

DRAFT 1. Final Thesis ADE

Investigation title: Comparative analysis of the long-term effects of extractive colonial institutions: The Case of the Belgian Congo and the Dutch Indies

Student: María García Álvarez

Word count: 10.303

Table of Contents

1. Introduction	2
2. Theoretical and conceptual framework	5
3. Results and empirical analysis	11
3.1. Extractive colonialism: historical overview	11
3.1.1. The Congo case: The Free State rule and Leopold II	12
3.1.2. The Indonesia case: The Dutch East India company and the cultivation system	13
3.2 Inherited institutions and immediate effects	14
3.2.1 The case of Congo: mining enclaves, weak taxation, minimal education and excluded elites.	15
3.2.2 The case of Indonesia: colonial bureaucracy, partial investments and educated elites.	17
4. Discussion of the long-term effects	27
4.1. GDP trajectories and growth divergence	27
4.2. Inequality and resource dependence	28
4.3. Corruption and the political economy	28
4.4. Neocolonialism and globalization	29
4.5. Social indicators: education and poverty	30
4.6. Comparative balance and implications for development policy	30
4.7. Future lines of research	31
5. Conclusion	32
6. Bibliography	33
7. Appendix	39

1. Introduction

During the first half of the twentieth century, around one third of the world's population lived under European colonial rule, a fact that continues to influence debates on global inequality and development (Rodney, 1972). Many of what are today the world's poorest countries were integrated into European empires until the mid-twentieth century. This has sustained the belief that colonial institutions and policies have left economic, social, and political distortions that have endured in the post-independence era.

Part of the critical literature argues that colonial rule prioritized metropolitan interests at the expense of the welfare and autonomy of the indigenous communities, thus creating institutional legacies that have weakened the postcolonial state capacity and undermined long-run development (Rodney, 1972; Mamdani, 1996). Another strand of literature highlights the developmental aspects of colonial integration, including the diffusion of capitalist methods of production, the integration into the global markets and selective investments in infrastructure, health, and education, which have raised living standards and productivity in some colonial contexts (Warren, 1980; Ferguson, 2002). However, despite decades of research, the debate has not reached a single explanation as to why some former colonies have achieved more growth than others.

In the discussion, one of the most influential contemporary frameworks is that of Acemoglu and Robinson (2012). Their central argument is that long-term development outcomes depend on whether political and economic institutions are inclusive or extractive. Inclusive institutions distribute political power widely, create incentives for innovation and investment and protect property rights. By contrast, extractive institutions concentrate political and economic power in the narrow elites. However, critics stress that institutions do not operate in a vacuum. Geography, disease, and access to trade routes (Gallup, Sachs, & Mellinger, 1998), cultural factors such as civic engagement and population trust (Putnam, 1993; Fukuyama, 1995), and the political economy of resource dependence (Auty, 1993; Sachs & Warner, 1995) can interact with institutions, constraining policy choices and shaping incentives.

This paper is placed in the context of this ongoing debate and uses the comparative case to study why some countries with the same extractive colonial past have diverged so sharply after independence in terms of economic growth. The Belgian Congo, today the Democratic

Republic of Congo, and the Dutch Indies, today Indonesia, are compelling cases because they share similar colonial pasts with striking postcolonial divergence. Both Belgium and the Netherlands built extraction-intensive empires centered on one major colony, Congo in the case of the first and the Dutch Indies in the case of the latter. Their colonies were among the most profitably exploited in the modern era, which was done through forced concessions and resource extraction, particularly of rubber, oil, tin, and copper, with prominent fiscal returns in the home country. (Frankema and Buelens, 2013). Colonial extraction in these contexts encompassed multiple processes such as forced cultivation, trade monopolies and labor coercion, which had effects on political and socioeconomic structures that would persist post-independence. At the same time, both countries are similar in that they both lie in the tropics, are endowed with commodities, and both inherited states shaped by a centralized colonial government with outward oriented economies.

Despite their similarities, their trajectories diverged sharply after independence, especially after the late 1960s. At the time of independence, Congo's GDP per capita was higher than Indonesia's, but by the early twenty-first century Indonesia had achieved significant growth and transformation while the Democratic Republic of Congo experienced institutional breakdown and economic collapse (Frankema and Buelens, 2013). This contrast makes the comparison compelling and challenges the interpretation that extractive institutions are uniform and produce similar outcomes.

Accordingly, the research title that guides this study is "Comparative analysis of the long-term effects of extractive colonial institutions: The Case of the Belgian Congo and the Dutch Indies". The paper aims to analyze and compare the long-term effects of extractive colonial institutions in the Belgian Congo and Dutch Indies and to account for their divergent paths after independence, focusing on their economic, social, and political development.

Additionally, the paper has a series of specific objectives. First, to provide the context for the establishment of extractive colonial systems under the Dutch and Belgian rulings, highlighting the institutional legacies they left behind and to examine how, during colonial times, institutions shaped labor, taxation, education, and governance policy. Secondly, to analyze the immediate effects of these legacies in the post-independence Democratic Republic of Congo (DRC) and Indonesia. Thirdly, to compare the long-term development outcomes in both cases. Fourthly, to assess whether it is colonial legacies alone that can help explain these

differences or whether other factors (resource dependence, leadership, etc.) could have played a significant role. Finally, to engage with the current theoretical debate regarding country inequality: while authors like Acemoglu and Robinson argue that extractive colonial institutions are the main cause of inequality between countries, the differing outcomes of Indonesia and DRC challenge this view. Thus, the paper aims to contribute with the current debate on development policy by identify why similar extractive colonial legacies had led to different postcolonial *status quos*.

In terms of methodology, this paper adopts a comparative historical political economy approach, using the comparative and historical methods, which is adequate for analyzing the effects of colonial extractive institutions in different contexts. The objective is not just to describe the trajectories of the Belgian Congo and Dutch Indies, but rather to identify the common and divergent patterns in the long term. Following a most likely cases design, both cases present comparable starting conditions but diverged significantly after independence. This logic allows the isolation of the institutional mechanisms that contributed to the distinct development outcomes.

In line with this, the comparative analysis aids in evaluating how variations in the degree of extraction, investment and differences in the institutional organization conditioned later results. The paper will focus on literature review, but also will utilize historical data such as production statistics and investment, GDP per capita, education enrollment and production data. In this sense, the historical method will be used through process tracing to identify the institutional evolution since the colonial period until this day. The comparison criteria that will be considered are production structure, fiscality and work systems, education and elites, governance post-independence and social and economic development including statistical indicators. Finally, there are some challenges to studying the links between colonial extraction and long-term economic development. First, the institutions imposed by the colonial administrations have been subject to change, either because of colonial policy reforms or changing responses by indigenous groups. Thus, casting extractive colonial institutions as a time invariant indicator is problematic. Secondly, short-term consequences may differ substantially from long-term consequences, but the latter are hard to isolate as the number of control variables grow as time goes on. Finally, the dependency on secondary sources and the potential Eurocentric bias in historiography pose limitations to the study.

Therefore, the historical approach aims to combine the systematic analysis of practices and institutions at the era of colonial extraction and the dynamic aspect of the evolution of extractive institutions, local responses, and developmental consequences, with historical change being taken into account.

The academic and contemporary relevance of the study is twofold. Firstly, it contributes to the ongoing debate about the roots of global inequality by analyzing how the extractive and inclusive institutions framework helps explain post-independence divergence. Secondly, it relates to the current policy discussions on development and state-building in resource rich countries. If colonial legacies matter in specific mechanisms, then development strategies should aim to improve those, rather than focus only on short-term growth or technical reforms that disregard deeper constraints. At the same time, Indonesia's relative economic success suggests that even under authoritarian rule and corruption, sustained development can be achieved in a context of administrative capacity, human capital investments and production diversification.

The paper is organized into three main sections: Section 2 situates the study in the broad theoretical debate, Section 3 and 4 present the historical evidence and comparative analysis of the cases studied and the final section summarizes the findings.

2. Theoretical and conceptual framework

During the first half of the twentieth century around one third of the world population lived under European colonial rule (Rodney, 1972). Many of what are now the poorest countries of the world were part of European empires in the past, and thus, there is a strong belief that colonial policies and institutions have shaped the long-run development of their economies for the worse. Historical literature has demonstrated that practices of colonial exploitation led to widespread impoverishment because colonial powers prioritized their own political and economic interests at the expense of the subjected communities and because they bequeathed distorted institutions to the overseas territories which have undermined their prosperity and political stability in the post-colonial era (Rodney, 1972). Even though the ideological blanket that has covered the colonial legacy debate has been gradually pulled away, scholarly opinions on the root causes of poverty in former colonies have not converged.

To unpack these disparities, it is necessary to explore the broader theoretical frameworks that scholars have developed to explain why some societies have been able to achieve sustained prosperity, while others remain trapped in subdevelopment. These explanations range from institutional and geographical to cultural approaches and provide complementary perspectives on how both initial conditions and colonial legacies have influenced long-term development trajectories.

Acemoglu and Robinson (2012) proposed one of the most influential frameworks for explaining the causes of global inequality, the institutional hypothesis. They argue that the variation in institutions between societies is crucial to explain differences in national economic prosperity in the modern world. Economic institutions provide the engine for economic growth, as they allow individuals to start businesses and trade, by creating incentives for them to commit long-term investments, create and adopt new technologies and improve their knowledge and skills through education (Acemoglu and Robinson, 2012). In turn, the effectiveness of economic institutions is shaped by political institutions that determine how political power is spread across society.

Acemoglu and Robinson (2012) classify institutions as being either *inclusive* or *extractive*. On one hand, inclusive institutions are those that encourage and enable most of the population to participate in a secure and free manner in economic activities. In this context, barriers to entry for new business and ideas are removed and the economic playing field is leveled. Inclusive institutions are pluralistic, that is, political power is spread broadly rather than being concentrated in a few.

On the other hand, extractive institutions are designed to benefit a few, privileged elites. This system is not conducive to economic growth because it does not provide the necessary incentives for individuals to generate wealth, such as secure property rights or access to credit and capital. Furthermore, the elite focuses on protecting and maintaining their own power even if it is not for the interest of the majority. Thus, they may have an interest in maintaining the *status quo* rather than welcoming new technologies or innovations that may threaten their position of power. For instance, during the nineteenth century, while Western Europe was investing in developing steam railways, absolutist regimes such as Russia opposed the new technology in fear that it would threaten the feudal and agrarian system that granted them power (Acemoglu and Robinson, 2012).

In line with this theory, European colonizers transplanted different institutional systems depending on the feasibility of settlement and extraction. Colonies where Europeans faced higher mortality rates tended to develop extractive institutions designed to exploit local labor and natural resources to the benefit of the colonizing powers. These colonies include the Spanish *encomiendas*, the Belgian Congo and the Dutch Indies. In contrast, colonies with lower settler mortalities experienced the settling of Europeans in large numbers in which their home institutions, including rule of law, property rights and checks on power, were replicated. This system was created in countries such as the United States, Australia, and New Zealand (Acemoglu, et al., 2001). The inequality hypothesis is useful in explaining why some countries with similar geographies or characteristics have different incomes. Nonetheless, it has limitations as it does not help explain why countries with extractive colonial pasts have diverged economically post-independence, as is the case with the Democratic Republic of Congo and Indonesia. Moreover, the authors rapidly dismiss other hypotheses, creating a false dichotomy, whereas a combination of multiple theories could help explain cross-country economic inequality.

A second line of explanation is the geographical or ecological hypothesis, which is proposed by Gallup, Sachs, and Mellinger (1998). Their main argument is that geographical and ecological factors such as location, climate, the disease environment, and access to the sea play direct and indirect roles in shaping the long-term economic performance of a country. Their hypothesis rests on three key patterns found from their study. Firstly, tropical regions are systematically poor. That is, most high-income countries lie outside the geographical tropics, as these face heavy disease burdens, high transportation costs and lower agricultural productivity, all of which impede industrialization. Secondly, coastal countries, specifically those within 100km of a navigable sea or river exhibit a higher GDP per capita and population density than landlocked or interior regions. Thirdly, landlocked countries, with a few exceptions, such as Switzerland, are poor because of limited access to global markets, dependence on the infrastructure of neighboring nations and higher transportation costs. In line with this, it is estimated that each additional 1,000km distance from the coast reduces a nation's income by around 1%, while being landlocked further depresses GDP by approximately 20% (Sachs et al., 1998).

Building on this framework, the authors provide distinct mechanisms that link geography to development. Tropical diseases, in particular malaria, are identified as a major impediment to productivity and growth. Diseases affect economic growth by reducing life expectancy, school attendance, labor productivity and discouraging foreign investment. Their regression model shows that tropical countries with high malaria incidence grew 1.3 percentage points slower per year than non-tropical countries in the period 1965 to 1990 (Sachs et al., 1998). Moreover, agricultural output in tropical climates is constrained by heat, poor soils, and pests. The study estimates that agricultural productivity in tropical regions is 30 to 50% lower than in temperate zones, after controlling for inputs. Thus, tropical economies rely heavily on subsistence agriculture, while temperate regions transitioned earlier to industry and services. Finally, the geographical position of a country determines transportation costs which in turn affect industrialization and trade. Coastal regions with access to navigable rivers and ports enjoy lower trade costs and are more integrated into the global markets. In contrast, inland economies face high costs to both import and export goods. Nearly all successful developing countries after 1965, such as the Asian Tigers, based their growth on export-oriented manufacturing and were located within 100km of the coast (Sachs et al., 1998).

In line with these mechanisms, cross-country regressions and spatial datasets revealed robust empirical links between geography and both the level and growth of GDP per capita. Some of the key findings include the tropical location and malaria prevalence being highly negatively correlated with income and growth. Moreover, the share of tropical land, malaria index and distance from core economies help explain over 60% of the variation of global income per capita (Sachs et al., 1998).

This hypothesis offers valuable insights into the divergent post-colonial outcomes of the Belgian Congo and the Dutch Indies. The Congo's geography exemplifies many of the features identified by Sachs et al. (1998) as detrimental to development. The country lies almost entirely within the tropical rainforest belt and has a high incidence of tropical diseases including malaria and yellow fever. Moreover, its landlocked interior had limited access to the Atlantic making integration into global trade networks difficult. In contrast, the Dutch Indies situated in humid tropics but with fertile volcanic soils and its location along major maritime trade routes provided more favorable conditions for global economic integration.

However, the hypothesis has been strongly criticized, particularly by Acemoglu and Robinson (2012). One of its limitations is that it does not help explain divergent outcomes among countries with similar environments, such as North and South Korea or East and West Germany. Moreover, geography is historically constant throughout time, while economic prosperity changes. Once-poor regions such as Japan have become rich while some geographically favored regions such as Venezuela remain poor. Finally, colonial experience shows that geographic characteristics shapes institutions indirectly. For instance, high European settler mortality led to extractive institutions while easier climates led to settler colonies. (Acemoglu, et al., 2001).

The third dominant framework is the cultural hypothesis. Weber (1904) argued that inner-worldly asceticism, which involves discipline to treat one's occupation as a calling, and rationalized behavior such as investing, saving, and bookkeeping favored the emergence of modern capitalism. He posits that such behaviors are culturally embedded in the Protestant community despite not being theological per se. Fukuyama (1995) expanded upon the cultural hypothesis and claims that differences in generalized trust explain why some societies sustain large, complex productive organizations while others rely on kin and family networks. High-trust societies can scale cooperation, while low trust ones pay a "transaction-cost tax" on growth. Putnam's (1993) study in Italy adds the civic-association mechanisms: norms of reciprocity, dense networks and participation predict policy effectiveness and government performance, and hence better development outcomes. He observed that regions in Italy with stronger traditions of social trust and civic engagement attained higher economic performance and more effective governance. More recent literature observed that "culture" typically defined as customary beliefs and values transmitted across generations influence preferences for cooperation, family ties and trust, and most importantly, interact bidirectionally with formal institutions that shape development paths (Alesina and Giuliano, 2013). In line with the academic literature, high trust reduces monitoring and enforcement costs, and improves collective action capacity for public goods. Moreover, strong pluralistic family norms can substitute impersonal cooperation, which is negative for scaling, lowering generalized trust and civic engagement. Finally, some cultures are more work-oriented and sustain a long-horizon behavior, complementing the institutional rise of the modern bureaucracy.

This hypothesis has multiple limitations. Firstly, culture and institutions can co-evolve, this means that geography, shocks, and policy can shift both. Inferring that a particular culture can lead to growth without credible identification risks reverse causality. Moreover, culture poses measurement problems as it is proxied by surveys, historical instruments or immigrant persistence which are imperfect methods. At the same time, cultural approaches are often criticized for overusing Eurocentric baselines, elevating certain virtues that co-evolved with European institutions and markets and then reading them back as universal prerequisites. This ignores that alternative pathways to growth exists. Finally, over-culturizing outcomes can naturalize inequality or lead to an ineffective social engineering of values. Thus, the takeaway would be to target institutional complements such as transparency and inclusive civic engagement, that enhance the returns to generalized trust, instead of trying to teach culture directly.

Finally, Auty (1993) and Sachs and Warner (1995) propose the “*resource curse*” hypothesis, the paradox that countries rich in natural resources tend to experience higher poverty, slower economic growth and weaker institutions compared to resource-poor countries. This may come about because of several interrelated mechanisms. Firstly, large resource rents can foster corruption, institutional decay, and rent-seeking. Revenues are frequently captured by the political elites instead of funding public goods. Moreover, resource prices are volatile due to fluctuations in global demand. Such volatility exposes mineral economies to boom-bust cycles that undermine long-term development planning and fiscal discipline. The “*Dutch Disease*” is another mechanism at play, whereby mineral booms can appreciate the domestic currency and raise wages which damages the competitiveness of agriculture and manufacturing. The crowding out effect inhibits the diversification to other industries and leaves resource-rich countries vulnerable when resource prices fall.

However, mixed, or inconclusive empirical support has been found on several of the hypothesis’ main arguments. Even though price stability poses challenges, stabilization funds used in Norway or Chile can offset fiscal fluctuations (David and Tilton, 2005). Additionally, some degree of volatility may even encourage efficiency and reform. When it comes to the “*Dutch Disease*”, structural adjustment following resource booms may be beneficial if resources are allocated to more productive sectors. Evidence of permanent deindustrialization is limited and mostly depends on additional assumptions about

productivity in manufacturing (David and Tilton, 2005). Finally, when it comes to governance, institutional quality is the key differentiator. Where property rights and fiscal discipline prevail and the resource rents are properly invested, natural resources can promote development and industrialization as has happened historically in the United States or Germany, and more recently in Norway, Canada, and Australia.

Overall, natural resource wealth is neither a curse nor blessing. Instead, it is a development opportunity, the outcome of which depends on governance quality, institutional strengths, and policy choices. Effective management of rents obtained through mineral exploitation can transform subsoil assets into sustained growth, while mismanagement can lead to instability inequality and dependency.

The point of departure taken in this paper is the belief that colonial legacies have been shaped by an interaction of the policies set by the colonial powers, local policy practices and the indigenous institutional response.

3. Results and empirical analysis

3.1. Extractive colonialism: historical overview

Extractive colonialism in the Belgian Congo and Dutch Indies emerged from the nineteenth century context of European imperial expansion but took different institutional forms which are relevant to explain their long-run divergence in development. The comparison is motivated by the striking post-independence economic gap. Around the time of independence, Congo's GDP per capita was approximately 20% higher than Indonesia's, however, by 2009 Congo's GDP per capita had fallen around 22% of its 1970 level, while the GDP per capita of Indonesia had risen to approximately six times its 1960 level and to around 17 times the level of Congo (Heston et al., 2011, and Madison, 2010, as cited in Frankema and Buelens, 2013).

European imperialism was directly connected with the structural transformation of northwestern Europe. The industrialization process reshaped the global political economy, as there was a growing European demand for raw materials and markets, which intensified the incentives to obtain territories overseas and reorganize the local economies around export production (Booth, 2013). The case of the Dutch Indies illustrates the coexistence of

extraction and selective investments. At the peak of forced cultivation in the 1850s, net profits from the forced cultivation of tropical commodities, known as the Cultivation System, contributed to up to 52% of the Dutch state tax revenue and made up almost 4% of the Dutch GDP (Frankema and Buelens, 2013). In contrast, the Congo case highlights how an extractive regime can be built around monopoly rights and violence, especially in a commodity boom, which in this case was rubber, producing unequal asset ownership patterns that have persisted into the late colonial period.

3.1.1. The Congo case: The Free State rule and Leopold II

The Congo is an example of extractive institutions in the *longue durée*¹, in which precolonial trade in commodities interacted with the shifting of political authority. External trade dynamics and the Atlantic slave trade eliminated earlier systems of checks and balances and produced political fragmentation making the territory more vulnerable to external conquest (Exenberg and Hartmann, 2013).

In this context, Belgium was a late entrant into the colonization of Africa and would likely not have become a colonial power without the ambitions of King Leopold II. In 1878, Leopold II commissioned Henry Morton Stanley to explore the Congo and arrange treaties, presenting an independent Congo Free State (CFS) as a humanitarian project based on free trade (Exenberg and Hartmann, 2008). In practice, however, King Leopold's rule created a predatory institutional architecture around the state monopoly where power was concentrated in the authority. Exenberg and Hartmann (2008) describe the CFS as "a private venture of the king, shaped by monopoly capitalism and brutal violence". This was facilitated by the fact that coercive extraction was not alien to the region, which had been market by slave and ivory trade in the past.

Rubber quickly became central to the regime because it could be extracted quickly during a global boom. Creutzberg (1975) and Barlow (1978) document that rubber exports rose from zero in 1887 to over 5,000 tons in 1902, exceeding Indonesian rubber exports at the time, which reflected the intensity of the CFS extraction. This system of acquisition was

¹ The *longue durée* refers to a historical approach that prioritizes deep, long-term structural approaches over short-term events. It emphasizes how the slow changing of social, economic and environmental factors shape historical outcomes over centuries rather than years (Braudel and Wallerstein, 2009).

accompanied by the introduction of the *impôt indigène*², a tax paid on rubber and sometimes food and ivory, which escalated production requirements. Additionally, there was compulsory labor for public projects which resulted in non-paid work for around 24 days a month (Edgerton, 2002). Indeed, the violent wild-rubber regime shaped the subsequent trajectory of the region. The “red rubber” scandal, where thousands of Africans died because of the imposition of the forced collection of wild rubber was one of the main factors that pushed Belgium to take over the Congo from King Leopold II in 1908 (Clarence-Smith, 2013).

Early on, the Belgian administration formally dismantled the forced cultivation system and commercial monopsonies. However, institutional persistence remained, and wartime pressures during World War I led to renewed forced cultivation by decree in 1917, whereby villages were compelled to collect designated crops and the prices were fixed by authorities (Clarence-Smith, 2013).

The depth of the structural inequality generated under these institutions is captured by the distribution of assets and income in the later times of the colonial period. In 1958, Europeans made up 1% of the population but received 45% of the wages and held 95% of capital assets. Moreover, they accounted for 82% of enterprises and 70% of material output (Peemans, 1968). Thus, Africans were integrated into export production under constrained rights and coercive recruitment, while Europeans controlled the enterprises and capital.

3.1.2. The Indonesia case: The Dutch East India company and the cultivation system

Extractive institutions in Indonesia evolved over a longer period and combined state coercion, corporate monopoly, and intermediary governance. Under the Dutch East India Company, known as VOC and founded in 1602, extraction initially was enforced through a monopoly in the spice islands, paired with a monopsony on purchase with monopoly on sales in the Dutch Republic (Thee, 2013). The profit logic can be illustrated with the example of nutmeg. In the early seventeenth century, 600 pounds of nutmeg could be purchased for 120 guilders and sold for approximately 1200 guilders in Europe, providing an enormous profit margin (Fasseur, 1992). As a result of the brutal methods utilized to enforce the monopoly and

² The “native tax”, *impôt indigène* in French, in the Belgian Congo was a colonial tax established by decree in 1910 for the African populations. Its purpose was to finance the colonial administration and encourage forced labor. It was often collected violently by local chiefs in exchange of commissions (Moeller, 1936).

disease, the Moluccan population in the spice islands decreased from 150,000 in the early seventeenth century to around 100,000 by the end of the eighteenth century (Gonggripj, 1949).

The apex of state led extraction took place with the Cultivation System in the nineteenth century. Thee (2013) describes its formal design, consisting of peasants setting aside one fifth of land for export crops at fixed prices, however, official crop quotas often exceeded that share in practice. The system was widely implemented and by 1840 about 57% of Java's population worked for the system (Booth, 2013). As a result, export revenues grew rapidly. Exports of coffee and sugar rose from 22.9 to 73.2 million guilders³ in the period 1833-1869 while total exports grew from 33.3 to 92.4 million guilders (Fasseur, 1992).

Institutionally, the Cultivation System deepened the penetration of the state into rural society and strengthened the power of local authority figures as they gained a share of the proceeds (Thee, 2013). Tax farming was an important component. From the mid 1820s onward, tax farm revenues contributed around a quarter of total colonial government revenue, while taxes on opium farms alone contributed over 138.5 million guilders per decade in the period 1866-1895 (Claver, 2006).

By the early twentieth century, the ideology of the Dutch Indies shifted from overt extraction to a welfare-oriented rhetoric under the Ethical Policy. Justification for exploitation gradually receded and became replaced with concerns over living standards, health, and prosperity for the general population (Ricklefs, 2008). Even though the Ethical Policy did not end extraction, it rebalanced the institutional and ideological thinking, which is relevant to the comparative framework as it suggests a contrasting colonial logic to that of the Congo, where the Free State's violent coercion left a legacy of fear and constraint in the rural production systems.

3.2 Inherited institutions and immediate effects

A central point in the comparative literature on colonial legacies is that "extractive" regimes shaped the institutional composition of the post-colonial state regarding control over land and labor, fiscal capacity, and the formation of elites. Thus, in the Belgian Congo and Dutch Indies the immediate post-independence effects reflected inherited structures that constrained or enabled early state building and economic policy. In this context, "immediate

³ The quantities are provided as yearly averages.

effects” is understood as the institutional conditions at the time of sovereignty and their short-term consequences when it comes to political and economic institutions and policy.

3.2.1 The case of Congo: mining enclaves, weak taxation, minimal education and excluded elites.

At the later stages of the colonial state, the Congolese economy was organized around enclave production, especially mining. Lacroix (1967) characterizes Congo’s colonial industrialization as large in scale but structurally narrow. In 1960, industrial production amounted to approximately 14% of GDP, with Léopoldville, the capital region, containing above a quarter of industrial activity, a disproportionate rate. The pattern was tied to export-oriented mining and cash crop processing instead of a diversified domestic manufacturing structure.

Institutionally, this implied that the colony bequeathed a modern island economy, with large firms and infrastructure clustered around mining, while the rural economy remained outside productive public investment (Buelens and Cassimon, 2009). This configuration amplified post-independence vulnerability, as political contestation over mining rents could destabilize the fiscal base.

A second constraint after independence was the limited fiscal capacity beyond a narrow set of revenue instruments. Pre-independence, there was a cash-tax system, but the tax base remained thin. A core driver of this was structural. Congo had a low level of imports which meant that customs taxation, an easy early-modern revenue source, was weak (Gardner, 2012). In 1897, customs receipts amounted to 0.01 Belgian Francs (BEF) per capita, rising to 0.76 BEF per capita by 1912, but which was still a small figure compared to the scale of the administration (Gardner, 2012).

Moreover, the Belgian Congo’s fiscal yield was low even when compared to other African colonies. In 1912, government revenue was 4.87 BEF per capita, far below colonies such as Southern Rhodesia (25.20 francs per capita) and the Gold Coast (20.66 francs per capita) (Gardner, 2012). The immediate post-colonial effect is that a state with a limited broad-based taxation tends to rely on rents and politically coercive instruments for revenue, which undermines stable public goods provision, especially when there is competition among elites to control those rents (Gardner, 2013).

Thirdly, land tenure institutions were designed to secure colonial control over land for state purposes and for European companies. Even though colonial legislation formally recognized ownership rights, in practice, they were defined restrictively around villages and cultivated fields, while all the remaining land was declared “vacant” and declared under state control (Lentz, 2006).

Comparatively, the result was that the rural economy was left institutionally marginalized. In the Congo, only around 1% of the geographic area was under smallholder cultivation, while 5% was reserved for private companies and settlers. This contrasts sharply with the Dutch Indies, where smallholders cultivated around 63% of land (Central Bureau of Statistics, 1963b as cited by Booth, 2013).

The immediate effect was that after independence, the country faced contested land rights and weak incentives for rural productivity growth. Thus, the institutional framework was conducive to peasant distrust and limited rural surplus mobilization for development.

Fourthly, Congo’s labor institutions combined coercive enforcement mechanisms with nominal wage labor. In this context, taxes were not only fiscal tools but also labor instruments. The state, by creating cash obligations, pushed Africans into wage labor (Houben and Seibert, 2013). Punishment and violence shaped popular memory and wage work would come to be perceived as “slavery” (Rodney, 1981). This is relevant to the immediate post-independence effects, as early governments inherited a labor market marked by asymmetric bargaining power and coercive histories. Such a legacy complicated efforts to implement taxation, mobilize labor for public works and negotiate productivity enhancing reforms without being perceived as coercion.

Finally, Congo’s education expansion was impressive at the primary level but vertically constrained, especially regarding the formation of African Elites. Mission schools expanded rapidly, with the number of foreign missionaries growing from 500 in 1908 to 7,205 in 1957 and school enrollment increased from 46,000 in 1908 to 1,718,931 in 1957 (Frankema, 2013).

However, this institutional arrangement did not generate a robust cohort of secondary and tertiary school graduates. Two main causes may be attributed to this. Before 1940, per capita expenditure on education in Congo remained below US \$ 0.10, while in the Dutch Indies the expenditure was at least five times higher in the period 1910-1940 (Frankema, 2011).

Secondly, the outcome in Congo proved to be weaker with an adult literacy reported at 31.3% in Congo and a 42.9% in Indonesia in 1961 (UNESCO, 1965).

The absolute scale of advanced training at the time of independence in 1960 was low, with only 423 tertiary students and only 56 students in STEM fields and with the overrepresentation of European citizens (UNESCO, 1965). More importantly, segregation policies restricted Africans from attaining access to higher ranks in military, business management and education, and higher education for Africans was deemed unnecessary (Frankema, 2013).

The immediate consequence was acute, as the leadership staffing was drawn disproportionately from mission schools rather than a technocratic class. The scarcity of higher educated classes shaped early state effectiveness and its ability to bargain with foreign firms. Moreover, its ability to design and implement complex fiscal and industrial policies was limited (Frankema, 2013).

3.2.2 The case of Indonesia: colonial bureaucracy, partial investments and educated elites.

Indonesia's inherited institutions differed in two main aspects. The colonial state formed earlier and deeper bureaucratic regimes and governed a densely populated agrarian society with the use of intermediaries. The construction of the Great Post Road, of approximately 1,000 km demonstrates administrative capacity and coercive mobilization, while it expanded access to communications and territorial integrity (Thee, 2013). Raffles⁴ land-rent reforms illustrate early fiscal and administrative ambitions, with the peasants being expected to pay two-fifths of their annual harvest in rent or tax (Houben, 2002). In the short term, this meant that Indonesia inherited more extensive administrative routines for taxation, public works, and governance even if embedded in inequality.

When it comes to fiscal extraction, Dutch fiscal capacity relied heavily on tax farming and the use of Chinese intermediaries, reflecting a model of governance that negotiated with local social structures (Wahidm 2013). Tax farming produced a large share of state revenue for

⁴ The French and British Interregnum in the Dutch Indies took place between 1806 and 1816, when it was transferred back to the Dutch. The British appointed Raffles as lieutenant governor of Java in 1811 and he continued Danendels' (the previous governor) reform agenda by transforming the corrupt colonial administration inherited from the VOC into a more rational and reliable bureaucracy (Houben, 2002).

most of the nineteenth century accounting for around one fifth to one quarter of total colonial revenue (Mellegers, 2004). In the period 1886-895, tax farming revenue accounted for 228.4 million guilders, of which 22.7% came from the opium farm (Mellegers, 2004). By the 1910s that share had fallen to 2.9% , which reflected institutional change and the end of tax farming as the system modernized (Mellegers, 2004) ⁵. The intermediary system was socially costly and extractive, but at the same time implied a broader administrative penetration of the local society than in Congo. The immediate effect was that the Indonesian governments could draw from previous practices even while attempting to dismantle colonial intermediaries.

In contrast to Congo's limited social spending, the Dutch combined extraction with development initiatives under the Ethical Policy, which aimed to improve welfare through attention to health, education, and safety. The interventions remained modest and incremental (Thee, 2013). The Policy responded to population pressure in Java, with about 30 million people in the year 1900, and expanded departments for public works. Yet, these investments produced additional fiscal burdens, as public debt rose to 94% of export earnings by the early 1920s (Booth, 2013).

From the perspective of inherited institutions, the partial investments were important as they created bureaucratic departments and planning routines. Foreign direct investment, despite being biased toward exports, managed to complement the later industrial policy. For instance, in 1933, 2 million guilders in equity capital to manufacture consumer goods such as soap and margarine was destined to the Lever's Zeep factory in Batavia (Lindblad, 2013). Thus, even if colonial investment priorities were not designed for the maximization of Indonesian welfare, they left behind a more robust administrative process than in the Congo case.

Finally, even if education remained limited in mass terms, it produced an educated stratum. Adult Indonesian literacy was only 7.4% in the 1930 census, with a Dutch-language literacy remaining limited at 0.32%, evidence that schooling remained unequal and restricted (Thee, 2013). Nonetheless, Frankema (2013) stresses that opportunities for Indonesian children to follow a Western curriculum through all levels of education enabled the emergence of a small intellectual class which proved to be crucial for national leadership and post-colonial capacity building. The contrast with Congo is visible in elite formation, as Indonesian leaders such as

⁵ The complete dataset is presented in Appendix A.

Sukarno and Hatta had received university education and colonial universities were pathways to administration and politics. This contrasts with the Congo mission-based system and restricted access to higher education, that limited the technocratic depth of early leaders.

The immediate effect is reflected by the education expansion after independence, with a primary enrollment that increased from below 20% in 1940 to 80% in 1962, indicating a greater capacity to mobilize mass education than Congo (Frankema, 2013).

Overall, the Congo inherited an enclave export economy organized primarily around mining, a narrow and weak fiscal apparatus, land, and labor institutions designed to mobilize coerced labor and appropriate “vacant” land and a schooling system that produced very few higher educated Africans. These factors combined yield post-independence constraints on administrative competence, legitimacy, and fiscal extraction that limited development. In contrast, Indonesia inherited a more robust bureaucracy, a greater fiscal reach and selective investments in population welfare which produced an educated elite capable of sustaining post-colonial governance, despite the persistence of inequality and the extractive intent of colonial rule.

3.3 Congo–Indonesia comparison

A first contrast between the Belgian Congo and Dutch Indies lies in the composition of production and the way that extraction was organized. At the time of independence, Indonesia’s colonial economy contained a more diversified base of export agriculture, rooted in smallholder cultivation while the Congo’s production structure was organized as enclaves, with a weaker smallholder participation (Booth, 2013; Table 1.1).

Table 1.1. Area under main cash crops, 1958 ('000 hectares)

Crop	Smallholder	Estate
<i>Belgian Congo</i>		
Sugar	0.9	4.8
Palm oil	59.2	119.7
Sesame	17	n.a.
Cotton	339.4	0.1
Urena and punga	9.8	n.a.
Coffee	18.8	76.8
Rubber	10	48
Cocoa	0.1	15.4
Total	455.2	264.8
Total per capita (hectares)	0.03	0.01
<i>Indonesia</i>		
Sugar	43.3	52.1
Palm oil	n.a.	104.5
Tea	60.1	74.3
Coffee	198.9	47.1
Rubber	1301.50*	498.2
Cloves/nutmeg	33.4	n.a.
Pepper	33.4	n.a.
Coconut/areca	1706.7	n.a.
Kapok	220.1	9.5
Tobacco	178.3	7.6
Total	3775.7	793.3
Total per capita (hectares)	0.04	0.01

*Estimated hectarage

Sources: Belgian Congo (1960: 90-1); Central Bureau of Statistics (1963b: 74-83) as cited by Booth (2013)

By 1958, the total land under major cash crops in the Belgian Congo was approximately 720 thousand hectares, compared to 4,569 thousand hectares in Indonesia (Booth, 2013; Table 1.1). The composition of this agriculture underscores the divergence. While the Congo had 58 thousand hectares under rubber, Indonesia had 1,799.7 thousand hectares, with Indonesian rubber being predominantly smallholder based (1,301.5 thousand hectares), while in the Congo smallholder rubber was only 10 thousand acres.

The difference is important because smallholder export booms tended to diffuse cash income and stimulate demand for services and local manufacturing. By 1930, in Java, around one third of the indigenous labor force was employed outside agriculture, indicating occupational diversification under late colonial rule (Booth, 2013).

Congo, by contrast, was less conducive to broad-based rural commercialization. It had a large territory, low population density and the integration into markets usually occurred through coercive channels such as compulsory cultivation (Houben and Seibert, 2013).

Agrarian intensification further distinguishes the cases. In Java, the cultivated area per agricultural worker was smaller than in Congo, with 0.35 hectares in 1934 in the first case and 0.83 hectares in 1934 in the latter case (Booth, 2013; Table 1.2). However, this points to Java's more intensive smallholder agriculture and tighter land-labor ratios. In 1958, Indonesia devoted more land to rice, with 76.7 hectares per 1,000 people, while the Congo's food-crop area was dominated by roots, with 48.9 hectares per 1,000 people (Booth, 2013; Table 1.3). Production per capita shows the same specialization, Indonesia produced 168.4 kg per capita of paddy rice, while the Congo produced 616.8 kg per capita of roots and tubers (Booth, 2013; Table 1.4). These patterns align with the different paths of commercialization. While the Dutch late colonial policy increasingly linked smallholders to export markets, the Belgian corporate practice constrained smallholders and reinforced extractive enclaves (Booth, 2013; Clarence-Smith, 2013).

Table 1.2. Area cultivated by peasant households per agricultural worker, 1934 and 1958 (in hectares)

Year	Measure	Belgian Congo (hectares)	Java (hectares)
1934	Cultivated area per male worker	0.76	1.09
	Cultivated area per worker	0.35	0.83
1958	Cultivated area per male worker	1.17	0.86
	Cultivated area per worker	0.43	0.65

Sources: Belgian Congo (1960: 90-1); Central Bureau of Statistics (1963b: 74-83) as cited by Booth (2013). Area cultivated refers to harvested area of all crops grown by smallholders.

Table 1.3. Hectares of food crops per thousand people, 1958

Crop (hectares per 1,000 people, 1958)	Belgian Congo	Java	Indonesia
Cassava	45.1	18.1	14.7
Sweet potatoes	3.5	5.1	4.9
All root crops	48.9	27.5	n.a.
Corn	25.2	35.5	29.7
Rice	11.6	74.0	76.7
Other cereals	59.2	n.a.	n.a.
All cereals	96.0	109.6	106.4
Fruit	16.5	n.a.	n.a.
Peanuts	19.6	4.8	3.6
Other beans	8.5	n.a.	n.a.
Soybeans	n.a.	9.0	6.5
All nuts	28.1	19.5	n.a.

Sources: Belgian Congo (1960: 90-1); Central Bureau of Statistics (1963b: 74-83) as cited by Booth (2013).

Table 1.4. Production of food crops, 1958 (kg per capita)

Crop (kg per capita, 1958)	Belgian Congo	Java	Indonesia
Paddy rice	13.6	161.0	168.4
Corn	24.9	33.9	28.9
Other cereals	4.5	n.a.	n.a.
Fresh cassava	590.7	136.6	123.8
Other tubers	26.1	29.5	34.1
Peanuts	13.2	3.2	2.5
Other peas/beans	5.4	n.a.	n.a.
Soybeans	n.a.	6.4	4.6
Bananas	141.9	n.a.	n.a.

Sources: Belgian Congo (1960: 90-1); Central Bureau of Statistics (1963b: 74-83) as cited by Booth (2013).

The significance of these choices is seen during the early 1930s price collapse. Congo's rubber output fell to 100 tonnes per year, while Indonesia still produced 250,000 tonner per year, which account to approximately one quarter of world output. By 1959, Congo reached a production of 40,000 tones which was lower than Indonesia's 700,000 tones (Baulkwill, 1989).

The mechanism for this divergence is institutional, while Congo's earlier coercive legacy and policy constraints limited African smallholder entry and scale into the market, Indonesia developed a durable smallholder network (Clarence-Smith, 2013).

Industrial patterns also differed. Between 1913 and 1939, manufacturing in the Dutch Indies contributed to 15% of GDP. In the Congo, meanwhile, the industrial segment was 14% of GDP, but was anchored to mining, and proved vulnerable to rent predation after independence (Buelens and Cassimon, 2013). The “enclave industrialization” in Congo became central to its later deindustrialization (Abbeloos, 2013).

When it comes to the fiscal and labor systems, the Dutch Indies raised and spent more per person than the Belgian Congo in the late 1930s. In 1938, Congo’s budget revenues were \$0.48 per capita and expenditures \$0.51 per capita compared to \$0.76 and \$0.85 respectively in the Dutch Indies (Booth, 2012; Table 1.5). The composition and purpose of the expenditure deepened the difference. Congo devoted 33.2% of expenditure to capital outlays, versus 10.9% in the Indies, and had a higher debt-service burden, being 33.8% of total expenditure in Congo versus 16.1% in the Indies (Booth, 2013, Table 1.6). The Indies relied more on direct taxation which made up 38.5% of revenue compared to 11% in Congo, which was consistent with a deeper administrative penetration and broader taxable base (Booth, 2013). Overall, Congo’s fiscal strength was compatible with extraction because the state could finance administration and infrastructure around export nodes, without creating fiscal contracts with the indigenous populations.

Table 1.5. Budgetary revenues and expenditures per capita, c. 1938, African colonies and Indonesia (pounds)

Country	Revenues (pounds per capita, c.1938)	Expenditures (pounds per capita, c.1938)
Kenya	1.12	1.15
Northern Rhodesia	1.16	1.03
Gold Coast	0.98	0.88
Netherlands Indies	0.76	0.85
Angola	0.67	0.67
Uganda	0.50	0.54
Belgian Congo	0.48	0.51
Sudan	0.43	0.40
Nigeria	0.34	0.34

Sources: Naval Intelligence Division (1944); Creutzberg (1976) as cited by Booth (2013).

Table 1.6. Budgetary and trade indicators: Netherlands Indies and the Belgian Congo, 1937

Indicator	Belgian Congo (1937)	Netherlands Indies (1937)
Exports per capita (pounds)	1.66	1.61
Budget expenditures per capita (pounds)	0.48	0.82
Budget revenues per capita (pounds)	0.35	0.76
Trade taxes as % of exports and imports	4.40	5.30
Trade taxes as % of total revenues	30.30	17.10
Debt service as % of total expenditures	33.80	16.10
Debt service as % of total exports	9.70	8.10
Total debt as a ratio of budget expenditures	9.30	2.80
Exports as a ratio of imports in 1929	0.74	1.35
Exports as a ratio of imports in 1937	2.19	1.89

Sources: Naval Intelligence Division (1944); Creutzberg (1976) as cited by Booth (2013).

When it comes to labor institutions, they link fiscal extraction to production outcomes. In Java, the state labor region was compulsory in the period 1830-1870, but was from then phased out, while in Congo, the *cultures obligatoires*⁶ began in 1917 and continued until the end of the colonial rule in 1960 (Vanderlinden, 2016). In Congo coerced labor dominated before 1908, and despite an attempt to build wage labor afterwards, it reverted with the start of World War I (Houben and Seibert, 2013). In the Indies, there was a parallel coercive regime in the Outer Islands that involved indentured “*coolie*”⁷ labor, with about 250,000 *coolies* employed in Sumatra in 1919 (Lindblad, 1999). However, the sequencing differed. While the Indies moved toward a labor abundant and increasingly monetized economy, in Congo labor shortages, coercive recruitment and reliance on taxation to push people into wage labor prevailed which weakened smallholder incentives (Houbert and Seibert, 2013).

When it comes to education, the expansion of primary education in Congo concealed the institutional weakness of elite formation. In Congo, education was mission-based, and enrolments expanded rapidly at the primary level. The number of missions increased from

⁶ The *cultures obligatoires* in the Belgian Congo was a colonial policy that forced Congolese villages to grow specific crops, specifically export cash crops, under administrative coercion (Vanderlinden, 2016).

⁷ *Coolies* refers to plantation workers, often from Asian origin, employed in serfdom conditions under the Dutch Indies system. They worked under the Coolie Ordinance (1880) laws which allowed physical punishment and labor exploitation for workers under minimum wages (Lindblad, 1999).

156 in 1930 to 212 in 1955, while students rose from 562,851 in 1930 to 1,417,514 in 1955 (Stengers and Vansina (1985) as cited in Frankema, 2013). Nonetheless, the Belgian state invested little in higher levels of education, with per capita education spending in Congo of below US \$0.10 while the Dutch spent five times as much (Frankema, 2013). The educational profile maps onto elite capacity. Booth (2013) argues that while Dutch educational achievements were scarce in absolute terms, some Indonesians acquired professional training in medicine, engineering and law and entered government service, which created enough trained personnel for the state to formulate and implement development projects under Suharto post-Independence. This institutional condition was absent in Congo, and the limited formation of the indigenous elite amplified the risk that governance would rest on narrow patronage networks post-independence.

Another key comparative point is that colonial institutions shaped the organizational inheritance of the postcolonial state. In Indonesia, the administrative structures reached deeply into the indigenous society and remained largely intact after independence (Booth, 2013). At the same time, transitions toward a development-oriented approach took place in a longer period in Indonesia than in Congo, where development was compressed into a shorter window (Frankema and Buelens, 2013).

These institutional contrasts conditioned how the post-independence regimes translated power into policy. Mobutu and Suharto are often grouped as autocratic and corrupt. Nonetheless, their economic policy effectiveness diverged sharply, Indonesia avoided institutional breakdown and achieved growth after the mid 1960s, while the Congo experienced an economic and institutional collapse (Frankema and Buelens, 2013).

The growth divergence after 1970 is the empirical evidence of the comparison. Indonesia's GDP per capita multiplied by approximately 7.3, while Congo's GDP per capita contracted by 1.4% per year. By 2010, the GDP of Indonesia was 17 times that of Congo (Frankema and Buelens, 2013). World Bank indicators show that while Congo started richer in 1960 with a GDP per capita of \$325 versus Indonesia's \$201 (in 2000 US\$), by 2010 Indonesia reached \$1,444 in GDP per capita while Congo fell to \$104 (Abbeloos, 2013, Table 1.8).

Table 1.8. Divergence in growth: GDP per capita (2000 \$US)

Country	1960	1965	1970	1980	1990	2000	2010
Indonesia	201	196	233	390	592	773	1144
Congo	325	319	332	260	210	87	104

Source: World Bank Development Indicators 2012 as cited by Abbeloos (2013).

Table 1.9. Structures of production: Sectorial composition of GDP (%)

Period	Country	Agriculture	Industry	Manufacturing	Services
1960–70	Indonesia	50.9	14.8	9.1	34.2
	Congo	19.9	35.2	n.a.	44.9
2001–10	Indonesia	14.8	47.1	28	38.2
	Congo	47.3	24.7	5.8	27.9

Source: World Bank Development Indicators 2012 as cited by Abbeloos (2013).

Table 1.10. Composition of merchandise exports (%)

Period	Country	Agriculture	Food	Ores and fuels	Manufacturing
1960–70	Indonesia	33.1	20.0	45	1.3
	Congo	3.9	13.7	74.9	7.5
2001–10	Indonesia	5.2	13.0	34.3	47.5
	Congo	8.2	3.9	83.4	3.2

Source: World Bank Development Indicators 2012 as cited by Abbeloos (2013).

Abbeloos (2013) links this divergence to postcolonial structural transformation and policy capacity. Congo's decline is described as having a long negative tendency, with a sustained decline after the 1970s and a dramatic decline in the 1990s with an 8.4% annual contraction.

The structure of the economy is key in the comparison. Congo became over 47% dependent on the primary sector, undergoing a process of industrialization, with manufacturing making up only 5.8% of GDP while Indonesia saw its agriculture share fall from 50.9% in 1960-70 to 14.8% in 2001-10 and industry rising to 47.1% in the same period (Abbeloos, 2013, Table 1.9).

The composition of exports mirrors the same logic. Indonesia shifted toward manufacturing, as exports in this area increased from 1.3% in 1960 to 47.5% in the period 2001-2010. Meanwhile, Congo increased its mineral dependence, with ores and fuels rising from 74.9% in 1960 to 83.4% in the period 2001-10, while the exports of manufacturing goods fell to 3.2% (Abbeloos, 2013, Table 1.10).

The pattern is consistent with the architecture of the colonial era, where colonial institutions supported a monetized smallholder economy in Indonesia, along with deeper administrative penetration and some elite formation, while in Congo extraction was organized through mining-centered enclaves, coercion, and concession. Thus, in Congo, the postcolonial state inherited weaker capabilities and stronger incentives to capture rents, making the long run divergence more likely even under similar authoritarian leadership forms in the surface (Booth, 2013; Abbeloos, 2013).

4. Discussion of the long-term effects

The long-term effects of extractive colonial institutions become visible when the way that the Democratic Republic of Congo and Indonesia entered the 21st century is observed. They had different capacities for social provision, macroeconomic stability, and structural transformation. Even though both territories experienced regimes oriented toward extraction, the ways this took place left different political, economic, and institutional inheritances. These legacies defined the way that post 1960 authoritarianism, globalization and commodity cycles were navigated and explain why the gap became so large in the twenty-first century (Frankema and Buelens, 2013).

4.1. GDP trajectories and growth divergence

By the early 21st century the main contrast is the reversal of near parity at the time of independence to a large income gap. While Indonesia's GDP per capita multiplied by 7.3, the Congo experienced a contraction of about 1.4% per year after 1970, which left Indonesia approximately 17 times richer by 2010 (Frankema and Buelens, 2013). The same turning point is seen when comparing both countries GDP per capita (in constant 2000 US\$). In 1960 Congo's was \$325 versus Indonesia's \$201, but by 2010 Indonesia increased to \$1,144 while Congo fell to \$104 (Abbeloos, 2013).

The divergence reflects different development paths, which can be seen in the structural transformation in both countries. Indonesia's share of agriculture fell from 50.9% in the period 1960–70 to 14.8% in 2001–10 and industry expanded to 47.1%, with manufacturing reaching 28% (Abbeloos, 2013). Meanwhile, Congo's structure moved in the opposite direction. The share of agriculture increased from 19.9% to 47.3% in the same periods while manufacturing remained small even decreasing from 7.8% to 5.8% (Abbeloos, 2013).

Institutionally, this is consistent with an enclave trajectory in Congo, characterized by dependence on the extraction of primary materials and limited diffusion into productivity growth (Buelens and Cassimon, 2013).

4.2. Inequality and resource dependence

Inequality in Congo has historical roots. In 1958 there was still extreme late-colonial concentration of income and assets, with Europeans which made up 1% of the population receiving 45% of wages and owning 95% of capital assets. Additionally, they accounted for 82% of enterprises and 70% of material output (Exenberg and Hartman, 2013). This mechanism is crucial for understanding the 21st century condition, as when skills, ownership and assets are concentrated on an exclusionary and extractive economy, the politics in the post-independence period tend to revolve around who will control the rents instead of building a broad social contract. As seen, Congo's dependence on ores and fuels rose, while Indonesia moved toward a more diversified and skill intensive export structure with a growing importance of the manufacturing industry.

This is relevant in developmental terms, as diversified exports tend to stabilize revenues and expand the tax base by deepening linkages to domestic employment. Meanwhile, mineral concentration intensifies rent contests and volatility.

4.3. Corruption and the political economy

A key comparative insight that can be derived from the study is that authoritarianism alone does not predict economic collapse. Mobutu and Suharto both used coercive patronage methods in a similar way, but the economic outcomes were sharply different. It is important to add that both leaders became known for self-enrichment controlled through power, patronage and army dominance and received Western support during the anti-communist struggle (Frankema, 2013).

Nonetheless, Suharto combined the extraction of rents with sustained macroeconomic growth and improvements for much of the population with his policies contributing to structural transformation and rapid poverty reduction (Frankema, 2013). In Congo, however, Mobutu's "Zairianization" and radicalization transferred foreign and Belgian business assets to politically connected elites which undermined productive capacity and accelerated the rent seeking dynamics (Abbeloos, 2013).

In Indonesia, the New Order of Suharto prioritized “economic capacity building”, pursuing food security, industrial upgrading and assembling technocratic expertise (Abbeloos, 2013). Abbeloos (2013) cautions against reducing the comparison to personality, as the two regimes faced different political and economic starting points in 1965, which shaped incentives and feasible strategies.

The distinction is useful to interpret the legacies of corruption in the 21st century. In the Congo, corruption was intertwined with economic fragmentation and state weakening which fed into the long-run collapse. However, it is to be noted that by 2010 the Congolese economy was largely unrecorded partly due to state breakdown and the legacy of the civil war (Frankema and Buelens, 2013). In Indonesia, while corruption persisted, the state retained enough coherence to deliver long-run transformation. Later, democratization created a “messy, democratic corrupt state” rather than total breakdown (Abbeloos, 2013, citing Hill.

4.4. Neocolonialism and globalization

Global integration must be considered to analyze the 21st century perspective. Both countries remained highly exposed to international commodity markets in terms of volume, but with distinct consequences. Abbeloos (2013) highlights that both were at the mercy of world commodity prices and capital, but that Congo was more exposed to volatility compared to Indonesia.

Congo’s resource dependence led to a context in which external shocks and foreign interests could reshape domestic political economy. For instance, foreign interest in the country increased from 2003 amid high copper prices, which suggests a neocolonial type of dynamic in which external demand and capital flows concentrate on subsoil rents instead of domestic capability building.

Indonesia’s path toward globalization was different. Initially, oil revenues underwrote national development and redistribution, but after the fall of oil prices in the 1980s the state pursued investment and trade liberalization. These measures and growing FDI inflows from Japan and Asian NIEs from 1989 into labor intensive manufacturing diversified the economy away from primary exports. Nonetheless, Indonesia suffered severely in the 1997 crisis, with its GDP contracting by around 15% in 1998, but then recovered in the 2000s (Abbeloos, 2013).

However, the main institutional difference is that Indonesia converted global integration into manufacturing upgrading, while Congo's integration remained concentrated in minerals.

4.5. Social indicators: education and poverty

Human capital is a key channel in which colonial legacies are transformed into long-run development capacity. Congo's late-colonial system systematically constrained higher education, which produced a thin elite and weaker administrative capacity in the post-colonial era. In the early 1960s adult literacy was 31.3% in Congo versus 42.0% in Indonesia. Even decades later, tertiary education enrollment remains higher in Indonesia, with 0.2% enrollments in 2010 for DRC and 1.5% in Indonesia, underscoring the depth of the Congo's human capital constraint.

When it comes to poverty, Frankema (2013) emphasizes the consensus that the Suharto-era policies supports structural transformation and the rapid reduction of urban and rural poverty rates. Additionally, oil revenues and a strong central state helped keep regional inequality and social deprivation relatively in check, with improvements in physical and social infrastructure. In the case of Congo, the evidence is indirect, with deindustrialization, a war economy and institutional collapse that imply severe and persistent poverty pressures instead of sustained social progress.

4.6. Comparative balance and implications for development policy

A comparative balance is that the Belgian Congo and the Dutch Indies shared "extractive" similarities, including coercion, elite-biased surplus appropriation, and external orientation. However, they differed in the institutional bundles that survived into independence.

On one hand, Indonesia's deeper administrative penetration regarding bureaucracies, fiscal routines and some western education tracks and its longer colonial timeline created a more robust platform that later authoritarian developmentalism could exploit. On the other hand, Congo's colonial political economy organized around mining enclaves and concessions with a limited formation of elites increased the likelihood that postcolonial regimes would become predatory instead of developmental (Frankema, 2013, and Abbeloos, 2013).

This reinforced a key theoretical point, which is that colonial institutions are not the sole factor for diverging economic and development paths. Incentives, interests and the political economic context conditioned Mobutu's and Suharto's decisions. Similarly, international

capital and global commodity cycles had an effect and, thus, resource dependence interacted with institutional capacity rather than determining outcomes (Abbeloos, 2013).

The comparison suggests several policy implications. In the first place, it is crucial to develop fiscal capacity and legitimacy. Congo's dependence on mineral rents made broad taxation difficult, but the fiscal contract is crucial for stable public goods. Strengthening transparency and the revenues flows for administration purposes is therefore an institutional need. Secondly, resource rents must be converted into capabilities. Indonesia's experience suggests that developmental investment and rent extraction can coexist when the state channels rents into increasing rural productivity and food security, infrastructure, and human capital. Thirdly, education quality and elite formation must be prioritized. Frankema's (2013) evidence suggests that vertical constraints on education create bottlenecks for policy capacity. For Congo, increasing the quality of secondary and tertiary education is crucial for the country's capacities, not just a social sector measure. Finally, production and exports must be diversified. The stark differences in the composition of exports between both cases underscore the need to build industrial policy that goes beyond mining or raw materials.

4.7. Future lines of research

From the Congo-Indonesia comparison several research directions may take place. Firstly, subnational comparisons may be carried out, given the difference in industry and population density. In that line with this, studies comparing Java to the Outer Islands in Indonesia, and the mining enclaves to the agrarian provinces in Congo may reveal whether the extractive legacy behaves uniformly throughout the country.

Secondly, the feedback loop formed by the relationship between institutions and conflict may be studied. The relationship between institutional weakness and conflict and, in turn, how civil conflict entrenched extraction may be enlightening for the debate at hand.

Finally, broadening the comparative set by adding other country cases is useful to test generalizability. A study with a broader design including more countries can help separate the general trends from the case-specific shocks.

5. Conclusion

6. Bibliography

Declaration of use of artificial intelligence

Tool used: ChatGPT (GPT-5.2 version)

Purpose of use: it was used to create the initial essay structure and organize the content of the sources by section.

Prompts or instructions provided:

“Create a structure for an essay between 10,000 and 12,000 words with the following title: Comparative analysis of the long-term effects of extractive colonial institutions: The Case of the Belgian Congo and the Dutch Indies”.

“From the attached sources, tell me which one of them correspond to each section of the essay.”

Use of generated content: The proposed content was used as a starting point. The writing was developed and written by the author.

Reviewing and editing: All of the content generated by AI was revised critically and contrasted to academic sources.

Limitations and ethical considerations: The author assumes the authorship and accuracy of the content provided.

Acemoglu D. and Robinson. J. (2012) *Why Nations Fail: The Origins of Power, Prosperity, and Poverty*. Crown Publishing Group.

Acemoglu D., Johnson S., and Robinson J. (2001) The colonial origins of comparative development: An empirical investigation. *American Economic Review*, 91:1369– 1401,

Alesina A., Giuliano P. (2013) *Culture and Institutions*. National Bureau of Economic Research. <https://www.nber.org/papers/w19750>

Alpers, E. A. (1975) *Ivory and Slaves: Changing Pattern of International Trade in East Central Africa*, Berkeley: University of California Press.

Anstey, R. (1966) *King Leopold’s Legacy: The Congo Under Belgian Rule, 1908–1960*, Oxford: Oxford University Press.

Assenova, V. A., & Regele, M. (2017) Revisiting the effect of colonial institutions on Comparative Economic Development. *PLOS ONE*, 12(5). <https://doi.org/10.1371/journal.pone.0177100>

- Austin, G. (2008) "The 'Reversal of Fortune' Thesis and the Compression of History: Perspectives from African and Comparative Economic History," *Journal of International Development*, 20, 996–1027.
- Austin, G. (2010) "African economic development and colonial legacies," *Revue Internationale de Politique de Développement*, 1(1): 11–32.
- Auty, R., & Warhurst, A. (1993). Sustainable development in mineral exporting economies. *Resources Policy*, 19(1), 14–29. [https://doi.org/10.1016/0301-4207\(93\)90049-s](https://doi.org/10.1016/0301-4207(93)90049-s)
- Barlow, C. (1978) *The Natural Rubber Industry*, Kuala Lumpur: Oxford University Press.
- Baulkwill, W. J. (1989) "The history of natural rubber production," in C. C. Webster and W. J. Baulkwill (eds.), *Rubber*, Harlow: Longman.
- Boomgaard, P. and van Zanden, J.L. (1990) *Changing Economy in Indonesia XI. Population Trends, 1795–1942*, Amsterdam: Royal Tropical Institute.
- Booth, A. (1989) "The state and economic development in Indonesia: the ethical and New Order eras compared," in R.J. May and W.J. O'Malley (eds.) *Observing Change in Indonesia. Essays in Honour of J.A.C. Mackie*, Bathurst: Crawford House Press.
- Booth, A. (1998) *Indonesian Economic Development in the Nineteenth and Twentieth Centuries: A History of Missed Opportunities*, London: Macmillan.
- Booth, A. (2013). *Varieties of exploitation in colonial settings: Dutch and Belgian policies in Indonesia and the Congo*. In E. Frankema & F. Buelens (Eds.), *Colonial exploitation and economic development* (pp. 60–87). Routledge.
- Braudel, F., & Wallerstein, I. (2009). History and the Social Sciences: The Longue Durée. *Review (Fernand Braudel Center)*, 32(2), 171–203. <http://www.jstor.org/stable/40647704>
- Buelens, F. and Marysse, S. (2009) "Returns on investments during the colonial era: the Case of the Belgian Congo," *Economic History Review*, 62: 135–66.
- Buelens, F., & Cassimon, D. (2013). *The industrialization of the Belgian Congo*. In E. Frankema & F. Buelens (Eds.), *Colonial exploitation and economic development* (pp. 229–250). Routledge.

- Castrycck, G. (2007) "Whose History is History? Singularities and Dualities of the Public Debate on Belgian Colonialism," in L. Csaba (ed.), *Europe and the World in European Historiography*, Pisa: Pisa University Press.
- Central Bureau of Statistics (1963b) *Statistical Pocketbook of Indonesia 1963*, Jakarta: Central Bureau of Statistics.
- Clarence-Smith, W. (2013). Rubber cultivation in Indonesia and the Congo from the 1910s to the 1950s. In E. Frankema & F. Buelens (Eds.), *Colonial exploitation and economic development* (pp. 60–87). Routledge.
- Claver, A. (2006) "Commerce and Capital in Colonial Java: Trade, Finance and Commercial Relations between Europeans and Chinese, 1820s–1942," PhD Thesis, Vrije Universiteit Amsterdam.
- Clement, P. (2013). *The land tenure system in the Congo, 1885–1960: Actors, motivations, and consequences*. In E. Frankema & F. Buelens (Eds.), *Colonial exploitation and economic development* (pp. 88–108). Routledge.
- Creutzberg, P. (ed.) (1975) *Changing Economy in Indonesia, Volume 1: Indonesia's Export Crops 1860–1940*, The Hague: M. Nijhoff.
- Creutzberg, P. (ed.) (1976) *Changing Economy in Indonesia, Volume 2: Public Finance, 1816–1939*, The Hague: M. Nijhoff.
- Currie, Thomas E. 2013. Inequality and Institutions: A Review Essay on *Why Nations Fail* by Daron Acemoglu and James A. Robinson. *Cliodynamics* 4: 153–161.
- Edgerton, R. B. (2002) *The Troubled Heart of Africa: A History of the Congo*, New York: St. Martin's Press.
- Exenberger, A. and Hartmann, S. (2008) "The Congo and World Market Integration: A Dark History of Recurring Exploitation," in H. Marques, E. Soukiazis, and P. Cerqueira (eds.), *Perspectives on Integration and Globalisation*, Münster: Lit.
- Fasseur, C. (1992) *The Politics of Colonial Exploitation. Java, the Dutch and the Cultivation System*, Studies on Southeast Asia, Ithaca, NY: Cornell University Press.

- Ferguson, N. (2002) *Empire: The Rise and Demise of the British World Order and the Lessons for Global Power*, New York: Basic Books.
- Fieldhouse, D.K. (1999) *The West and the Third World: Trade, Colonialism, Dependence, and Development*, Malden, Mass.: Blackwell.
- Frankema, E. (2013). *Colonial education and post-colonial governance in the Congo and Indonesia*. In E. Frankema & F. Buelens (Eds.), *Colonial exploitation and economic development* (pp. 153–177). Routledge.
- Frankema, E., & Buelens, F. (2013). Colonial Exploitation and Economic Development. *Routledge explorations in economic history*. <https://doi.org/10.4324/9780203559406>
- Frankema, E.H.P. (2010) “Raising Revenue in the British Empire, 1870–1940: How Extractive Were Colonial Taxes?”, *Journal of Global History*, 5: 447–77.
- Frankema, E.H.P. (2011) “Colonial Taxation and Government Spending in British Africa, 1880–1940: Maximizing Revenue or Minimizing Effort,” *Explorations in Economic History*, 48: 136–49.
- Fukuyama F. (1995) *Trust: The social virtues and the creation of prosperity*. Free Press Editorial.
- Gallup, J. L., Sachs, J., & Mellinger, A. (1998). *Geography and Economic Development*. National Bureau of Economic Research. <https://doi.org/10.3386/w6849>
- Gardner, L. (2013). *Fiscal policy in the Belgian Congo in comparative perspective*. In E. Frankema & F. Buelens (Eds.), *Colonial exploitation and economic development*, (pp. 130–152). Routledge.
- Gardner, L.A. (2012) *Taxing Colonial Africa: The Political Economy of British Imperialism*, Oxford: Oxford University Press.
- Gonggrijp, G. (1949). *Outline of an Economic History of the Dutch East Indies*. Haarlem: De Erven F. Bohn, N.V.
- Grier, R.M. (1999) “Colonial Legacies and Economic Growth,” *Public Choice*, 98: 317–35.
- Hill, H. (2007) “The Indonesian economy: growth, crisis, and recovery,” *The Singapore Economic Review*, 52(2): 137–66.

- Houben, V. (2002) "Java in the nineteenth century: consolidation of a territorial state," in H. Dick H, V.J.H. Houben, J.T. Lindblad, and K.W. Thee (eds.) *The Emergence of a National Economy. An Economic History of Indonesia, 1800–2000*, Crow's Nest, NSW: Allen & Unwin.
- Houben, V., & Seibert, J. (2013). *(Un)freedom: Colonial labor relations in Belgian Congo and the Netherlands Indies compared*. In E. Frankema & F. Buelens (Eds.), *Colonial exploitation and economic development* (pp. 178–192). Routledge.
- Lacroix, J.L. (1967) *Industrialisation au Congo. La transformation des structures économiques*, Paris: Mouton.
- Landes D. (1998) *The Wealth and Poverty of Nations: Why some are so rich and some so poor*. WW Norton and Co Editorial.
- Lentz, C. (2006), "Land rights and the politics of belonging in Africa: an introduction," in R. Kuba and C. Lentz (eds.), *Land and the Politics of Belonging in West Africa*, Leiden and Boston: Brill.
- Lindblad, J. T. (2013). *Manufacturing and foreign investment in colonial Indonesia*. In E. Frankema & F. Buelens (Eds.), *Colonial exploitation and economic development* (pp. 211–228). Routledge.
- Lindblad, J.T. (1999) "Coolies in Deli: labor conditions in Western enterprises in East Sumatra, 1910–1938," in V. Houben et al., *Coolie Labor in Colonial Indonesia. A Study of Labor Relations in the Outer Islands, c.1900–1940*, Wiesbaden: Harrasowitz Verlag.
- Mamdani, M. (1996) *Citizen and Subject. Contemporary Africa and the Legacy of Late Colonialism*, Princeton, NJ: Princeton University Press.
- Mellegers, J. (2004) "Government Revenue in the Netherlands East Indies," online dataset available at www.cgeh.nl/indonesian-economic-history (accessed 25 November 2010)
- Moeller, A. (1936). La Politique Indigene de la Belgique au Congo. *Journal of the Royal African Society*, 35(140), 233–240. <http://www.jstor.org/stable/717329>
- P. Englebert. Pre-colonial institutions, post-colonial states, and economic development in tropical Africa. *Political Research Quarterly*, 53:7 36, 2000.

- Peemans, J.-P. (1968) *Diffusion du progrès économique et convergence des prix. Le cas Congo-Belgique, 1900–1960*, Louvain: Editions Nauwelaerts.
- Putnam R. (1993) *Making Democracy work: Civic Traditions in Modern Italy*. Princeton University Press. <https://doi.org/10.2307/j.ctt7s8r7>
- Putterman, L. and Weil, D.N. (2010) “Post-1500 Population Flows and the Long Run Determinants of Economic Growth and Inequality,” *Quarterly Journal of Economics*, 125: 1627–82.
- Ricklefs, M.C. (2008) *A History of Modern Indonesia since c. 1200*, Basingstoke: Palgrave Macmillan.
- Rodney, W. (1972) *How Europe Underdeveloped Africa*, London: Bogle-L’Ouverture Publications.
- Rodney, W. (1981) *How Europe Underdeveloped Africa*, Washington: Howard University Press (rev. edn published in 1981 by Vincent Harding, William Strickland and Robert Hill).
- Thee, K. W. (2013). *Colonial extraction in the Indonesian archipelago: A long historical view*. In E. Frankema & F. Buelens (Eds.), *Colonial exploitation and economic development* (pp. 41–59). Routledge.
- UNESCO (1965) *Statistical Yearbook 1964*, Paris: UNESCO.
- Vanderlinden, J. (2016). THE BELGIAN CONGO BETWEEN THE TWO WORLD WARS. *Royal Academy for Overseas Sciences*.
- Wahid, A. (2013). *In the shadow of opium: Tax farming and the political economy of colonial extraction in Java, 1807–1911*. In E. Frankema & F. Buelens (Eds.), *Colonial exploitation and economic development* (pp. 109–129). Routledge.
- Warren, B. (1980) *Imperialism: Pioneer of Capitalism*, London: New Left Books.
- Weber M. (1904) *The protestant work ethic and the spirit of capitalism*. Taylor and Francis e-Library published in 1994.

7. Appendix

Appendix 1. The composition of tax farming revenue in Java, 1851–1900 (in thousand guilders)

Revenue source	1851–60	1861–70	1871–80	1881–90	1891–1900
Opium farm	72,708	107,818	148,775	187,763	185,603
Salt farm	51,227	59,984	67,730	75,241	87,907
Cattle slaughter farm	4,948	6,487	8,055	11,197	14,108
Pig slaughter farm	1,204	716	521	591	546
Pawn shop farm	2,911	3,122	126	9,016	10,824
Liquor farm	1,741	2,247	1,882	1,059	1,764
Gambling farm	2,415	2,407	2,631	9,334	8,018
Other farms	5,503	6,674	16,972	25,114	26,361
Other leases & licenses	10,719	6,105	6,876	13,777	13,018
Total	153,376	195,560	253,568	333,092	348,149

Source: Mellegers (2004)