associations and local administrations to cultural activities will be supported. Protection of cultural assets, natural beauties and cultural values will be prioritized. Mass communication tools will be used as much as possible for sustaining national culture and generalizing it. Getting children adopt the habit of reading and upskilling them will be significant. Producing cartoons and comic strips, writing children's book and publishing them will be supported (SPO, 1989, p. 322). Local works will be important in theatre. Travelling theatres will bring services to masses. State support for private theatres will continue. Necessary regulations will be prepared in order to guarantee authors royalties. Dual cultural interchange programs will be based on promoting our culture in foreign countries. Protection and renovation of cultural assets will be prioritized (SPO, 1989, p. 323). Efforts

will continue in order to bring back historical works that were smuggled. Municipalities will give importance to protecting historical architectural fabric (SPO, 1989, p. 324).

2.7. The Seventh Five Years Development Plan (1996 — 2000)

Protection of national culture, development and generalization of it which are the basic elements of development and opening to foreign countries, will be prioritized (SPO, 1995, p. 30). Tangible and intangible cultural assets will be carefully protected. National consciousness of citizens living in foreign countries will be important, their bonds with Turkey will be developed; social and cultural relations with different countries, especially Turkic ones, will be improved. Determining historical and cultural assets in foreign lands will be ensured. Public institutions and foundations will give more effort to domestic and foreign promotional activities, private initiatives, foundations and associations will be supported in this respect (SPO, 1995, p. 31). Enriching and sustaining natural and cultural values are some of the basic goals (SPO, 1995, p. 162). In order to minimize the destruction of cultural and natural assets, ecological balance will be taken into consideration while determining places for settlement (SPO, 1995, p. 176). Contribution of private sector will be ensured in order to promote artistic activities (SPO, 1995, p. 180).

2.8. The Eighth Five Years Development Plan (2001 — 2005)

Projects under the coordination of the Ministry of Culture will be created in order to ensure children get to know art at early ages. Strengthening cultural substructure and popularizing cultural activities are important. Qualified work force in the field of culture is important while meeting financial necessities and ensuring coordination are still insufficient (SPO, 2000, p. 97). Researches on Turkish language will be prioritized. Turkish culture will be advertised in order to create a center of attraction. Cultural cooperation with Turkic Republics and relative communities will be accelerated (SPO, 2000, p. 98). Works will be carried out for raising awareness of the public and public workers about the protection of cultural assets. Smuggling of historical artifacts will be prevented.

Traditional Turkish arts and folklore will be protected, developed and promoted; all of the artistic activities will be supported. Directors, scenarists and actors will be raised, educated and supported; authentic thinking and production in culture and art will be encouraged, individuals and artists who make contribution to cultural life will be supported (SPO, 2000, p. 99).

2.9. The Ninth Five Years Development Plan (2007 — 2013)

Proper environments will be prepared for developing arts. Everybody in the society will be able to reach cultural activities easily. Inventory of our cultural heritage will be prepared, works for restoring them will continue, public consciousness will be increased. The dimension of culture will be prioritized in social and economic policies. Turkish language will be used correctly and efficiently. As a part of developing and generalizing culture tourism, domestic examples that are protected for their authentic features will be increased. Material culture products, especially traditional handicrafts, will be exported. Production of cultural products such as cinema and documentary will be encouraged; their shares in national income and in exportation will be increased. Necessary steps will be taken in order to decrease socio-cultural adaptation problems resulting from migration and irregular urbanization. Policies that increase tolerance, social dialogue and culture of partnership will be prioritized (SPO, 2006, p. 90).

2.10. The Tenth Five Years Development Plan (2014 — 2018)

A significant part of historical artifacts are restored. It is important to establish culture policies in a way that they support social integrity and solidarity. Participation in cultural and artistic activities should become a habit. Our cultural relations with world countries, especially with the ones that we have common history, will be developed. Important historical figures, events, Turkish legendary characters, elements of cultural richness will be reflected in documentaries, series and cartoons. Contribution of the industry of culture to national income, exportation and promotion will be increased. Cultural identity will be protected while preparing urban transformation projects. Domestic and foreign cultural heritages will be protected in a way that they contribute to culture tourism. Historical areas in cities will be protected and they will be transformed into the centers of attraction (Ministry of Development, 2013, p. 45). Studies for transforming Turkish language into a globally spoken language will be encouraged. Children will have culture and art education at early ages (Ministry of Development, 2013, p. 46).

3. Result and Suggestions

Culture policies in Turkey for ten different development plans for the years between 1963 and 2018 are analyzed in this study. It is seen that there are various suggestions about culture policies in all of the plans. Despite this positive situation, there is no detail about how to put the suggestions into action, which is a significant deficiency. Promises that explain policies should be explained. It is pleasing to see that there are many articles about culture in every development plan; but the critical point is to see the will of the state in terms of putting the promises in development plans into practice. It is observed and concluded by the writers of this article that, related public organizations and institutions still do not have sufficient appreciation about the significance and the potential of culture policies. The role of the state in culture policies is to support the process of transforming cultural richness into economic value, to make innovations and prepare substructure; thus, as a suggestion about developing culture and art, it should be compulsory to establish the faculties of fine arts and conservatories in each public and private university. By doing so, protecting Turkish arts, transmitting them into next generations, diversifying and developing artistic creations will be possible. There should be Fine Arts Secondary schools and Fine Arts High Schools in each city, and children who are interested should be able to go to these schools and take education at early ages. Every individual, from kindergarten to the last grade of university should have a hobby in sports and arts at the same time. Various cultural and artistic projects should be made, thus, it may be possible to save students from the addiction of cell phones and internet. Culture and art programs should be included in all of the media broadcasts, especially TV series. The right to reach culture should be taken under constitutional guarantee just like the right to have education. There will be an increase in the interest and participation of the public into culture and art activities when easy access to culture is seen as a human right. The scope of moral and material protection of artists should be broadened. There must be an extensive judicial infrastructure about culture and art. The share of the protection of cultural assets taken as a part of property tax by Municipalities should be used for the purposes mentioned above. Historical cultural assets of Turkey should be brought to light as fast as possible; they should be announced to the world with efficient promotional activities. Natural and cultural heritages should be enriched as a whole; they should be protected carefully and transmitted to the next generations. The goal of transforming Turkey into a country proud of its unique language, rich literature, theatre, cinema, folklore, visual and written media publishing, art, architecture, original handicrafts and other cultural varieties isn't merely the duty of the state. Turkish nation created this unique culture and art, it is the duty of this nation to live and sustain it; it is under the conscientious responsibility of the nation.

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ECONOMIC & MANAGEMENT ISSUES IN **RETROSPECT & PROSPECT**

Economics, as the queen of social sciences, interacts with disciplines such as sociology, politics, history and management. This book, which contains important studies in the theoretical and empirical context, has a feature that emphasizes the relationship between economics and management. We hope that the book will make a remarkable contribution to the related disciplines.

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