

Real Earnings Management and Corporate Governance: A Study for Latin America¹

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Abstract:

This paper analyses the impact of both, the ownership structure features and the institutional settings, on real-based activities manipulation based on a sample of listed companies in the underexplored Latin American market for the period of 2004–2016. Using panel data based-GMM system estimator technique, the results confirm some previous literature that the monitoring role of the majority owner is crucial in mitigating the opportunistic behavior of managers in engaging in real activities manipulation that reduces the informative content of financial statements. However, the analysis of the insider ownership revealed the negative impact on transparency that entrenched managers cause. In this case, we observed that as insider ownership increases, managers engage more actively in real earnings management. Other corporate governance tools like the institutional ownership and the quality of the regulatory system demonstrated to be effective mechanisms in reducing the real activities manipulation. Taken together, our results mean that in institutional settings characterized by weak protection of the investors and possible conflicts of interests among shareholders, the oversight by majority shareholder in conjunction with the legal and regulatory framework becomes an important governance mechanism that reduces the managerial discretionary decision making concerning the quality of reported earnings.

JEL Classification: G15, G32, G34

Keywords: Real activities manipulation, earnings management, corporate governance, ownership structure, institutional setting.

1. Introduction

Earnings are the baseline number for shareholders to determine their investment decision in a firm's stock. At the same time, earnings are the criteria by which managers' performance is evaluated and retribution is paid. As such, managers might very well have the incentives to inflate the reported earnings by using various accounting maneuvers and techniques to change the timing and structure of operating, investing, and financing activities that deceives investors regarding the firm's earnings power.

The importance of detecting and preventing earnings management has become more critical than ever since the plague of huge accounting scandals that took place in US at the beginning of the 2000s, which had detrimental effects on different stakeholders of the firms. The 21 largest accounting scandals and the fall of the largest audit firm, Arthur Andersen, from 2000 to 2002 triggered the enactment of Sarbanes-Oxley Act of 2002, which represents an effort by the US authorities to improve the transparency and creditability of financial reporting (Cohen, Dey, & Lys, 2008).

Latin America has not been stranger to these accounting scandals. For example, in 2011 Chile lived the most significant revelation of corporate fraud in the history of the its market when on June 9, the retailer La Polar, informed to the Superintendencia de Valores de Seguros (SVS, Superintendency of Securities and Insurance) that its financial reports had vastly under-provisioned its consumer credit card portfolio, and as result La Polar's share price dropped

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more than 70%, the firm's managers were fired, criminal and civil charges were filed, and the accounting differences have turned out to be much greater than initially thought. Similarly, discretionary managerial decision-making power to inflate firms' profits was observed in Petrobras in Brazil, where executives overpriced contracts looking for private benefits; or Disco in Argentina, where it was found out that the financial results of several joint ventures were recorded inappropriately. These are just a few examples of high-profile firms that have misreported their earnings, to the detriment of investors and in direct contradiction with the provisions of governments and regulators. The set of overstatement of financial reports to mislead investors is known as earnings management.

Earnings management can be classified into two categories: accrual-based earnings management and real activities manipulation. Accrual-based earnings management purely involves various accounting maneuvers to improve the earnings baseline, which should be reverted in the future period and should not affect the firm cash flows (Dechow, Sloan, & Sweeney, 1995; Healy & Wahlen, 1999). Real activities manipulation, however, involves changes made to the normal business operations and consequently should affect the firm cash flows (Zang, 2012). Real activities manipulation can reduce firm value because actions taken in the current period to increase earnings can have a negative effect on cash flows in future periods (Roychowdhury, 2006). Long-lasting impact, real activities manipulation should deserve more attention from researchers. However, accruals-based earnings management have been attracted more attention from researchers so far (Dechow, Ge, Larson, & Sloan, 2011; Ronen & Yaari, 2008; Walker, 2013).²

Real activities manipulation, however, has just started to attract researchers' attention in recent studies by Graham, Harvey, and Rajgopal (2005), Roychowdhury (2006), Cohen et al. (2008), Cohen and Zarowin (2010), and Zang (2012), even though it is widely employed by managers of firms from developed countries to improve their reported earning numbers. Graham et al. (2005)'s survey documents that financial executives attach a high importance to meeting earnings targets, and thus are willing to manipulate real activities to meet these targets, even though the manipulation potentially reduces firm value. Walker (2013) suggests that academic researchers need to take much more seriously the possibility that firms may be regularly making value-destroying real economic choices to meet earnings benchmarks. Despite of this, there is a clear lack of researches in developing countries like Latin America.

Since real activities manipulation involves activities that alter the normal course of business of a firm such as changing the timing/structure of operating, financing and investing activities, it has a substantial impact on the firm's future cash flows and thus firm valuation. Accruals-based manipulation activities, on the other hand, are simply accounting adjustments which are reverted in the upcoming period and thus exert no significant impact on firm cash flows and valuation. The passage of Sarbanes-Oxley Act has led to increased scrutiny of auditors and regulators on financial reporting by companies. As such, managers switch to using more real activities manipulation (instead of accruals manipulation) (Cohen et al., 2008) to divert scrutiny since real activities can easily be disguised as routine business decisions and thus are more difficult to detect. Interestingly, Zang (2012) shows that managers choose to engage in real activities manipulation during the fiscal year and adjust accruals at the end of fiscal year according to how effective real activities manipulation is in molding the earnings figure. Thus, real activities manipulation should deserve more attention. Consequently, this paper intends to shed some additional light on the firm-based and country-based determinants of real activities manipulation for a sample of firms from emerging markets.

² Walker (2013) points out that most of the literature up to 2005 focuses solely on accruals-based earnings management to detect the methods firms use to manage earnings.

Our study utilizes basically the ownership structure features as a firm attribute that impacts on real activities manipulation and the contextual characteristics of the legal and institutional environment. Concerning the ownership structure, we study the ownership concentration, the insiders' ownership and the ownership of institutional investors. Regarding the country variables we used indicators of the countries' government effectiveness, rule of law and regulatory quality as proxies of the institutional setting quality.

This paper contributes to the current literature in different ways. First, differently from prior literature focused mainly on accruals-based manipulation as the sole method to mold earning figures in developed countries, in this study we examine whether corporate governance variables can control real activities manipulation in Latin America as a sample of an unresearched emerging market region. From here it comes our second contribution which corresponds to the consideration of a multi-country sample of companies. So far, most of the studies are focused on single-country analyses which are characterized by their limitation to extrapolate the conclusions and results beyond the local institutional context. For instance Roychowdhury (2006), Gunny (2010), Zang (2012) Farooqi, Harris, and Ngo (2014), and Mellado-Cid, Jory, and Ngo (2017) are either focused on samples of US companies, the Fortune 500 index or on specific industries. All of them lack broader consideration of contextual variables in their analyses. On the other hand, there are studies solely focused on external country-level determinants of earnings management such as Han, Kang, Salter, and Yoo (2008) which analyses cross-country cultures as proxy of their value system in explaining earnings management, or Ball, Kothari, and Robin (2000) and Hope (2003) that focus on the legal setting of countries as determinants of earnings management. Similarly, Leuz, Nanda, and Wysocki (2003) show evidence on the impact of legal protection of investors and the quality of financial information reported to outsiders. Consequently, the third contribution takes one step forward in comparison to the current empirical literature on real activities manipulation and follows a more comprehensive and integrated perspective by analyzing not only how firm attributes, such as the ownership structure, determine the discretionary behavior of managers to engage in real activities manipulation; but also, our research moderates the arguments by considering legal and institutional country-level variables as determinants of the magnitude of real activities manipulation. Hence, this study highlights the importance of diversity of ownership structure features and the characteristics of the institutional settings in monitoring income manipulation among Latin American firms. Fourth, the methodology used in the analysis allows us to control efficiently for several econometric problems observed in the previous empirical literature. Hence, we tackle the endogeneity problem and the individual, time invariant heterogeneity problem by setting an appropriate empirical strategy that reports consistent and robust findings.

The most important findings confirm some previous literature that the control-enhancing role of the majority owner is crucial in mitigating the opportunistic behavior of managers in engaging in real activities manipulation that reduces the informative content of financial statements. The analysis of the insider ownership however, revealed the negative impact on transparency that entrenched managers cause. We observed that as insider ownership increases, managers engage more actively in real earnings management. Other corporate governance tools like the institutional ownership and the quality of the regulatory system demonstrated to be effective mechanisms in reducing the real activities manipulation. Taken together, our results mean that in institutional settings characterized by weak protection of the investors and possible conflicts of interests among shareholders, the oversight by majority shareholder in conjunction with the legal and regulatory framework becomes an important governance mechanism that reduces the managerial discretionary decision making concerning the quality of reported earnings.

The remaining of this study is organized as follows. The following section presents the

related literature and hypothesis development. The third section describes the baseline research methodology. After that results are discussed and finally, in section five, we list the major conclusions.

2. Literature Review and Hypotheses Development

As earnings are the criteria by which managers' performance is evaluated, managers might very well have the incentives to inflate the reported earnings by using various accounting maneuvers and techniques to change the timing and structure of operating, investing and financing activities that mislead investors regarding the firm's earnings power. The role of governance structures, among others, is to reduce such managerial misconduct that erodes the quality of the reported earnings and increases the opaqueness of financial reporting. Here we discuss two main corporate governance tools: firms' ownership structure features and the countries' legal and regulatory systems.

2.1. Ownership structure features and real activities manipulation

There is a large number of studies that examines the relation between ownership structure characteristics and earnings management (Alves, 2012; Doukakis, 2014; Fan & Wong, 2002; Kazemian & Sanusi, 2015; Koh, 2003, 2007; Leuz et al., 2003; Masmoudi Ayadi, 2014; Siregar & Utama, 2008; Velury & Jenkins, 2006). Concerning the ownership concentration and its impact on the management of earnings there are two theoretical hypotheses. The first one, suggests a negative impact on the manipulation of the financial statements as the controlling owner holds a higher proportion of the outstanding shares. This hypothesis is supported by the supervisory role argument of the majority owner which minimizes the opportunistic behavior of managers. Through greater and tighter control of majority shareholders, managers have less discretionary power and consequently less incentives to manipulate the financial reports by real earnings management. This hypothesis suggests the existence of an alignment of interest between managers and shareholders. From an empirical viewpoint, Alves (2012) highlights the importance of ownership structure, mainly managerial ownership and ownership concentration, in constraining the likelihood of earnings management in Portuguese firms.

The competing hypothesis corresponds to a positive relationship between real activities manipulation and the shares held by the controlling owner. This approach is supported by the expropriation of minority shareholders' wealth by majority owner. It takes place when the majority shareholder has an excessively high proportion of the outstanding shares that allows him/her to expropriate the wealth of minority investors through their effective control of the firm (Morck, Shleifer, & Vishny, 1988). In this case, majority owner's decisions deprive the rights of minority shareholders because the former is often uncontestable in the weak legal systems (Johnson, La Porta, Lopez-de-Silanes, & Shleifer, 2000; La Porta, Lopez-De-Silanes, & Shleifer, 1999). In such situation, the majority shareholder may consent to certain accounting practices that discretionarily change the earnings in one or another direction for private benefits, at the expense of minority investors. For the East Asian context, Fan and Wong (2002) find evidence of the expropriation hypothesis where they observe that controlling owners are perceived to report accounting information for self-interested purposes, and concentrated ownership is associated with low earnings informativeness.

Regarding these two hypotheses, the one on the controlling effect and the one on the expropriation effect, we believe that in the context of Latin American countries the hypothesis on the controlling effect is more plausible. Differently from most of the previous literature focused on the US and developed markets, Latin American countries are characterized for the

civil-law legal system where most of the monitoring performed through internal governance systems, low level of investor protection of minority shareholders, and concentrated as well as pyramidal ownership structures (Lefort, 2005; Saona & San Martín, 2016). For instance, according to Lefort (2005), corporate governance in Latin America is characterized by high level of ownership concentration in which many companies are controlled by one of the industrial or financial conglomerates. This ownership concentration system works as a governance tool before weak protection of investors' rights and feeble law enforcement. Hence, given the intrinsic features of the institutional context in Latin America, as the ownership concentration increases the discretionary capacity of manager to overstate the earnings is constrained.

The insiders' ownership is another feature that drives the real activities manipulation. Similarly as before, there are two competing hypotheses that support both a positive and a negative relationship between the insiders' ownership and the real activities manipulation. On the one hand, when insiders' ownership increases there is less room for managerial discretionary behavior, and consequently the real activities manipulation decreases. This is known as the alignment of interests' hypothesis which suggests that the interests of managers and insiders converge to the one of the owners (Bennedsen & Nielsen, 2010). The alternative view is the entrenchment hypothesis which indicates that managers and other insiders over-exercise their making decision power since they free themselves from the disciplinary role of several corporate governance systems as suggested by de Miguel, Pindado, and de la Torre (2005). Hence, entrenched, private rent-seeking managers might be more prone to engage in active real earnings management than managers whose interests are aligned with those of the owners. Regarding the corporate governance characteristics in Latin America, Lefort and Walker (2000), Lefort (2005) and López and Saona (2005) have suggested that the weak institutional framework has mold the insiders' ownership towards complex structures where managers, families chains, conglomerates, business groups, directors, politicians and other related parties and stakeholders compound powerful interested and dominant groups that are isolated from direct contestability of second order shareholders such as minority owners. Stulz (2005) refers to this as the twin agency problems as the concurrence of the agency problem of corporate insider discretion and the agency problem of the state ruler discretion. Therefore, it is more likely that the entrenchment hypothesis crowds out the alignment of interest hypothesis given the excessive power concentration of insiders. These insiders as dominant groups might be more willing to incur in real activities manipulation for self-interested purposes, private rent seeking and empire building actions. For instance, according to Masmoudi Ayadi (2014), for French companies as a representative sample of a civil-law country, managerial ownership has a positive impact on the earnings management.

The last corporate ownership feature considered in this study is the role played by institutional investors as governance device. By their very nature, institutional investors are more skilled and sophisticated investors in using financial information to make decisions and in monitoring firms compared to other owners. Empirical studies such as those of James, Shivaram, and Mohan (2002) and Hashim and Devi (2012) for US and Malaysian firms, respectively, have shown that firms with relatively high level of institutional investors reduce the discretionary capacity of managers and the agency costs and enhance the informativeness of earnings. These authors conclude that the presence of institutional investors not only improves governance practices but contributes to a better quality of accounting information since it allows mitigate the earnings management activity. In another context, Koh (2003) finds for Australian firms that those with lower institutional ownership levels engage in income increasing discretionary accruals. This means that firms with higher institutional ownership limit managerial accruals discretion. Therefore, institutional investors can help corporate

governance mechanism in reducing earnings management when they have a sufficiently high ownership level. Velury and Jenkins (2006) demonstrate a positive relationship between institutional ownership and earnings quality. Similarly, Koh (2007) finds that long-term institutional investors constrain accruals management for firms that manage earnings to meet/beat earnings benchmarks. And finally, Masmoudi Ayadi (2014) shows that the ownership concentration and institutional ownership have a positive impact on the earnings informativeness, which results in lower real activities manipulation in the case of French companies. Consequently, we arrive to the following three research hypotheses concerning the diversity of ownership structure features in the Latin American context.

H1: A negative association is expected between the ownership concentration and the extent of real earnings management because of the monitoring hypothesis.

H2: A positive association is expected between the insiders' ownership and the extent of real earnings management because of the entrenchment hypothesis.

H3: A negative association is expected between the level of institutional ownership and the extent of real earnings management due to their effective monitoring of managers.

2.2. Institutional system and real activities manipulation

There is no doubt that corporate governance is a function of firm attributes, but it also depends on the efficiency of the legal setting where companies operate (Filatotchev, Jackson, & Nakajima, 2013). For instance, Ball, Robin, and Wu (2003) argue that the institutional arrangements of a country are the most important factor in controlling managers' self-interest, which reduces opportunistic behavior such as the overstatement of financial reports, and improving the quality of the accounting information. Insiders and majority shareholders take actions depending on their opportunity to gain profits. Hence, low legal protection of minority shareholders can provide these insiders and majority owners with incentives to extract private benefits at the expense of minority shareholders (La Porta, Lopez-De-Silanes, Shleifer, & Vishny, 2000).

Concerning the characteristics of the institutional setting, it has been widely argued its impact as governance system on the discretionary capacity of managers to engage in real activities manipulation. Specifically speaking, improvements in regulation have dramatically changed the managerial behavior concerning misreporting the financial information. For instance, Cohen et al. (2008) state that managers have shifted their method of earnings management from accrual-based earnings managements to real activities manipulation after the passage of the Sarbanes-Oxley Act (SOX) due to the increased scrutiny of accounting practices. Facts such as a weak investors' rights protection can provide insiders with incentive to extract private benefits by disguising the actual performance of the company (La Porta et al., 2000) and by obfuscating firm performance (Leuz et al., 2003). The Sarbanes-Oxley Act in the United States is a clear example of these regulatory arrangements. Another example about it is the application of international reporting systems (IFRS). For instance, the transition to IFRS had restrictive impact on earnings manipulation in Brazilian firms after its complete implementation (Pelucio-Grecco, Geron, Begas, & Cavalcante, 2014). In this case, the more effective the regulation, the lower the possibility for the manager to opportunistically manipulate the financial statements during the elaboration process and, as a result, the better the quality of the accounting information that is disclosed.

Therefore, one might expect that better corporate governance rules limit the corporate executives' discretionary behavior in managing earnings. For banks from 48 countries, Shen and Chih (2005) provide evidence suggesting that a firm in a country with good anti-director

rights does less earnings smoothing. In a further development for non-financial firms, Shen and Chih (2007) find that stronger anti-director rights may result in stronger earnings smoothing in low firm-level governance countries only, and not in high firm-level governance countries. They conclude that stronger enforcement of laws can result in less earnings smoothing but this effect is stronger in countries with worse corporate governance. Thus, they infer that the institutional setting impacts asymmetrically on the earnings manipulation based on the firm-level governance systems. Demirgüç-Kunt and Maksimovic (1998) and Demirgüç-Kunt, Laeven, and Levine (2004) assert that legal enforcement and efficient regulatory systems are associated with lower levels of corruption which make the financial system perform with much less frictions. Consequently, we can derive out of these arguments that the characteristics of the legal system also determine the way the executives use their discretionary capacity to manage the accounting earnings.

H4: A negative association is expected between the efficiency of the regulatory system and the extent of real activities manipulation.

All the previous developed research hypotheses are used to demonstrate that firm-level corporate governance as well as country-level governance systems can not be dissociated or analyzed in isolation one from the others. Conversely, we believe that all of them a part of the same puzzle.

3. Methodology

3.1. Econometric technique

We are interested in assessing whether a change in the diverse ownership structure measures used as governance mechanisms at firm level as well as within country modifications in governance can predict a change in the real activities manipulation. We proceed in two steps in the empirical analysis. First, we conduct a univariate analysis where we describe the firms' sample and provide descriptive statistics of the most important variables. Mean difference test is also used to contrast the null hypothesis that the mean values observed for the real activities manipulation variables are statistically different from zero.

Second, we performed a multi-variable, explicative analysis. Given the nature of the data used in the empirical analysis, we have to recognize two major econometric problems we have to deal with: the unobservable heterogeneity and the endogeneity problems (Arellano, 2002). Constant and unobservable heterogeneity refers to specific characteristics of each firm that remain constant over time (e.g. managerial style, attitude toward risk, internal policies, among others). Since they are unobservable, they become part of the random component in the estimated model. This problem is exacerbated in our model because the lagged dependent variable is also included as an explanatory variable to assess the persistency of the real activities manipulation. The endogeneity problem however, takes place when changes in earnings management drive an impact on corporate governance measures (Leuz et al., 2003). Consequently, the causality effect is not unidirectional and hence, it is expected that such simultaneity problem may cause biases in the predictions.

Consequently, in order to tackle these econometric problems, we proceed by estimating the regressions using the two-stage Generalized Method of Moments System Estimator (GMM-SE). The GMM-SE procedure allows us to address at the same time the heterogeneity problem and the potential endogeneity issues by using as instruments the lagged right-hand-side variables in the model. Due that in both problems the independent variables are endogenous and correlated with residuals of the regressions, the OLS estimation is both biased and inconsistent (Brown, Beekes, & Verhoeven, 2011). Consequently, the two-stage GMM System

Estimator arises as a superior approach to reduce the bias in the regressors and the inconsistency in the estimations which can induce poor asymptotic precision (Alonso-Borrego & Arellano, 1999). Given that the original Arellano and Bond (1991) estimation system can perform poorly if the autoregressive parameters are too large or if the ratio of the variance of the panel-level effect to the variance of the idiosyncratic error is too large (López & Santana-Martín, 2015), Arellano and Bover (1995) and Blundell and Bond (1998) developed the two-stage GMM System Estimator which is an enhanced technique in comparison with the original Arellano and Bond (1991) technique, because the former expands the instrument lists by including instruments in levels and instruments in differences. Nevertheless, in this paper, as a further robustness test of our findings, the two-stage GMM-SE approach is used as a primary method and the original Arellano and Bond (1991) technique is also used as a second order method.³ The consistency of the estimates in methods depends critically on the absence of second-order serial autocorrelation and on the validity of the instruments. Hence, the AR(2) statistic is used to measure the second-order serial correlation,⁴ on the one hand, and the Hansen (1982) contrast of over-identified restrictions is used to check if the instruments are exogenously determined, on the other hand. Additionally, we used the Wald test of joint significance for all independent variables and tested the potential multicollinearity problems through the Variance Inflation Factor (VIF).

As further robustness checks of our major findings we used panel data Fixed Effects (FE), the Feasible Generalized Least Squared estimations (F-GLS) and the Panel-Corrected Standard Error (PCSE) as alternative econometric techniques. Briefly, the FE method allows us to handle the unobservable heterogeneity problem. We use F-GLS because of minor problems of heteroscedasticity observed in the FE estimations. In their well-cited paper, Beck and Katz (1995) demonstrated that Feasible Generalize Least Squared specifications produce coefficient standard errors that are severely underestimated. Furthermore, by using Monte Carlo experiments, they report that PCSE estimator produces accurate standard error estimates at no or little loss in efficiency compared to F-GLS. Hence, to minimize the bias in the parameters estimates because of the chosen methodology, the FE, F-GLS and PCSE are used as robustness tests of our major findings, although they are not reported for saving-space reasons but are available upon request to the corresponding author.

Finally, given that we use micropanel data in which the cross-section dimension far exceeds the time-series dimension (i.e. we have many more firms than years), we used a Fisher-type (Choi, 2001) test which has as null hypothesis that all the panels contain a unit root to test the stationarity of the variables in the model. The advantage of this test before other tests for unit root is that it does not require strongly balanced panel data as is our case. The Fisher-type test for panel data unit roots follows a meta-analysis perspective. That is, this test conducts unit-root tests for each panel individually, and then combines their p-values to produce an overall test (Saona, 2016). Among other advantages in performing the estimation with panel data, it allows to take advantage of a higher informative content than cross sectional analysis as a consequence of the simultaneous use of time series and cross-sections, it also allows higher variability, lower collinearity among explicative variables, more degrees of freedom and higher

³ Instrumental variables might also be used to control for endogeneity. Nevertheless, in a multi-country setting like this study, it is hard to find out a free of endogeneity or purely exogenous shock that impacts all the countries in our sample in the same extent as stated by Black, de Carvalho, Khanna, Kim, and Yurtoglu (2014). Likewise, Larcker and Rusticus (2010) indicate that when the instrument is only weakly correlated with the regressor, the instrumental variable methods can produce highly biased estimates when the instrumental variable is even slightly endogenous. In such cases, estimates are more biased and more likely to provide the wrong statistical inference than OLS estimates that make no correction for endogeneity (Saona & San Martín, 2016). Hence, instrumental variable methods are not used in the econometric analysis.

⁴ No rejection of the null hypothesis of no second-order autocorrelation indicates that the moment conditions are valid.

efficiency as stated by Baltagi (2013).

3.2. Sample and variables measures

Our database combines time series with cross-sectional data, allowing the formation of panel data. The initial sample includes Latin American firms covered in Thomson Reuters EIKON from 2004-2016. It is necessary to exclude financial institutions (SIC 6000-6999) and utilities firms (SIC 4900-4999) from the sample because of their regulated status. The advantage of the Thomson Reuters EIKON is that has homogenized data and enables comparison and analytical work. The composition of the panel data by country is described in [Table 1](#). To compound an efficient panel data, we included a minimum of 5 continuous year observations per firm with an average of 8.57. The panel data include 5,405 firm-year observations.

The governance, country-level information was obtained from the updated World Governance Indicator form Kaufmann, Kraay, and Mastruzzi (2011) available at the World Bank web page⁵ and from the Index of Economic Freedom published by the Fraser Institute available also on line.⁶ The sample of firms is representative of the Latin American corporate sector because it includes the largest companies per country based on their market capitalization, representing a significant proportion of the assets of the corporate sector in the region.

3.2.1. Real activities manipulation

3.2.1.1. Background on the measures of real activities manipulation

Roychowdhury (2006) constructs three measures of real activities manipulation, including abnormal cash flows from operations, abnormal discretionary expenses, and abnormal production costs. These measures have been widely employed in prior studies (Cohen et al., 2008; Cohen, Pandit, & Zach, 2016; Cohen & Zarowin, 2010; Farooqi et al., 2014; Gunny, 2010; Kang & Kim, 2012; Kim & Park, 2014; Mellado-Cid, Jory, & Ngo, 2018; Zang, 2012). As such, we will use abnormal cash flows, abnormal discretionary expenses and abnormal production cost to proxy real activity-based earnings management. Managers can increase earnings by accelerating the timing of sales through increased price discount or more lenient credit terms that will increase temporarily sales volumes, but these are likely to disappear once the firm reverts to old prices (Cohen & Zarowin, 2010). They also can increase earnings by overproducing inventory to report lower costs of goods sold. With overproduction, managers can spread fixed overhead costs over a larger number of units, thus decreasing the reported cost of goods sold and increasing reported operating margins (Cohen et al., 2008; Cohen & Zarowin, 2010; Roychowdhury, 2006). At the same time, managers can cut discretionary expenditures to increase the reported earnings. Examples of this practice include research and development (R&D), advertising, and selling, general, and administrative expenditures (SG&A). Consequently, real activities manipulation is reflected in abnormal levels of production costs and discretionary expenses. Additionally, we follow Cohen et al. (2016) and Gunny (2010) and use one alternative measure of real earnings management based on the abnormal SG&A expenditures.

3.2.1.2. Estimation of the real activities manipulation measures

⁵ <http://info.worldbank.org/governance/wgi/#home>

⁶ <https://www.fraserinstitute.org/economic-freedom/dataset>

Like most accrual-based earnings manipulation measures, to obtain the abnormal real activities manipulation we subtract the expected value of each real activities manipulation measure based on the underlying expectation model from the actual value of the real activities measure (e.g., cash flow from operations, discretionary expenses, production costs, and SG&A). Abnormal real activities management measures and the expectations models are:

Abnormal cash flow from operations:

$$\frac{CFO_{i,t}}{A_{i,t-1}} = \beta_0 + \beta_1 \left(\frac{1}{A_{i,t-1}} \right) + \beta_2 \left(\frac{Sales_{i,t}}{A_{i,t-1}} \right) + \beta_3 \left(\frac{\Delta Sales_{i,t}}{A_{i,t-1}} \right) + \varepsilon_{i,t} \quad (1)$$

Where $CFO_{i,t}$ is the cash flow from operation for the firm i in year t ; A_{t-1} is the total assets; $Sales_{i,t}$ is the annual sales and $\Delta Sales_{i,t}$ is the change in annual sales. The abnormal level of cash flow from operation ($RAMCFO$) is measured as the residuals ($\varepsilon_{i,t}$) from equation (1) (Cohen et al., 2016; Roychowdhury, 2006). The higher the residuals, the larger is the amount of abnormal cash flow from operation, and the greater is the increase in reported earnings through increasing sales.

Abnormal discretionary expenditures:

$$\frac{DISX_{i,t}}{A_{i,t-1}} = \eta_0 + \eta_1 \left(\frac{1}{A_{i,t-1}} \right) + \eta_2 \left(\frac{Sales_{i,t-1}}{A_{i,t-1}} \right) + e_{i,t} \quad (2)$$

Where $DISX_{i,t}$ is the discretionary expenditures defined as the sum of R&D, advertising, and SG&A expenditures of the firm i in the year t . The abnormal level of discretionary expenditures ($RAMDISX$) is measured as the estimated residuals ($e_{i,t}$) from the equation (2) (Cohen et al., 2016; Roychowdhury, 2006). We multiply the residuals by -1 such that the higher the residuals, the larger the amount of discretionary expenditures cut by firms to increase reported earnings.

Abnormal production costs:

$$\frac{PROD_{i,t}}{A_{i,t-1}} = \gamma_0 + \gamma_1 \left(\frac{1}{A_{i,t-1}} \right) + \gamma_2 \left(\frac{Sales_{i,t}}{A_{i,t-1}} \right) + \gamma_3 \left(\frac{\Delta Sales_{i,t}}{A_{i,t-1}} \right) + \gamma_4 \left(\frac{\Delta Sales_{i,t-1}}{A_{i,t-1}} \right) + v_{i,t} \quad (3)$$

Where $PROD_{i,t}$ is the sum of the cost of goods sold of the firm i in the year t and the change in inventory from year $t - 1$ to t . The abnormal level of production cost ($RAMPROD$) is measured as the residuals (v) from equation (3) (Cohen et al., 2016; Roychowdhury, 2006). The higher the residuals, the larger is the amount of abnormal production costs, and the greater is the increase in reported earnings through reducing the cost of goods sold (e.g. stronger indication of real activities manipulation). For all the three previous estimations of real activities manipulation, we follow Zang (2012) and compute the regressions cross-sectionally for each industry-year with robust standard errors. Industry sectors are included to capture the impact of industry-wide economic conditions during the year on the firms' real activities manipulation.

Abnormal selling, general and administrative costs:

$$\frac{SGA_{i,t}}{A_{i,t-1}} = \gamma_0 + \gamma_1 \left(\frac{1}{A_{i,t-1}} \right) + \gamma_2 MV_{i,t} + \gamma_3 TQ_{i,t} + \gamma_4 \left(\frac{Int_{i,t}}{A_{i,t-1}} \right) + \gamma_5 \left(\frac{\Delta Sales_{i,t}}{A_{i,t-1}} \right) DD + v_{i,t} \quad (4)$$

Where $SGA_{i,t}$ is the selling, general and administrative expense, and $MV_{i,t}$, $Int_{i,t}$, and $TQ_{i,t}$ were defined above. $\Delta Sales_{i,t}$ is the change in sales, whilst DD is a dummy variable which takes value 1 when total sales decrease from year $t - 1$ to t , and zero otherwise. Similarly as in the previous models, the abnormal level of sales, general and administrative expenses ($RAMSGA$) is measured as the residuals (v) from equation (4) (Cohen et al., 2016; Roychowdhury, 2006).

Aggregate abnormal real activities manipulation:

RAMCOMB is an aggregate measure of real earnings management calculated as the sum of the abnormal discretionary expenses (*RAMDISX*), multiplied by negative one, and abnormal production costs (*RAMPROD*) described above.

Given that Cohen et al. (2016) suggest that although real earnings management measures are not well specified in each and every setting, the weight of the evidence suggests that, across a wide variety of research settings such as those encountered in accounting, finance, and economics, performance-matched real earnings measures will provide better-specified tests than other real earnings measures. Consequently, for all our previous measures, we calculated their performance-matched adjusted real earnings measures. Hence, given that managers' choice of real activities is a function of their firms' current performance, we develop our further empirical analyses basically focused on these performance-matched measures. Furthermore, in their critical study on accrual measures, Kothari, Leone, and Wasley (2005) find that performance matching leads to better specified measures of discretionary accruals when compared to traditional measures of discretionary accruals based on other classical approaches such the Jones (1991) or modified-Jones model (Dechow et al., 1995).

We match each firm-year observation with another from the same country, two-digit SIC code and year with the closest return on assets in the current year (ROA_{it}). Hence, we define our performance-matched real earnings management measure for firm i in year t as the real earnings management measures in year t minus the matched firm's real earnings management measure for year t (Kothari et al., 2005). The specifics of our performance-matching approach follows Cohen et al. (2016). For each abnormal real earnings management measure (e.g. see all the details provided above) we calculate a performance-matched version for a given "treatment" firm in a given year in a giving country by matching it to another firm in the same two-digit SIC code whose ROA is within $\pm 10\%$. The performance-matched real earnings management measure is the difference between the real earnings management measures of the treatment firm and that of its match.

3.2.1.3. Estimation of corporate governance measures

We use firm-level and country level-variables of corporate governance as determinants of real earnings management. According to our theoretical framework, at firm-level, we use diverse ownership structure measures and other measures that take into account the efficiency of the cross-country legal and institutional systems.

3.2.1.3.1. Ownership structure:

Three measures are used that consider the ownership structure features per firm: ownership concentration (*Own*), inside ownership (*IOwn*) and institutional ownership (*InsInv*). *Own* is the fraction of ownership held by the majority shareholder. *IOwn* is the proportion of shares $\geq 1\%$ owned by directors, managers, cross-holdings and related stakeholders with significant making decision power, which corresponds to the ownership that is closely held. The purpose of this variable is to measure the proportion of shares held by owners, who are directly related with the company or perform management or supervisory roles. These stocks are assumed not to be publicly traded in the same manner as common shares. Thus, closely held shares involve shareholders that do not necessarily have executive (e.g. managers) or control-enhancing (e.g. member of the board of directors) duties inside the firm, but also have a certain level of direct or indirect making decision power, such as the case of

holding companies. *InsInv* a dummy variable that records with 1 if the majority shareholder is an institutional investor or 0 otherwise.

3.2.1.3.2. Country-level variables:

For the contextual or country-level variables, we use three different measures. On the one hand, we used two out of six indicators of the composite Worldwide Governance Index⁷ computed by Kaufmann et al. (2011). We chose only two of these indicators because they are more closely related to the goal of this study. These indicators are Government Effectiveness (GE_{it}) which corresponds to the quality of public and civil services, and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies; and the Rule of Law (RL_{it}) which reflects the confidence that the agents will abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence. By construction, these individual indicators range between -2.5 and 2.5 with increasing values as the governance indicator improves. The third country-level independent variable was obtained from the Economic Freedom Index⁸ corresponding to the Regulation (R_{it}) which is an indicator that goes from 0 to 10 with increasing values as the regulation improves over time in the respective country.

3.2.1.3.3. Control variables:

To avoid misspecification problems in the models' estimation, we include control variables which represent firm's characteristics that might condition the use of real activity-based earnings management (Jiraporn, Kim, & Mathur, 2008). These variables are the company size ($Size_{it}$) measured as the natural logarithm of firm's total assets; the leverage ($Debt_{it}$) which is the ratio of total liabilities to total assets; the market to book ratio ($LnMTB_{it}$) corresponding to the market perception of firm's performance, calculated as the the natural logarithmic transformation as a measure of market-to-book ratio; and the firm's profitability (ROA_{it}) calculated as the net income over total assets.

Consequently, the general final model to be estimated takes the following form:

$$RAM_{itc} = \beta_0 + \sum_{i=1}^I \theta_i FLCG_{itc} + \sum_{j=1}^J \gamma_j CLCG_{itc} + \sum_{k=1}^K \delta_k CV_{itc} + \eta_i + \mu_t + \varepsilon_{it} \quad (13)$$

Where RAM represents our alternative measures of real activity-based earning management for the firm i , in time t and in the country c , $FLCG$ is a vector of $I = 3$ firm-level corporate governance measures (e.g. *Own*, *IOwn*, and *InsInv*); $CLCG$ is the vector of $J = 3$ country-level corporate governance variables (e.g. *GE*, *RL*, and *R*); and finally, CV is the vector comprising the control variables (e.g. *Size*, *Debt*, *LnMTB*, and *ROA*) used to prevent under-specification problems of the models and the temporal and country dummy variables. η_i is the individual, firm-specific time invariant effect, μ_t is the time effect, and ε_{it} is the stochastic error term. Given the recognized misspecification of the real activities management measures is closely related to firm performance, we followed Cohen et al. (2016) and Kothari et al. (2005) and account for the effect of performance by using the performance-matched real earnings

⁷ The latest update took place in 2016. Information is publicly available and can be downloaded from www.govindicators.org. The six indicators included in the World Governance Index are voice and accountability, political stability, government effectiveness, regulatory quality, rule of law, and control of corruption.

⁸ This indicator is broken down in five major areas: size of government, legal system and security of property rights, sound money, freedom to trade internationally, and regulation.

manipulation measures. As mentioned by Cohen et al. (2016), many accounting research settings use of performance-matched real earnings management measures that provide a more reliable basis from which to draw inferences about real earnings management-related hypotheses. Therefore, our empirical analysis is focused on the performance-matched real earnings management measures as dependent variables –e.g. $PMRAMCFO_{it}$, $PMRAMDISX_{it}$, $PMRAMPROD_{it}$, $PMRAMSGA_{it}$, and $PMRAMCOMB_{it}$ –.

4. Results

4.1. Univariate Analyses

Tables 1 and 2 provide information concerning the panel composition per country and descriptive statistics of the variables used in the analysis, respectively. Table 3 is relevant because it allows to test if the mean values of the alternative measures of real activities manipulation used in this study differ from zero. The p-values are reported in the last column, and through them we strongly reject the null hypothesis that mean values are equal to zero, meaning that the Latin American companies included in our sample overstate their financial statements through real activities manipulation, in average terms. This finding is alike those reported recently by Saona and Muro (2017) concerning accrual-based earnings management measures in Latin American firms. Recall that we are interested in the extent of the financial reporting manipulation not in the direction. Therefore, the absolute values of the real activities manipulation variables were used to run Table 3 and the followings.

4.2. Multivariate Analyses

We estimate multivariate regressions in which we control for firm characteristics that might affect the use of real activities manipulation. The standard errors are corrected for firm-clustering effect following Rogers (1993). The firm-clustering corrected standard errors allow for intra-group correlation by relaxing the usual requirement that the observations must be independent. Thus, the observations are independent across firms but not necessarily within firms. Table 4 displays the most important findings concerning the impact of the ownership concentration and the contextual variables on the alternative measures used for real activities manipulation – $PMRAMCFO_{it}$, $PMRAMDISX_{it}$, $PMRAMPROD_{it}$, $PMRAMSGA_{it}$, and $PMRAMCOMB_{it}$ –.

Table 4 reports the results by using a dynamic panel-data model where the unobserved panel-level effects are correlated with the lags of the dependent variable (GMM-SE). This dynamic-autoregressive model allows us to account for the persistence of the real earnings manipulation over time. The manipulation of the statements in the contemporaneous period is consequence of the extent to which managers engaged in such manipulation in the previous periods (Zang, 2012). In fact, Roychowdhury (2006) suggest that since real activities manipulation alter the cash flow streams in the current period and consequently the firm value, managers might see themselves impelled to manipulate cash flows in the future periods to demonstrate long-lasting firm value creation. Furthermore, Walker (2013) highlights the persistence properties of this type of managerial opportunistic behavior. Hence, the different measures of real activities manipulation used as dependent variable in Table 4 enter the models also as one-period lagged independent variables to check for such persistence effect.

On the one hand, we observe that there is a large persistency in the earnings manipulation given that the one-period lagged dependent variables is highly statistically significant in all the fifteen reported models. On the other hand, the magnitude of the

coefficients is also economically significant (e.g. greater than 0.10 in all the cases). According to the behavioral finance approach, when one conduct leads to positive private benefits in one period, it is hard to change such conduct when future private benefits will be harvested. Consequently, it is difficult for managers to get out of the loop, suggesting the existence of a certain level of persistence in the real activities manipulation over time.

Since the distribution the ownership concentration (Own_{it}) data is very skewed, we used the logarithmic transformation of this variable suggested by Demsetz and Villalonga (2001) to obtain a symmetric distribution of this measure of ownership concentration as $LogOwn_{it} = \log[Own_{it}/(1 - Own_{it})]$.⁹

As observed in the results, there is a negative and statistically significant relationship between the ownership concentration ($LogOwn_{it}$) and three alternative measures of real activities manipulation (e.g. $PMRAMDISX_{it}$, $PMRAMPROD_{it}$ and $PMRAMCOMB_{it}$). The voting rights of controlling shareholder are a critical governance system in monitoring managerial activity in Latin American companies. The results provide evidence that agency costs are reduced by aligning the interests between the manager and the majority shareholder and in preventing the active manipulation of earnings. Concerning the ownership structure, the literature has evidenced two alternative hypotheses. The first one involves the increasing pressure on managers to manage earnings to meet market expectations. This increases the real activities manipulation to demonstrate managers' value creation. This hypothesis suggests a positive correlation between the voting rights of the majority shareholder and the managers engagement in real activities manipulation. This hypothesis is supported by expropriation view where majority shareholders press managers to report accounting information for self-interested purposes (Bae, Baek, Kang, & Liu, 2012; Fan & Wong, 2002). The alternative hypothesis supports the benefits of ownership concentration in constraining earnings manipulation because of monitoring and the overall maximization of shareholders' wealth. This scenario is characterized by financial statements with high earnings informativeness. This harmonization of interests between managers and majority shareholders is known as the monitoring hypothesis that reduces the potential agency costs that induces managers to less active earnings manipulation. Our findings support this second hypothesis.

Differently from developed-market oriented economies, Latin American countries are still in a developing stage of their economies which is encompassed with weak protection of the investors' rights, low degree of enforcement of the law and low degree of information sharing (Djankov, La Porta, Lopez-De-Silanes, & Shleifer, 2008; La Porta, Lopez-De-Silanes, Shleifer, & Vishny, 1998; La Porta et al., 2000). These facts have redounded in an internalization of such weaknesses of the legal and institutional environment. The law and finance approach argues that companies have handled such weaknesses in the legal and institutional systems through highly concentrated ownership structures where majority shareholders play a critical role in the firm's making decision process and in its control (La Porta et al., 1999; La Porta, Lopez-De-Silanes, & Shleifer, 2008). Therefore, from a contextual perspective, our findings also make sense supporting the fact that majority shareholders prevent managers from misreporting the financial information. Specifically, Table 4 provides evidence that majority shareholders constrain the temporary increases in discretionary expenditures

⁹ Nevertheless, for checking the consistency of the findings regarding the concentration of the ownership structure, we used as alternative variable the untransformed voting rights of the majority shareholders measured as the percentage of outstanding shares in the portfolio of the controlling shareholder (Own_{it}). In various cases, this untransformed variable was statistically significant and with the expected sign. However, given that the transformed variable ($LogOwn_{it}$) reported greater consistency and higher significance than Own_{it} , for space-saving reasons, we decided to omit the results with this variable, but they are available upon request to the corresponding author.

($PMRAMDISX_{it}$) and overproduction ($PMRAMPROD_{it}$) to report lower cost of goods sold. These findings allow to accept our research hypothesis H1 which suggested a negative association between the ownership concentration and the extent of the real earnings management in Latin American firms because of the monitoring effect.

At country-level variables, our findings support the fact that improvements in the government effectiveness (GE_{it}) indicator reduce the opportunistic behavior of real activities manipulation. The GE_{it} measures the quality of public and civil services, and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies (Kaufmann et al., 2011). In fact, the results show that the management of operating cash flows ($PMRAMCFO_{it}$), discretionary expenditures ($PMRAMDISX_{it}$), and production costs ($PMRAMPROD_{it}$) are reduced as the government effectiveness is enhanced at country level as observed in the models (1), (4), and (7) in Table 4. Similar findings are observed when the rule of law (RL_{it}) index or the regulation (R_{it}) index are used as contextual variables. In both cases, the findings indicate that as the confidence in the agents and in the rules increases, and the property rights and the contract enforcement are properly protected (RL_{it}) the real activity-based manipulation is constrained, on the one hand. Likewise, when the regulatory and infrastructure environments work efficient in the corporate sector (R_{it}), the non-accrual-based management of the financial statement is restricted, on the other hand. These findings are statistically significant at the standard confidence levels for the variables that measure the real activities manipulation of operating cash flows ($PMRAMCFO_{it}$), discretionary expenditures ($PMRAMDISX_{it}$), the manipulation of production costs ($PMRAMPROD_{it}$), sales, general and administrative expenses ($PMRAMSGA_{it}$), and for the aggregated measure of the abnormal discretionary expenses and the abnormal production costs ($PMRAMCOMB_{it}$).

Regarding the institutional ownership, the results show that the nature of the majority shareholder, in addition to its voting rights, are also relevant in preventing the deliberate manipulation of real earnings. In fact, when the majority shareholder is either an institutional investor ($InsInv_{it}$) or the government ($Govern_{it}$), the real activities manipulation declines. In fact, the statistically significant coefficients observed in $InsInv_{it}$ variable allows us to accept our third hypothesis on the ownership structure features. Therefore, if the majority shareholder is an institutional investor, its financial sophistication and greater controlling and analytical capacity, prevent managers from engaging actively in real activities manipulation.

Concerning other firm-level variables, we observe that particularly the logarithmic transformation of the market-to-book ratio ($LnMTB_{it}$) is positive and highly statistically significant in all the estimations reported in Table 4. This finding shows that when the market perception of the firm's prospects is overvalued, managers take actions in order to achieve such expectations by reducing the transparency of the financial statements and engaging in real activities manipulation. This fact minimizes the informativeness content of the future earnings, misleading investors to make less informed investing decisions. As stated by Saona, Slocum, Muro, and Moreno (2017), in the institutional environments of high information asymmetry, such as the Latin American one, investors are not able to effectively discern the quality of the information they are provided with and can therefore be misled in their investment decisions by managerial opportunism. Mokoaleli-Mokoteli, Taffler, and Agarwal (2009) suggest that according to the behavioral finance approach, the perception of market participants is likely to be biased as a consequence of the lack of transparency in pricing and poor quality of financial reporting, which pursue managers to overstate financial information before higher market valuation.

Leverage position also plays a remarkable role in determining the extent of the

manipulation of the financial reports. When companies incur in greater levels of debt ($DEBT_{it}$), real earnings manipulation in terms of discretionary expenditures ($PMRAMDISX_{it}$) and in terms of the production costs ($PMRAMPROD_{it}$) are more actively exercised –we also find some minor evidence that real activities manipulation associated to sales, and general and administrative expenses increases when debt position increases as shown in model (10)–. External debt is characterized for debt covenants that firms must fulfill to grant further borrowing. Such contractual restrictions are typically restrictive in institutional environments characterized by weak protection of investors’ rights (Berlin & Loeys, 1988; Rajan & Winton, 1995). These findings show that companies engage in more real-based activity manipulation when debt increases, which means that companies overstate the financial statement to fulfil the contractual covenants. Contrary to what is expected, the control-enhancing role of debt and particularly the covenants are not necessarily efficient in the case of Latin American companies. In fact, rather than minimizing the real activities manipulation, debt triggers more manipulation.

Likewise, firms’ profitability (ROA_{it}) also triggers real activities manipulation. Managers see themselves encouraged to manipulate the statements when the return on assets improves. A plausible explanation is that they see themselves impelled to more real activities manipulation as profitability increases because potential investors set their goals based on the historical performance of the firm. Consequently, when profitability increases, managers must demonstrate their ability to at least meet historical performance. Real activities manipulation is instrumentalized to achieve such expected performance measured through the return on assets.

Table 5 is designed to test the hypothesis concerning the impact of the insiders’ ownership ($IOwn_{it}$) on the real activities manipulation. The insiders’ ownership corresponds to the ownership closely held –or not typically publicly held–, which includes the ownership of holding companies, employees and insiders such as managers, directors and officers. As displayed in Table 5, there is evidence that the insider ownership impacts positively on all the real activities manipulation variables except $PMRAMSGA_{it}$ where it is not statistically significant.

When the role of owners is overlapped with the duties of managers, the asymmetries of information between the principal and the agent are minimized and one would expect lower agency costs, and consequently more transparent and informative financial statements. However, the Latin American corporate sector is characterized by ownership structures highly concentrated with shareholders who hold a predominant role as insiders and managers too. The agency approach supports two competing hypotheses on this respect. The first one is the convergence hypothesis which states that when managers hold a significant proportion of the outstanding shares in the company they manage, there is an alignment of interests between the principal and the agent (Jensen & Meckling, 1976; Sáenz & García-Meca, 2014) which would lead to less real activities manipulation. However, the alternative hypothesis is that when managers and insiders keep excessive decision-making power, they engage in accounting decisions that reflect their own interests in gaining private benefits (Huang, Wang, & Zhou, 2013). This is known as the entrenchment hypothesis. Our findings support the entrenchment hypothesis which demonstrates that at excessively high levels of managerial ownership, executives are insulated from shareholders discipline which allows managers to engage in more active real activities manipulation. In fact, according to Leuz et al. (2003)’s arguments, in institutional contexts characterized by weak protection of investors’ rights, it is more likely that financial information suffer from earnings management, on the one hand, and that the lack of protection encourages insiders to obfuscate firm performance and the informative content of its financial information. These facts describe the scenario we observe in the case of Latin American countries. Hence, we accept the hypothesis H2 which stated that as the insiders’ ownership increases, the likelihood of overstatement of the financial information through real

activities manipulation increases, as predicted by the entrenchment view.

The rest of the results recorded in Table 5 are alike those observed in the previous table. Consequently, up until now and by considering the performance-matched real activities manipulation variables, we observe that our major findings are robust across all the models.

Tables 6 and 7 replicate the findings displayed in tables 4 and 5, respectively by using as dependent variables the nonperformance-matched real activities manipulation measures. As observed, all our findings remain consistent and consequently, these last couple of tables can be considered as robustness checks of our major results. Specifically speaking, Table 6 uses as measure of ownership concentration the unadjusted variable of Own_{it} . We observe that ownership concentration (Own_{it}) is statistically significant in models (11), (12), (14) and (15) only, and the sign of the coefficients in these models is always negative. This finding suggests that despite Own_{it} variable is skewed by construction, it still records a negative impact on real activities manipulation, meaning that majority shareholders monitor managers with at least certain level of efficiency, constraining their capacity to make discretionary decisions in their own interest. Hence, majority shareholder behaves as efficient corporate governance system in Latin American corporations. Concerning the institutional investor dummy variable ($InsInv_{it}$) in both Tables 6 and 7 it still records a negative and statistically significant variable at the standard confidence levels, providing further support to our hypothesis H3. Regarding the insiders' ownership ($IOwn_{it}$) variable in Table 7, the findings are also consistent with those previously found.

Under the GMM-SE linear dynamic panel-data estimation we observe that the contextual variables are all highly statistically significant and show the expected negative signs in Tables 6 and 7. Consequently, these findings are reported as a strong robustness check of the fact the we cannot dissociate the efficiency of the legal and institutional systems from corporate governance. And that such efficiency of the legal system in protecting the interests of the investors, in enforcing the law and in the degree of information sharing is determinant of the extent of the real activities manipulation. In other words, as the government effectiveness (GE_{it}) improves across countries, the rule of law (RL_{it}) is efficiently enforced and regulation (R_{it}) protects the interest of minority and majority shareholders, there is significantly lower room for managers to manipulate the real activities in terms of the operating cash flows, the discretionary expenses, the production costs, and the sales and administrative expenses.

Table 8 intends to achieve two goals. On the one hand, we want it increases the heterogeneity of the statistical analysis, and on the other hand, it intends to test all our research hypothesis simultaneously. To do so, we made up a new dummy variable that identifies the gross governance quality across country ($LegalSys_c$). This variable takes value 1 if the country is either Brazil or Chile and zero otherwise. In our sample, Brazil and Chile are the only countries that reported positive average Worldwide Governance Index (Kaufmann et al., 2011); whilst Argentina, Colombia, Mexico and Peru achieved an average Worldwide Governance Index lower than zero. Recall that this indicator is ranged between -2.5 and 2.5 with greater values as the country's governance quality improves. Consequently, $LegalSys_c$ describes the countries with relatively better governance quality –e.g. Brazil and Chile– and the set of countries with relatively poor governance index in our sample –e.g. Argentina, Colombia, Mexico and Peru–. This is not an arbitrary classification. As suggested by Lefort (2005), Brazil and Chile are the two best scored countries in Latin America concerning their levels of corporate governance. Similarly, Klapper and Love (2004) also rank Brazil and Chile as the leading Latin American economies concerning investor protection and corporate governance.

Afterwards the construction of $LegalSys_c$, we created interacted variables that measure the joint impact of firm-level corporate governance attributes and country-level governance

systems. Consequently, we created $OwnLegal_{it}$ ($= Own_{it} \times LegalSys_c$), $LogOwnLegal_{it}$ ($= LogOwn_{it} \times LegalSys_c$), $IOwnLegal_{it}$ ($= IOwn_{it} \times LegalSys_c$), and $InsInvLegal_{it}$ ($= InsInv_{it} \times LegalSys_c$). In order to test properly the significance of these interacted variables, we applied the linear restriction contrast to test the linear combination of coefficients of, for instance, the addition of the coefficients $Own_{it} + OwnLegal_{it}$, which represents the impact of ownership concentration for the set of countries with relatively better governance quality –Brazil and Chile– on the respective real activities manipulation variable; and therefore, Own_{it} would be the impact of ownership concentration only for the set of countries with relatively weak governance quality. In our case, Argentina, Colombia, Mexico and Peru. The other variables have similar treatment.

The most remarkable findings in Table 8 support our previous results concerning the ownership concentration (Own_{it}) and its impact on real activities manipulation. For instance, we observe two significant models, 10 and 13. First, there we can see that for the set of countries with relatively good governance indicators, which is when $LegalSys_c$ takes value 1 –for Brazil and Chile– as the ownership concentration in hand of the majority shareholder increases, the real activity-based earnings management decreases (for $PMRAMSGA_{it}$ and $PMRAMCOMB_{it}$ variables). However, such negative impact of ownership concentration on real activities manipulation is stronger for the set of countries with relatively good governance (see the coefficient corresponding to the addition of $Own_{it} + Own_{it} \times LegalSys_c$) than for the set of countries with relatively poor governance systems (see the coefficient of Own_{it} variable in models 10 and 13). This finding allows us to suggest that the ownership structure as internal governance system has a more beneficial effect in transparency in countries with better governance than in countries with poorer regulatory systems.

Once the ownership structure variable is log transformed according to Demsetz and Villalonga (2001) to prevent biases as a consequence of its non-normal distribution ($LogOwn_{it}$), the findings provide even stronger support to our previous deduction. For instance, in models 5, 8 and 14, in Table 8 all of them provide higher absolute and statistically significant values at the standard confidence levels for the addition of $LogOwn_{it} + LogOwn_{it} \times LegalSys_c$ than for the variable $LogOwn_{it}$, which represent the impact of ownership concentration on real activities manipulation for the set of countries with better governance systems and the set of countries with relatively poorer governance systems, respectively. Hence, we can deduct from these results that in countries like Brazil and Chile, with relatively better governance systems and protection of investors' rights, the monitoring role of majority shareholder in reducing real activities manipulation is more efficient than in the rest of countries in the sample where the governance systems and transparency is relatively poor.

When regarding the insiders' ownership, the findings show in models 6, 9 and 15 that as closely held shares increase, insiders engage more actively in manipulating the financial statements in countries with relatively poor governance systems (see the coefficients of $IOwn_{it}$ variable) than in countries with better governance (see the coefficient represented by $IOwn_{it} + IOwn_{it} \times LegalSys_c$). In these three significant models, the coefficient of $IOwn_{it}$ is greater than the coefficient represented by $IOwn_{it} + IOwn_{it} \times LegalSys_c$. This provides evidence that the entrenchment behavior and its negative consequences on the transparency of financial reporting are more nefarious when the institutional setting is characterized by weak protection of investors' rights.

Finally, regarding the institutional ownership, our findings in Table 8 can be used as robustness checks of our previous results found in the other tables. Briefly, in many cases we see that in both institutional settings of countries with relatively good and relatively poor

governance systems, institutional investors are quite efficient in reducing the likelihood of real activities manipulation. Hence, summarizing, we observed that the institutional system is a major determinant of the opportunistic behavior of managers in overstating the financial reports. And that depending on the quality of the country-level governance systems, it will mold the efficiency of the companies' ownership structure as governance device. Therefore, it would be improper to dissociate the joint impact that governance mechanisms, both at the company level and at the country level, can have on accounting manipulation.

Like last source of robustness check of our results, we re-estimated the regressions by using panel data Fixed Effects (FE), the Feasible Generalized Least Squared estimations (FGLS) and the Panel-Corrected Standard Error (PCSE) as alternative econometric techniques. In most of the cases, the results remain invariant and the tests of our research hypotheses concluded the same results. Hence, our findings are robust and consistent by using alternative estimation methods. For space-saving reasons these results are not tabulated, but all of them are available upon request to the corresponding author.

5. Conclusions

Under a governance approach, we analyze the impact of several ownership structure features as well as the characteristics of the institutional setting and regulatory framework in constraining the discretionary capacity of managers to misreport the earnings. Our research hypotheses were tested in a representative sample of non-financial listed companies from Argentina, Brazil, Chile, Colombia, Mexico, and Peru. Latin America provides a good opportunity to study real earnings management in a context of highly concentrated firms' ownership structure in countries that exhibit weak protection of investors' rights and enforcement of the law.

This underexplored context offers several dynamics not observed in more developed institutional settings. For instance, different from previous literature, the intrinsic characteristics of the Latin American corporate sector allowed us to adjust our research hypotheses by considering certain governance features that yielded interesting insights concerning the discretionary managerial behavior. For instance, our findings allowed to conclude that monitoring role played by the majority owner is critical in constraining earnings management. However, there is still room for improvements concerning certain particularities of the ownership structure of Latin American firms, such as the insider ownership. In this case, we observed strongly significant results of entrenched closely held shareholders, represented by managers, offices, directors, crossholdings and other interested stakeholders, and their negative consequences on the transparency of the reported earnings. Specifically, the results evidenced that they intent to extract private benefits at the expense of minority, less protected shareholders by managing opportunistically the earnings in their own benefit. On this respect, there is a clear need for more restrictive directrices, such as widely accepted code of conduct, concerning the power concentration in the Latin American corporate sector.

Coherent with our research hypotheses, our results support the arguments that the institutional system is also a major determinant of the managerial opportunistic behavior in misreporting the financial information. In fact, the quality of the of country-level governance systems molds the efficiency of the companies' ownership structure as governance tool. Our findings allow us to conclude that in countries with relatively better regulatory systems, the monitoring role of majority owner in constraining real activities manipulation is more efficient than in countries with relatively poor institutional setting. Alike, insiders engage more actively in manipulating the financial statement in countries with weaker institutional and regulatory systems than in countries with better legal framework. This asymmetric impact on earnings

management is a tangible evidence that better institutional systems contribute to more transparent accounting reports, and ultimately, to more informed financial decision. On the top of it, differently from what is widely shown in previous literature, this study shows the ownership structure features and not be dissociated from the institutional system and that both together complement each other when explaining the discretionary managerial behavior.

This study some policy implications for regulators and supervisory authorities. We identify some issues of ownership structure that raise concerns about the interests of minority shareholders. The current debate in Latin America about the correct corporate governance should consider the inherent problems of ownership structures regarding the excessive power of insiders. For the Latin American region, literature has suggested that pyramidal structures, business groups, and crossholdings are a few among many other strategies to increase control power beyond voting rights (Poczter, 2018). More balanced ownership structures with less power concentration in certain groups would contribute to the long-run maximization of all shareholders' wealth, preventing the expropriation of the minority owners. The new codes of good governance that are being updated and issued in several countries across the region could consider this issue. At the same time, our research also encourages policy makers to go on improving the institutional environment for a better protection of the minority investors rights.

New directions arise for future research. There are other ownership structure features widely popular in Latin America such as business groups and dual-class shares that are used as control-enhancing mechanisms. A deeper analysis of these governance tools might provide further insights on the managerial discretionary behavior. Similarly, the composition of the firms' board of directors and its effectiveness in preventing managerial misconducts in Latin America in another unresearched field. The power distribution inside the firm depends on the dynamics within the board of directors. Hence, independent directors who are supposed to be unbiased concerning inside interests, the board gender diversity and the role played by female board members, or the presence of directors representing pension funds, financial institutions or other institutional investors, can have influential consequences for the corporate governance of Latin American firms, and ultimately, in the discretionary managerial decision-making power regarding the report of earnings quality.

Table 1. Panel Composition

Country	Observations	(%)	Firms	(%)	Av. Obs. per Firm
Argentina	415	7.68	50	7.92	8.30
Brazil	1,674	30.97	206	32.65	8.13
Chile	1,357	25.11	133	21.08	10.20
Colombia	233	4.31	38	6.02	6.13
Mexico	1,043	19.30	103	16.32	10.13
Peru	683	12.64	101	16.01	6.76
Total	5,405		631		8.57

Table 2. Descriptive Statistics

Acronym	Variable	Mean	Std. Dev.	Min	Max
RAMCFO	RAM from Operating Cash Flows	0.0000	0.1281	-0.8102	0.5855
RAMDISX	RAM from Discretionary Expenditures	0.0000	0.1420	-0.5557	1.0427
RAMPROD	RAM from Production Costs	0.0000	0.1899	-2.7265	1.6786
RAMSGA	RAM from Sales, Operating and Adm Costs	0.0000	0.1582	-0.3522	1.0766
RAMCOMB	RAM Aggregated	0.0150	0.0634	-0.6626	1.9171
ABSRAMCFO	Absolute Value RAM from Operating Cash Flows	0.0835	0.0971	0.0000	0.8102
ABSRAMDISX	Absolute Value RAM from Discretionary Expenditures	0.0909	0.1090	0.0000	1.0427
ABSRAMPROD	Absolute Value RAM from Production Costs	0.1208	0.1464	0.0000	2.7265
ABSRAMSGA	Absolute Value RAM from Sales, Operating and Adm Costs	0.1099	0.1138	0.0000	1.0766
ABSRAMCOMB	Absolute Value RAM Aggregated	0.0190	0.0623	0.0000	1.9171
Own	Ownership shareholder I	0.3481	0.2796	0.0000	1.0000
LogOwn	Log transformation of Own	-1.2058	2.4692	-10.9251	9.2203
IOwn	Closely held shares	0.5191	0.3448	0.0001	1.0000
InsInv	Institutional Investor	0.3954	0.4890	0.0000	1.0000
Govern	Government	0.0041	0.0640	0.0000	1.0000
IndivInv	Individual Investor	0.0738	0.2615	0.0000	1.0000
Insider	Insider	0.2233	0.4165	0.0000	1.0000
GE	Government Effectiveness	0.1640	0.5714	-1.2290	1.2612
RL	Rule of Law	-0.1204	0.7553	-1.8895	1.4267
R	Regulation	6.3169	0.9960	3.6014	8.0333
Size	Firm Size	12.3603	2.1692	-0.8488	19.6047
Debt	Leverage	0.4869	0.2242	0.0000	1.0000
ROA	Return on Assets	0.0350	0.1033	-0.6074	0.4608
MTB	Market to Book Ratio	2.9514	7.2580	0.0532	45.2242
LnMTB	Ln of MTB	0.1042	1.4374	-5.9642	10.4261

Table 3. Mean Difference Test

Variable	Obs	Mean	Std. Err.	Std. Dev.	P-Value
ABSRAMCFO	7,183	0.0835	0.0011	0.0971	0.0000
ABSRAMDISX	7,838	0.0909	0.0012	0.1090	0.0000
ABSRAMPROD	7,089	0.1208	0.0017	0.1464	0.0000
ABSRAMSGA	6,438	0.1099	0.0014	0.1138	0.0000
ABSRAMCOMB	7,056	0.0190	0.0007	0.0623	0.0000

Table 4. Real activities Manipulation (GMM-SE). Dependent Variable Performance-Matched RAM

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
	PMRAMCFO			PMRAMDISX			PMRAMPROD			PMRAMSGA			PMRAMCOMB		
Dep. Var. _{t-1}	0.1776*** (1.4640)	0.1567*** (9.9464)	0.1714*** (11.0875)	0.1094*** (9.3428)	0.1048*** (9.3474)	0.1083*** (9.4255)	0.1679*** (13.5750)	0.1521*** (12.1041)	0.1649*** (13.4582)	0.1454*** (12.4550)	0.1400*** (11.5714)	0.1406*** (11.7268)	0.1525*** (61.3246)	0.1489*** (60.1862)	0.1518*** (60.1307)
LogOwn	-0.0013 (-1.2591)	-0.0013 (-1.2975)	-0.0016 (-1.5700)	-0.0008** (1.1068)	-0.0007* (1.0102)	-0.0008** (1.0996)	-0.0015* (-2.1203)	-0.0015** (-2.1649)	-0.0013 (-0.9497)	-0.0008 (-1.1157)	-0.0009 (-1.2057)	-0.0011 (-1.5121)	-0.0003** (-1.4987)	-0.0003** (-1.3571)	-0.0004** (-1.4410)
InsInv	0.0021 (0.4183)	-0.0010 (-0.1956)	0.0020 (0.4075)	-0.0042* (-0.8624)	-0.0038* (-3.7774)	-0.0029* (-3.5960)	-0.0028* (-0.4033)	-0.0041** (-1.5963)	-0.0045** (-2.6339)	-0.0054** (-2.3035)	-0.0058** (-2.3914)	-0.0039 (-0.9369)	-0.0041*** (-3.4720)	-0.0035*** (-2.8251)	-0.0043*** (-3.5796)
Govern	0.0424* (1.8983)	0.0312* (1.8018)	0.0356** (2.1321)	0.0171 (0.8038)	0.0127 (0.5513)	0.0180 (0.7061)	-0.7150*** (-60.6968)	-0.7067*** (-60.7304)	-0.6991*** (-55.8244)	-0.1668** (-2.3760)	-0.1810*** (-2.5869)	-0.1679** (-2.4856)	-0.0296*** (-8.8324)	-0.0287*** (-6.6818)	-0.0259*** (-7.3595)
IndivInv	-0.0248*** (-2.8460)	-0.0251*** (-2.8831)	-0.0250*** (-2.8722)	0.0001 (0.0124)	-0.0007 (-0.1051)	-0.0004 (-0.0568)	-0.0152 (-1.5063)	-0.0154 (-1.5580)	-0.0173* (-1.6997)	0.0060 (1.0517)	0.0054 (0.9773)	0.0078 (1.3867)	-0.0047*** (-3.5906)	-0.0046*** (-3.3840)	-0.0046*** (-3.4116)
Size	0.0038 (1.0496)	0.0074** (2.1264)	0.0044 (1.1917)	0.0034 (1.0860)	0.0076** (2.2329)	0.0026 (0.7649)	0.0152*** (3.4340)	0.0198*** (3.7889)	0.0123** (2.4951)	0.0070** (2.4775)	0.0108*** (3.6786)	0.0094*** (3.1407)	0.0008 (1.0487)	0.0030*** (3.2111)	0.0007 (0.8039)
Debt	-0.0019 (-0.0791)	-0.0002 (-0.0085)	-0.0047 (-0.1976)	0.0373** (-2.3756)	0.0393** (-2.4799)	0.0365** (-2.3281)	0.0150*** (-3.5076)	0.0036*** (-3.1199)	0.0022** (-3.0743)	0.0264* (1.7539)	0.0249 (1.6343)	0.0224 (1.4929)	-0.0020 (-0.3625)	-0.0091 (-1.5451)	-0.0037 (-0.6834)
LnMTB	0.0034 (1.4622)	0.0047** (2.0544)	0.0045* (1.9147)	0.0054*** (3.5213)	0.0055*** (3.6335)	0.0050*** (3.1655)	0.0127*** (4.6701)	0.0129*** (4.8676)	0.0132*** (4.9047)	0.0057*** (3.1547)	0.0060*** (3.3052)	0.0058*** (3.0990)	0.0027*** (5.4432)	0.0034*** (6.9395)	0.0029*** (5.6781)
ROA	0.1070*** (4.3769)	0.1010*** (4.2482)	0.1055*** (4.3491)	-0.0156 (-0.9519)	-0.0198 (-1.1882)	-0.0177 (-1.0688)	0.1133*** (3.8822)	0.1160*** (3.9579)	0.1201*** (4.0729)	0.0676*** (3.9852)	0.0630*** (3.6728)	0.0639*** (3.7976)	0.0119** (2.3201)	0.0092* (1.7420)	0.0097* (1.9130)
GE	-0.0331** (-2.3703)			-0.0182* (-1.6892)			-0.0773*** (-3.9947)			0.0051 (0.5431)			-0.0136*** (-5.2354)		
RL		-0.0786*** (-6.2359)			-0.0454*** (-4.9754)			-0.0743*** (-5.3385)			-0.0282*** (-2.9014)			-0.0298*** (-10.5679)	
R			-0.0122** (-2.1261)			-0.0075* (-1.7492)			-0.0138* (-1.9286)			-0.0116*** (-2.7870)			-0.0036*** (-3.1574)
Constant	0.0110 (0.2512)	-0.0401 (-0.9416)	0.0734 (1.5711)	0.0384 (0.9938)	-0.0177 (-0.4142)	0.0902** (2.3719)	-0.0999* (-1.8679)	-0.1830*** (-2.8421)	0.0014 (0.0251)	-0.0481 (-1.3848)	-0.0924*** (-2.5873)	-0.0009 (-0.0252)	0.0088 (0.9025)	-0.0174 (-1.5251)	0.0312*** (3.1091)
Observations	3,787	3,787	3,787	3,975	3,975	3,975	3,577	3,577	3,577	3,769	3,769	3,769	3,555	3,555	3,555
Number of iden	574	574	574	576	576	576	523	523	523	559	559	559	523	523	523
Wald-test	328.3	346.7	307.5	521.5	476.2	490	663.3	715	625.5	788.4	729.7	737.4	34337	32673	33171

Table 5. Real activities Manipulation (GMM-SE). Dependent Variable Performance-Matched RAM

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
	PMRAMCFO			PMRAMDISX			PMRAMPROD			PMRAMSGA			PMRAMCOMB		
Dep. Var _{t-1}	0.1319*** (5.9883)	0.1219*** (5.6054)	0.1336*** (6.1088)	0.1162*** (6.9654)	0.1148*** (6.8552)	0.1195*** (7.1005)	0.1645*** (8.2988)	0.1578*** (8.2686)	0.1670*** (8.8172)	0.1423*** (6.2804)	0.1378*** (6.2243)	0.1407*** (6.3021)	0.2745*** (188.2382)	0.2718*** (182.7199)	0.2662*** (187.3154)
IOwn	0.0006 (0.0726)	0.0004** (3.0524)	0.0006** (2.0752)	0.0071** (2.0270)	0.0072** (2.0879)	0.0083** (2.3327)	0.0055 (0.6459)	0.0055** (2.6479)	0.0054** (3.6272)	-0.0057 (-0.9590)	-0.0052 (-0.8713)	-0.0057 (-0.9499)	0.0247*** (15.7496)	0.0265*** (17.3263)	0.0269*** (15.6703)
InsInv	-0.0042 (-0.5194)	-0.0081 (-1.0191)	-0.0038 (-0.4783)	-0.0034 (-0.5898)	-0.0036 (-0.6358)	-0.0033 (-0.5786)	-0.0008** (-3.0973)	-0.0016* (-2.1995)	-0.0027** (-3.3380)	0.0009 (0.1653)	0.0003 (0.0479)	0.0006 (0.1186)	-0.0123*** (-12.3958)	-0.0126*** (-12.4269)	-0.0109*** (-11.5053)
Govern	-0.0374 (-1.2945)	-0.0469** (-2.0373)	-0.0325 (-1.1199)	0.0263 (1.2585)	0.0269 (1.5231)	0.0251 (1.3030)	-0.3164 (-1.5407)	-0.3062 (-1.5117)	-0.2996 (-1.4729)	-0.3930*** (-22.4107)	-0.3917*** (-23.0503)	-0.3878*** (-22.7419)	-0.0340 (-0.8835)	-0.0309 (-0.9852)	-0.0137 (-0.4087)
IndivInv	-0.0326*** (-2.6764)	-0.0356*** (-2.9126)	-0.0323*** (-2.6744)	-0.0035 (-0.4556)	-0.0043 (-0.5593)	-0.0043 (-0.5584)	-0.0085 (-0.6470)	-0.0080 (-0.6102)	-0.0086 (-0.6564)	0.0121* (1.8550)	0.0120* (1.8579)	0.0117* (1.7973)	0.0072*** (7.7243)	0.0077*** (7.4270)	0.0082*** (7.8716)
Size	0.0207*** (2.8568)	0.0294*** (4.3614)	0.0247*** (3.4082)	0.0076 (1.4535)	0.0110* (1.9172)	0.0086 (1.4836)	0.0259*** (4.0817)	0.0323*** (4.6404)	0.0327*** (4.5573)	0.0137*** (3.2130)	0.0129*** (3.0516)	0.0142*** (3.2453)	0.0011*** (2.5885)	0.0025*** (4.6224)	0.0021*** (4.4630)
Debt	-0.0102 (-0.3104)	-0.0134 (-0.4160)	-0.0143 (-0.4336)	0.0335* (-1.7670)	-0.0360* (-1.9414)	0.0352* (-1.8603)	0.0189 (0.4825)	0.0196 (0.5063)	0.0225 (0.5825)	0.0271 (1.3949)	0.0281 (1.4443)	0.0278 (1.4267)	0.0225*** (8.3061)	0.0206*** (7.0504)	0.0153*** (5.0257)
LnMTB	-0.0005 (-0.1309)	0.0019 (0.4976)	0.0007 (0.1903)	0.0062*** (2.6564)	0.0062*** (2.6335)	0.0059** (2.5183)	0.0112** (2.5389)	0.0126*** (2.8568)	0.0120*** (2.6924)	-0.0015 (-0.6516)	-0.0020 (-0.8727)	-0.0017 (-0.7195)	0.0068*** (21.0641)	0.0074*** (22.8738)	0.0062*** (17.3101)
ROA	0.0801* (1.9430)	0.0770* (1.8737)	0.0812** (1.9729)	0.0574** (-2.5145)	0.0574** (-2.5364)	0.0571** (-2.5130)	0.1629*** (3.6891)	0.1661*** (3.8383)	0.1498*** (3.3935)	0.0572** (2.2262)	0.0595** (2.3329)	0.0582** (2.2586)	0.0118*** (3.3009)	0.0080** (2.2083)	0.0083** (2.4384)
GE	0.0167 (0.7730)			0.0107 (0.6453)			0.0007 (0.0239)			-0.0265 (-1.5888)			-0.0136*** (-5.2354)		
RL		-0.0769*** (-4.3364)			-0.0180 (-1.3021)			-0.0498** (-2.3814)			-0.0166 (-1.2276)			-0.0298*** (-10.5679)	
R			-0.0082 (-0.9375)			0.0023 (0.3077)			-0.0194* (-1.6977)			-0.0089*** (-3.4048)			-0.0036*** (-3.1574)
Constant	-0.2088** (-2.3794)	-0.3179*** (-3.8320)	-0.2048** (-2.3475)	-0.0285 (-0.4477)	-0.0705 (-0.9792)	-0.0539 (-0.8876)	-0.2817*** (-3.6193)	0.3683*** (4.2483)	0.2499*** (2.8468)	-0.1272** (-2.3848)	-0.1230** (-2.2807)	-0.0830 (-1.5195)	0.0088 (0.9025)	-0.0174 (-1.5251)	0.0312*** (3.1091)
Observations	3,787	3,787	3,787	3,975	3,975	3,975	3,577	3,577	3,577	3,769	3,769	3,769	3,555	3,555	3,555
Number of iden	574	574	574	576	576	576	523	523	523	559	559	559	523	523	523
Wald-test	328.3	346.7	307.5	521.5	476.2	490	663.3	715	625.5	788.4	729.7	737.4	34337	32673	33171

Table 6. Real activities Manipulation (GMM-SE). Dependent Variable Non Performance-Matched RAM

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
	RAMCFO			RAMDISX			RAMPROD			RAMSGA			RAMCOMB		
Dep. Var _{t-1}	0.2738*** (15.3533)	0.2507*** (13.7750)	0.2645*** (14.7417)	0.2394*** (20.3008)	0.2236*** (18.1872)	0.2373*** (19.6340)	0.2250*** (21.9613)	0.2101*** (20.1790)	0.2143*** (20.8920)	0.2466*** (21.1115)	0.2322*** (19.8849)	0.2382*** (20.2007)	0.2139*** (134.0923)	0.2051*** (120.8427)	0.2104*** (134.8553)
Own	-0.0065 (-0.7412)	-0.0090 (-1.0615)	-0.0111 (-1.3052)	0.0051 (1.0230)	0.0057 (1.1421)	0.0029 (0.5681)	-0.0014 (-0.1229)	-0.0034 (-0.3349)	0.0003 (0.0231)	-0.0059 (-1.3476)	-0.0080* (-2.8451)	-0.0113** (-3.4468)	-0.0020 (-1.5225)	-0.0035*** (-2.7466)	-0.0028** (-2.2082)
InsInv	0.0083 (1.5156)	0.0071 (1.3264)	0.0090 (1.6931)	-0.0130*** (-4.4166)	-0.0150*** (-4.8902)	-0.0133*** (-4.5065)	0.0100** (2.0087)	0.0077 (1.5105)	0.0072 (1.4193)	-0.0143*** (-5.0402)	-0.0157*** (-5.3746)	-0.0153*** (-5.1837)	-0.0066*** (-8.3386)	-0.0079*** (-9.1878)	-0.0060*** (-7.3414)
Govern	0.0304 (1.2148)	0.0132 (0.5861)	0.0243 (1.1726)	0.0119** (2.3216)	0.0043 (0.5679)	0.0079 (0.5751)	0.0168 (1.0991)	0.0131 (1.1458)	0.0311*** (3.1415)	-0.0233 (-1.1701)	-0.0255 (-1.1885)	-0.0347 (-1.2420)	0.0020 (0.1920)	-0.0069 (-0.6628)	0.0000 (0.0042)
IndivInv	0.0008 (0.1249)	0.0011 (0.1689)	0.0012 (0.1882)	-0.0071* (-1.8796)	-0.0099** (-2.5077)	-0.0075* (-1.9474)	0.0057 (0.7818)	0.0049 (0.6611)	0.0041 (0.5658)	-0.0053* (-1.7317)	-0.0054* (-1.7586)	-0.0058* (-1.8365)	-0.0042*** (-5.1427)	-0.0061*** (-6.5840)	-0.0039*** (-4.6447)
Size	0.0052 (1.6059)	0.0091*** (2.7524)	0.0076** (2.2503)	0.0058*** (3.1863)	0.0101*** (5.0653)	0.0067*** (3.5217)	0.0102*** (3.2312)	0.0153*** (5.0182)	0.0125*** (4.1705)	0.0041** (2.0663)	0.0040** (1.9613)	0.0054** (2.5586)	-0.0043*** (-9.4309)	-0.0013*** (-2.7478)	-0.0034*** (-8.0363)
Debt	-0.0024 (-0.1093)	-0.0033 (-0.1505)	-0.0019 (-0.0874)	0.0274*** (2.7288)	0.0228** (2.2643)	0.0263** (2.5656)	0.0343 (1.3752)	0.0067 (0.2799)	0.0222 (0.9033)	0.0222** (2.0411)	0.0242** (2.1625)	0.0214* (1.9477)	0.0100*** (3.6085)	-0.0004 (-0.1158)	0.0037 (1.2996)
LnMTB	0.0075*** (3.2439)	0.0072*** (3.1253)	0.0079*** (3.2778)	0.0016 (1.5443)	0.0022** (2.0858)	0.0014 (1.2630)	0.0123*** (5.2668)	0.0127*** (5.5243)	0.0130*** (5.4478)	0.0025** (2.2293)	0.0023** (2.0773)	0.0028** (2.3483)	0.0028*** (10.6981)	0.0033*** (12.5839)	0.0029*** (9.0803)
ROA	0.1170*** (4.8497)	0.1200*** (5.0356)	0.1169*** (4.7698)	-0.0173* (-1.7220)	-0.0215** (-2.0206)	-0.0217** (-2.1008)	0.1066*** (4.3126)	0.0912*** (3.9661)	0.1029*** (4.3963)	0.1498*** (13.5741)	0.1500*** (13.6808)	0.1457*** (12.9261)	0.0005 (0.1722)	-0.0052 (-1.6351)	-0.0030 (-1.0119)
GE	-0.0293*** (-2.7535)			-0.0204*** (-3.0616)			-0.0600*** (-5.1730)			-0.0265*** (-4.8855)			-0.0056*** (-4.7263)		
RL		-0.0729*** (-6.2524)			-0.0534*** (-8.1152)			-0.0898*** (-8.2696)			-0.0158*** (-2.6952)			-0.0332*** (-20.6710)	
R			-0.0228*** (-4.5812)			-0.0157*** (-5.5703)			-0.0292*** (-6.7115)			-0.0195*** (-7.2819)			-0.0055*** (-9.2346)
Constant	-0.0181 (-0.4805)	-0.0726* (-1.8603)	0.0913** (2.0047)	-0.0229 (-0.9896)	-0.0817*** (-3.2190)	0.0628** (2.4731)	-0.0771** (-2.0976)	-0.1450*** (-4.0522)	0.0716* (1.7760)	0.0122 (0.5086)	0.0079 (0.3221)	0.1164*** (4.5118)	0.0657*** (11.4089)	0.0328*** (5.6502)	0.0918*** (13.7012)
Observations	3,787	3,787	3,787	3,975	3,975	3,975	3,577	3,577	3,577	3,769	3,769	3,769	3,555	3,555	3,555
Number of iden	574	574	574	576	576	576	523	523	523	559	559	559	523	523	523
Wald-test	328.3	346.7	307.5	521.5	476.2	490	663.3	715	625.5	788.4	729.7	737.4	34337	32673	33171

Table 7. Real activities Manipulation (GMM-SE). Dependent Variable Non Performance-Matched RAM

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
	RAMCFO			RAMDISX			RAMPROD			RAMSGA			RAMCOMB		
Dep. Var. _{t-1}	0.2288*** (9.7561)	0.2152*** (9.4039)	0.2255*** (9.7405)	0.1916*** (13.2756)	0.1864*** (12.4723)	0.1874*** (12.7156)	0.1503*** (9.3625)	0.1452*** (9.2475)	0.1486*** (9.4825)	0.2588*** (15.6613)	0.2471*** (14.9778)	0.2543*** (15.4889)	0.1576*** (79.2090)	0.1585*** (86.7437)	0.1585*** (78.7739)
IOwn	0.0155** (2.3586)	0.0147** (2.2982)	0.0148** (2.2592)	0.0105*** (3.1622)	0.0106*** (3.1864)	0.0097*** (2.8287)	-0.0059 (-0.8942)	-0.0047 (-0.7050)	-0.0063 (-0.9431)	0.0057 (1.6348)	0.0057 (1.6363)	0.0053 (1.5312)	0.0002* (0.1720)	0.0052* (-0.0455)	0.0048* (0.0351)
InsInv	-0.0016 (-0.2299)	-0.0034 (-0.5125)	-0.0021 (-0.3092)	0.0005 (0.1219)	-0.0010 (-0.2630)	-0.0004 (-0.0985)	-0.0015 (-0.2147)	-0.0031 (-0.4484)	-0.0036 (-0.5179)	-0.0014 (-0.4609)	-0.0013 (-0.4168)	-0.0036 (-1.1909)	-0.0025*** (-2.7547)	-0.0025*** (-2.8148)	-0.0024*** (-2.7669)
Govern	-0.0420 (-0.9443)	-0.0438 (-1.0307)	-0.0356 (-0.7696)	0.0299** (1.9670)	0.0218 (1.5190)	0.0288* (1.8384)	-0.0086* (-1.7371)	-0.0087 (-1.5487)	-0.0047 (-0.6382)	0.0435** (2.0556)	0.0467** (2.0346)	0.0494** (2.2946)	-0.0012 (-0.3569)	-0.0015 (-0.4250)	-0.0014 (-0.4185)
IndivInv	0.0041 (0.6400)	0.0051 (0.8080)	0.0034 (0.5366)	-0.0045 (-0.9429)	-0.0052 (-1.0109)	-0.0037 (-0.7371)	-0.0030 (-0.2940)	-0.0029 (-0.2794)	-0.0055 (-0.5386)	0.0014 (0.3330)	0.0023 (0.5179)	-0.0009 (-0.2277)	-0.0046*** (-3.5635)	-0.0052*** (-4.1189)	-0.0048*** (-3.9253)
Size	0.0230*** (3.5911)	0.0245*** (3.9718)	0.0285*** (4.1973)	0.0017 (0.4018)	0.0087** (2.0461)	0.0059 (1.4008)	0.0068 (1.1822)	0.0053 (0.8926)	0.0102 (1.5428)	0.0118*** (3.8026)	0.0109*** (3.4697)	0.0163*** (5.0308)	-0.0031*** (-4.1301)	-0.0020** (-2.1874)	-0.0027*** (-3.3835)
Debt	0.0145 (0.5100)	0.0191 (0.6832)	-0.0010 (-0.0330)	0.0110 (0.7962)	0.0016 (0.1218)	-0.0021 (-0.1545)	0.0332 (1.1261)	0.0442 (1.5033)	0.0359 (1.2045)	0.0121 (0.9630)	0.0151 (1.1913)	0.0045 (0.3559)	-0.0092*** (-2.8806)	-0.0105*** (-3.2782)	-0.0099*** (-3.1547)
LnMTB	0.0071** (2.2473)	0.0065** (2.1209)	0.0079** (2.4584)	-0.0006 (-0.3573)	-0.0000 (-0.0248)	-0.0003 (-0.2099)	0.0037 (1.0040)	0.0031 (0.8593)	0.0044 (1.2067)	0.0015 (0.8209)	0.0011 (0.5994)	0.0022 (1.2055)	0.0010** (2.1967)	0.0009** (2.4255)	0.0010** (2.2850)
ROA	0.1315*** (3.7656)	0.1376*** (3.9498)	0.1206*** (3.4583)	-0.0218 (-1.5270)	-0.0226 (-1.5009)	-0.0217 (-1.5016)	0.1379*** (3.8531)	0.1453*** (4.1059)	0.1350*** (3.7595)	0.1663*** (10.1051)	0.1688*** (10.1754)	0.1529*** (9.2914)	0.0094** (2.1458)	0.0056 (1.1926)	0.0072 (1.5580)
GE	-0.0257* (-1.6612)			0.0136 (1.5166)			-0.0314* (-1.8189)			-0.0214** (-2.2674)			0.0053** (2.3495)		
RL		-0.0429** (-2.5612)			-0.0342*** (-4.0596)			-0.0220 (-1.3749)			-0.0073 (-0.9742)			-0.0002 (-0.1106)	
R			-0.0241*** (-2.9272)			-0.0103** (-2.0674)			-0.0153* (-1.9420)			-0.0200*** (-5.3903)			-0.0001 (-0.1797)
Constant	-0.2652*** (-3.3081)	-0.2915*** (-3.7407)	-0.1819** (-2.3546)	0.0265 (0.5131)	-0.0601 (-1.1053)	0.0461 (1.2834)	-0.0189 (-0.2717)	-0.0106 (-0.1464)	0.0256 (0.3828)	-0.1020*** (-2.6047)	-0.0949** (-2.3760)	-0.0323 (-0.8987)	0.0550*** (5.4785)	0.0428*** (3.5001)	0.0518*** (5.5072)
Observations	2,213	2,213	2,213	2,239	2,239	2,239	2,004	2,004	2,004	2,142	2,142	2,142	1,993	1,993	1,993
Number of iden	528	528	528	530	530	530	479	479	479	512	512	512	478	478	478
Wald-test	155.7	163	162.8	194.4	188.3	189.7	142.8	146	147.7	429.1	413.9	444.2	12769	14148	14383

Table 8. Real activities Manipulation (GMM-SE). Dependent Variable Performance-Matched RAM

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
	PMRAMCFO			PMRAMDISX			PMRAMPROD			PMRAMSGA			PMRAMCOMB		
L.pmabramcfo	0.1832*** (11.9685)	0.1789*** (11.6307)	0.1328*** (6.0355)	0.1452*** (10.9421)	0.1139*** (9.6687)	0.1162*** (6.7327)	0.1701*** (13.7436)	0.1661*** (13.7115)	0.1658*** (8.8230)	0.1455*** (11.7696)	0.1441*** (12.2612)	0.1401*** (6.3604)	0.1646*** (74.7377)	0.1542*** (61.1239)	0.1490*** (31.9365)
Own	-0.0189 (-1.4554)			-0.0004 (-0.0451)			-0.0203 (-1.1330)			-0.0066** (-2.5638)			-0.0050* (-1.6976)		
OwnLegal	0.0382* (1.7769)			0.0186 (1.2126)			0.0191 (0.7123)			-0.0054** (-2.3280)			-0.0156*** (-3.2965)		
Own + Own * LegalSys	0.0193			0.0146			-0.0012			-0.0120**			-0.0206**		
LogOwn		-0.0020* (-1.7127)			-0.0003** (-3.4428)			-0.0010*** (-3.6442)			-0.0007 (-0.7809)			-0.0006** (-2.3093)	
LogOwnlegal		0.0003 (0.0956)			-0.0012* (-2.8546)			-0.0016*** (-3.5985)			-0.0007 (-0.4597)			-0.0025*** (-5.2278)	
LogOwn + LogOwn * LegalSys		-0.0017			-0.0015**			-0.0026***			-0.0014			-0.0031**	
IOwn			0.0043*** (4.3554)			0.0096*** (2.5992)			0.0115*** (3.9761)			0.0086 (1.0295)			0.0014** (2.5771)
IOwnlegal			0.0111 (0.6976)			-0.0035** (2.4020)			-0.0105** (-2.6123)			-0.0078 (-0.6108)			-0.0007*** (-3.2326)
IOwn + Iown * LegalSys			0.0154			0.0061**			0.0010**			0.0008			0.0007***
InsInv	0.0148 (0.6539)	0.0108 (0.9046)	-0.0072 (-0.8156)	-0.0051* (-2.9894)	-0.0018** (-3.8347)	0.0015 (0.2158)	-0.0066 (-0.6101)	-0.0113* (-2.2200)	-0.0184 (-0.7497)	0.0030 (0.4789)	-0.0015 (-0.2813)	-0.0132** (-2.4264)	0.0023 (1.0598)	0.0007 (0.4230)	0.0022 (1.0189)
InsInvlegal	-0.0267*** (-3.7510)	-0.0164 (-1.5735)	0.0081 (0.5539)	-0.0125* (-2.7239)	-0.0050 (-0.6986)	-0.0115 (-1.0412)	0.0183 (1.3166)	0.0099 (0.7405)	0.0046 (0.8635)	-0.0189** (-2.2052)	-0.0073 (-0.8742)	-0.0301*** (-3.3174)	-0.0130*** (-4.9916)	-0.0080*** (-3.4697)	-0.0052 (-1.6036)
InsInv + InsInv * LegalSys	-0.0119***	-0.0056**	0.0009	-0.0176*	-0.0068*	-0.0100	0.0117	-0.0014*	-0.0138	-0.0159*	-0.0088	-0.0433**	-0.0107**	-0.0073*	-0.0030
Govern	0.0125 (0.4545)	0.0397** (2.3386)	-0.0349 (-1.2670)	0.0320 (1.4471)	0.0180 (0.6594)	0.0291 (1.3969)	-0.7928*** (-27.0649)	-0.7146*** (-54.0476)	-0.3301 (-1.6201)	-0.2479*** (-2.8317)	-0.1660** (-2.4380)	-0.3834*** (-22.5734)	-0.0278*** (-6.5092)	-0.0216*** (-7.0053)	0.0073 (0.7204)
IndIvinv	-0.0124 (-1.3234)	-0.0243*** (-2.6915)	-0.0322*** (-2.6463)	-0.0029 (-0.4381)	0.0012 (0.1852)	-0.0041 (-0.5285)	-0.0121 (-1.1655)	-0.0190* (-1.9318)	-0.0077 (-0.5833)	0.0046 (0.7777)	0.0067 (1.1811)	0.0113* (1.7664)	-0.0039*** (-3.1195)	-0.0038*** (-2.7356)	-0.0003 (-0.1261)
Size	0.0020 (0.5261)	0.0021 (0.6048)	0.0220*** (3.1929)	0.0089*** (3.6565)	0.0029 (0.9658)	0.0078 (1.5377)	0.0106*** (2.6647)	0.0087* (1.9531)	0.0268*** (4.1883)	0.0079*** (2.9695)	0.0072*** (2.6274)	0.0118*** (2.8995)	-0.0000 (-0.0040)	0.0001 (0.1652)	0.0031*** (2.8038)
Debt	0.0178 (0.7522)	0.0038 (0.1589)	-0.0097 (-0.2965)	-0.0248 (-1.6179)	-0.0332** (-2.0658)	-0.0342* (-1.8550)	0.0009*** (4.0307)	0.0064*** (3.2153)	0.0223 (0.5829)	0.0188 (1.2611)	0.0288* (1.9145)	0.0262 (1.3612)	-0.0017 (-0.2883)	-0.0023 (-0.4103)	-0.0057 (-0.8609)
Lnmb	0.0053*** (2.7021)	0.0040* (1.7192)	-0.0001 (-0.0369)	0.0072*** (4.7062)	0.0055*** (3.6913)	0.0056** (2.4885)	0.0136*** (5.3603)	0.0137*** (5.1579)	0.0113*** (2.6228)	0.0069*** (3.9883)	0.0057*** (3.1964)	-0.0022 (-0.9841)	0.0035*** (7.8238)	0.0029*** (5.4556)	0.0030*** (3.6886)
Wroa	0.0904*** (3.8813)	0.1035*** (4.2895)	0.0794* (1.9269)	-0.0031 (-0.1935)	-0.0145 (-0.8923)	-0.0545** (-2.3828)	0.0684*** (2.7193)	0.1259*** (4.3455)	0.1661*** (3.8401)	0.0703*** (4.1031)	0.0651*** (3.8650)	0.0561** (2.2016)	0.0083 (1.6443)	0.0102** (1.9639)	0.0332*** (4.4234)
Constant	0.0170 (0.3866)	0.0213 (0.4902)	-0.2223*** (-2.6329)	-0.0463 (-1.5196)	0.0381 (0.9963)	-0.0279 (-0.4418)	-0.0651 (-1.3528)	-0.0352 (-0.6396)	-0.2963*** (-3.6981)	-0.0505 (-1.5281)	-0.0503 (-1.4843)	-0.1038** (-2.0114)	0.0175* (1.6647)	0.0139 (1.3482)	-0.0251* (-1.8799)
Observations	3,787	3,780	2,213	3,975	3,968	2,239	3,577	3,570	2,004	3,769	3,762	2,142	3,555	3,548	1,993
Number of iden	574	574	528	576	576	530	523	523	479	559	559	512	523	523	478
Wald-test	213.1	210.3	60.46	169	118.2	203.2	985.8	10410	148.7	224.2	212.3	680.1	8575	5926	1852

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