PIER
Penn Institute for Economic Research
University of Pennsylvania

The Ronald O. Perelman Center for Political Science and Economics (PCPSE)
133 South 36th Street
Philadelphia, PA 19104-6297

pier@econ.upenn.edu
http://economics.sas.upenn.edu/pier

PIER Working Paper
26-002

Informal Empire and Divergence: The Making of a Wealthy Nation in Latin America

ANGEL ALVARADO
University of Pennsylvania

IVAN LUZARDO-LUNA
University of Pennsylvania

January 5, 2026

Informal Empire and Divergence:
The Making of a Wealthy Nation in Latin America

Angel Alvarado* Ivan Luzardo-Luna†

January 5, 2026

Abstract

This paper examines divergent economic trajectories in Latin America between the late nineteenth century and the first half of the twentieth century through the lens of informal empire, fiscal policy, and institutional development. We construct a country–commodity panel covering the period 1850–1950 to assess the impact of foreign corporations on commodity production in seven Latin American countries—Argentina, Chile, Colombia, Cuba, Perú, Uruguay, and Venezuela—that experienced economic take-off under an export-led growth model. We find evidence that foreign corporations promoted key commodity exports, although these results are contingent on the inclusion of Venezuela's oil industry. We argue that Venezuela's distinctive outcome reflects the interaction between a capital-intensive staple and a fiscal strategy that avoided debt-led growth during the 1920s, as oil revenues were used to reduce and repay external public debt. This choice allowed Venezuela to sustain informal empire arrangements through the Great Depression, in contrast to other large countries in the region.

Venezuela, as all the countries of Latin America, is still a country for colonization."

— Letter from Carracciolo Parra Pérez, Former Minister of Foreign Affairs of Venezuela, to Nelson Rockefeller, 1947[1]

Introduction

During most of their independent history, Latin American countries were under the influence of two economic superpowers: Britain in the 19th century and the United States in the 20th. This close but asymmetric relationship shaped Latin America's long-run development, leading some scholars to classify it as an informal empire (Gallagher and Robinson 1953; Brown 2009; Paquette 2013). This is a situation in which, without direct territorial control, an external power exerts substantial influence over a sovereign

*University of Pennsylvania Email: angelalv@sas.upenn.edu . Address: Department of Economics, The Ronald O. Perelman Center for Political Science and Economics, 133 South 36th Street, Philadelphia, PA 19104, United States.

†University of Pennsylvania Email: luzardo@sas.upenn.edu. Address: Department of Economics, The Ronald O. Perelman Center for Political Science and Economics, 133 South 36th Street, Philadelphia, PA 19104, United States.

[1]Parra-Pérez (1947), *Letter*, Venezuela, 1946–1961, en *Nelson A. Rockefeller Personal Papers, Countries, Series E: Venezuela*, Rockefeller Archive Center, https://dimes.rockarch.org/objects/7xJ9cxRh7qt38BrrUFnGx9.

country. Did the *informal-empire* system benefit or hinder the prosperity of *informal colonies'*? How critical were *informal empires* to the economic take-off of Latin American countries? This article aims to answer these questions.

Informal empires can take multiple forms, ranging from financial supervision and debt dependency to direct foreign investment in key sectors. Scholars have long debated whether informal imperialism should be defined by the ability to shape local policy without formal annexation, or by the presence of economic dominance. We follow the latter approach, which emphasizes indirect power exercised through trade and finance. Specifically, we focus on the role of foreign corporations in specific commodities—such as petroleum, minerals, sugar, and agricultural crops—which by far accounted for most of Latin American countries' exports during their transitions to modern economic growth, in the late 19th/early 20th century.

The most extensively studied cases of informal empire in Latin America are those of the Southern Cone—Argentina, Chile, and Uruguay—during the second half of the nineteenth century, under the era of British hegemony. This period coincided with the transition to modern economic growth through the so-called export-led growth model, in which Britain was by far the principal foreign investor and trading partner. In addition to these long-studied cases, this article examines three Andean countries—Colombia, Peru, and Venezuela—and one Caribbean case, Cuba, which underwent a shift from formal colonial status to an informal dependency.

Much of the economic literature, particularly within the institutionalist tradition, assumes that secure property rights, grounded in strong fiscal and state capacity, are essential preconditions for sustained economic growth (North 1990; North and Thomas 1973; Hall and Jones 1999; Acemoglu et al. 2001; Acemoglu 2002; Acemoglu et al. 2005; Besley and Persson 2011) (Figure 1). This framework emphasizes endogenous institutional development, where the state's ability to tax, enforce contracts, and protect property emerges from internal political equilibrium. However, such an approach often overlooks cases in which an external power exerts significant influence over domestic elites, shaping institutional outcomes without direct rule. In these contexts, informal empires can impose or sustain property rights and investment regimes not through domestic state capacity but through geopolitical leverage and elite alignment. Under certain circumstances, informal empires can facilitate economic take-off in countries lacking appropriate institutional development, in a way similar to Gerschenkron's framework of substituting for the missing preconditions for economic growth (Figure 2).

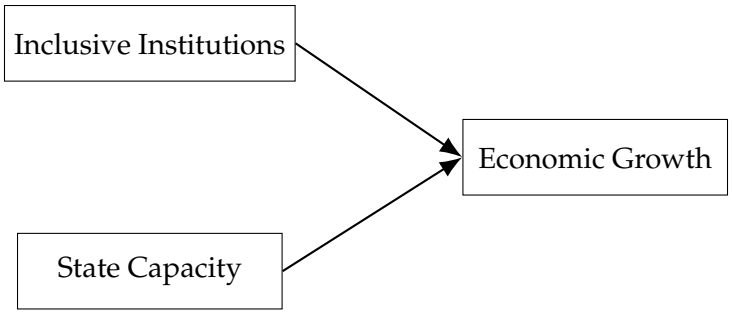

FIGURE 1: STANDARD INSTITUTIONAL MODEL.

After the Latin American independence movements, particularly in the second half of the nineteenth century, Britain significantly increased its presence in the region, particularly in South America. Countries such as Argentina, Chile, Peru, and Uruguay experienced their economic take-off based on an export-led growth model, in which Britain was not only their most important trade partner and investor but also managed critical transportation infrastructure and influenced certain aspects of government policy. (Ferns 1960; Hopkins 1994; Miller 2014).

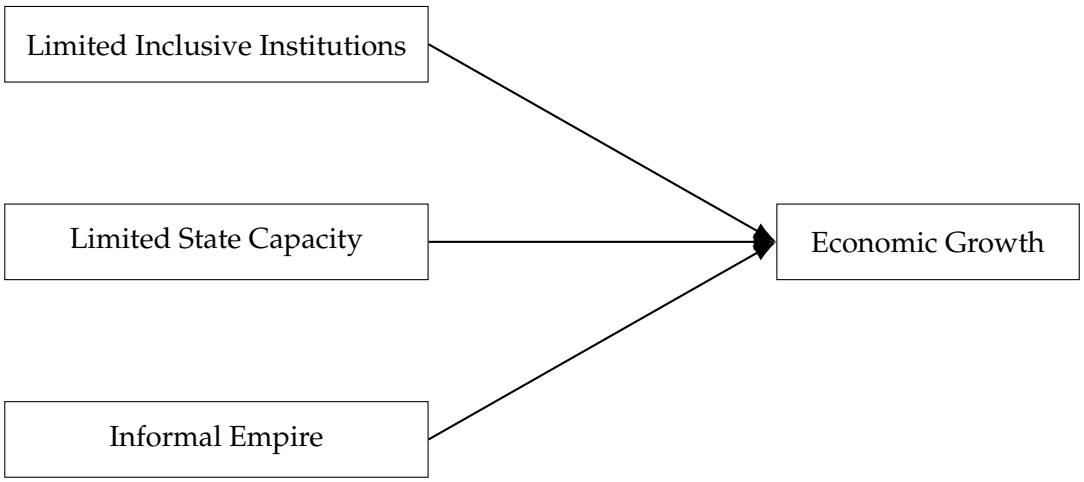

FIGURE 2: AN ALTERNATIVE MODEL.

Similar to the case of Britain in the nineteenth century, the 1920s present a compelling example of an informal empire, as the United States first competed with Britain and Germany and later replaced them as the main lender and investor. As in the case of Argentina, Chile, Peru, and Uruguay in the nineteenth century, by the early 1920s, Colombia and Venezuela saw their economic take-off, although following different patterns. By the early 1920s, Colombia and Venezuela had essentially the same income per capita. The two neighboring countries, which a century earlier had been part of the same nation under Gran Colombia, experienced a major divergence throughout the twentieth century. By the mid-1970s, Venezuela had more than double the per capita income of Colombia, a divergence largely related to the

rise and consolidation of Venezuela's oil industry. This divergence, however, began in the interwar years and intensified after WWII. The countries' responses to the Great Depression and World War II largely shaped their economic performance over the rest of the twentieth century. Colombia and Venezuela diverged not only in their growth paths but also in the form and degree of their association with the United States. Such a divergence had several dimensions, including Colombia's earlier transition to import-substitution industrialization (ISI) policies. One critical difference between the two countries concerned oil policy. While Colombia gradually moved toward a state-oriented oil policy—culminating in the establishment of ECOPETROL, the national oil company, in 1951—Venezuela maintained a private-oriented oil policy until the mid 1970s.

Informal empires can also hinder economic growth by encouraging debt-led development that distorts domestic incentives. Because imperial powers expect preferential repayment, they may overinvest in informal colonies beyond what local economic fundamentals justify, flooding these economies with external capital. While this inflow can temporarily boost growth, it often undermines the formation of sound fiscal institutions, as easy access to foreign finance substitutes for the politically difficult task of building effective taxation systems. This dynamic was evident in Latin America during the 1820s under British financial dominance and re-emerged in the 1920s with heavy U.S. lending, where reliance on external capital left states fiscally fragile and vulnerable to sudden reversals. Once this model proves unsustainable, informal colonies are typically cut off from fresh capital inflows, generating capital scarcity and a high risk of growth stagnation following the boom-and-bust sequence of capital bonanza and debt crisis.

This article is composed of five sections, in addition to the current introduction. In the first section, we present a literature discussion on the impact of informal empires on economic growth. In the second section, we outline the historical context of informal empires in Argentina, Chile, Colombia, Cuba, Perú and Uruguay, Venezuela. In the third section, we examine the role of foreign corporations, as channels of informal empire, in key commodity exports, which served as the engine of economic growth during these countries' economic take-off. We construct a country–commodity panel to examine the impact of foreign corporations on commodity output. The econometric results show that foreign corporations had a positive and significant impact, although the result is contingent on the inclusion of Venezuela's oil industry. Based on these findings, Section Four presents the particularities of Venezuela, its fiscal policy during the 1920s, and how those decisions shaped the evolution of the informal empire until the late 1960s. Finaly, we present the main conclusions.

1 Literature discussion on informal empires

While much of the institutionalist literature emphasizes endogenous factors—such as secure property rights and bureaucratic capacity—as fundamental drivers of economic growth, this article broadens that perspective by introducing new evidence on the link between informal empire and long-run economic performance. Our findings suggest that external influence can generate positive outcomes when coupled with a capital-intensive industry and sufficient political centralization. Under these conditions, domestic elites are able to safeguard returns for foreign powers while preserving institutional coherence.

In the literature, state centralization is widely recognized as a foundational prerequisite for building effective state capacity (Acemoglu et al. 2020). Dincecco and Katz (2016) provide compelling evidence of the absence of centralized governance structures in the precolonial period have had lasting effects on institutional development and state effectiveness in Africa. Herbst (2000); Gennaioli and Rainer (2007); Michalopoulos and Papaioannou (2013b) show evidence of poverty and lack of a history of centralized government. Michalopoulos and Papaioannou (2013a) present evidence of internal fragmentation further undermines economic growth by weakening the coherence and reach of state institutions and weak state capacity is strongly associated with vulnerability to civil war and internal conflict (Blattman and Miguel 2009), highlighting the broader consequences of institutional fragility for political stability and development.

Within this framework, Rodríguez and Gomolin (2009) compare the income trajectories of Venezuela and Mexico. Unlike Venezuela, Mexico did not undertake a significant process of centralization and consolidation of national public finances at the beginning of the twentieth century. As a result, economic growth diverged between the two countries. We build on this argument by suggesting that, at a certain level of state centralization, informal empires played a crucial role in creating the conditions for state-building and economic take-off in Chile, Argentina, and Venezuela in the late nineteenth and the first half of the twentieth century.

This paper contributes to the literature by introducing the concept of the *informal empire* as a complementary framework for understanding institutions. The concept refers to a form of imperial influence exerted without direct territorial control, typically through economic, diplomatic, and cultural mechanisms. Originating in the work of Gallagher and Robinson (1953), who argued that British imperialism often operated through "free trade" rather than formal colonization. This concept has since been ap-

plied to various historical contexts, including U.S. influence in Latin America and French postcolonial relations in Africa. Informal empires rely on asymmetrical relationships, where dominant powers shape the political and economic trajectories of weaker states through financial leverage, strategic alliances, and ideological penetration (Darwin 2009; Gross 2023).

A key contribution of the informal empire framework is its relevance to understanding the political economy of the resource curse. While much of the literature focuses on domestic institutions and state capacity, informal empire highlights how external actors, often powerful states or multinational corporations, can shape the institutional trajectories of resource-rich countries through indirect control. Crucially, informal empires tend to operate above a certain threshold of state centralization: they require a minimally functional state apparatus capable of enforcing contracts, maintaining basic order, and engaging in international relations. This condition enables external powers to exert influence without direct governance, often by co-opting local elites or leveraging economic dependencies. By embedding economic growth within a broader historical and geopolitical context, informal empire theory offers a valuable lens for analyzing how external influence can reinforce domestic institutional fragility and hinder inclusive development.

2 Seven informal empires in Latin America

One of the main channels through which British and American economic influence in Latin America has been documented is sovereign debt and foreign investment (Stone 1977; Reinhart et al. 2003; Taylor 2003; Flores Zendejas 2020; Cavaca and Meurer 2021; Campbell et al. 2024). Table 1 shows the British foreign investment per capita between the second half of the 19th century and 1913, displaying a markedly increase in Argentina and Uruguay, both of which emerged as major recipients of British capital by the late nineteenth century. Chile and Cuba also experienced substantial increases, though at lower levels, while Peru shows a pronounced but temporary rise in the 1870s and 1880s, associated with the guano boom. In contrast, countries such as Colombia and Venezuela remained marginal destinations for British investment throughout the period, highlighting the uneven distribution of British capital across Latin America.

In the case of American foreign investment in the region, there was a significant concentration in the early twentieth century, as shown in Table 2. In 1929, almost half of American foreign investment was directed toward Latin America, by far more than to any other region. However, this concentration

TABLE 1: BRITISH FOREIGN INVESTMENT PER CAPITA (BRITISH POUNDS)

Country	1865	1875	1885	1895	1905	1913
Argentina	1.66	10.31	15.43	47.32	44.77	62.69
Brazil	2.22	2.87	3.68	5.82	6.22	10.77
Chile	1.78	4.76	4.15	11.64	13.42	22.18
Colombia	3.20	1.29	1.18	1.14	1.72	2.48
Cuba	2.32	1.15	11.30	21.95	11.21	18.88
Mexico	2.90	2.90	3.69	7.39	8.32	8.82
Peru	1.59	12.97	11.58	6.47	5.79	6.92
Uruguay	3.79	15.54	28.37	42.42	39.48	40.19
Venezuela	4.07	4.15	3.83	4.08	3.55	3.41

Source: Total investment from Stone (1999), and population from Maddison Project dataset (2020).

gradually declined throughout the twentieth century, and by 1966 the region's share was smaller than that of Canada or Europe.

TABLE 2: UNITED STATES DIRECT INVESTMENT POSITION ABROAD

Region	**1929**	**1936**	**1957**	**1966**
Canada	27%	29%	35%	31%
Europe	18%	19%	16%	30%
Latin America	47%	43%	32%	21%
Others	9%	10%	17%	18%

Source: Department of Commerce. *American Direct Investment in Foreign Countries*, 1929 and 1936, and *Selected Data on U.S. Direct Investment Abroad, 1950-1970*.

In this article, rather than focusing on aggregate direct investment, we examine the role of corporations operating in Latin American countries as the mechanism through which informal empires functioned. The role of foreign corporations in Latin America has been extensively examined in the literature (Amini and Toms 2021; Méndez-Chacón and Van Patten 2022; Bucheli et al. 2023). The reason behind this decision lies in the nature of Latin America's transition to modern economic growth, which was characterized by the export of large volumes of a few commodities under the so-called *export-led* growth model. This high level of specialization in a few commodities directly connected specific corporations to the capacity to achieve persistent economic growth in the early stages of economic take-off.

We document several cases of informal empires in Latin America characterized by heavy foreign investment concentrated in one or a few strategic commodities, alongside a sharp rise in external debt, producing a pattern of debt-led growth. In most cases, dependence on external borrowing made these economies highly vulnerable to shifts in international capital markets, ultimately resulting in defaults

when global conditions deteriorated. Venezuela stands as the key exception: during the 1920s, oil revenues were used not to leverage further borrowing but to actively repay external debt, preventing default in the aftermath of the Great Depression. As a result, Venezuela avoided the typical collapse of the debt-led model, allowing its informal imperial relationship to persist until the early 1970s, well beyond the lifespan observed in most large economies in the region.

2.1 Peru, the Guano Boom, and the experience of two informal empires

During the 1850s, the Chincha Islands off Peru's coast became the center of an economic boom based on guano, a highly valued fertilizer. This *guano era* transformed Peru into one of the first Latin American countries to pursue export-led growth in Latin America, after a period of inestability that followed the wars of independence. Before the nationalization of the guano islands in 1861, most export activity was carried out under consignment contracts with foreign firms. The most prominent of these was the British trading house Antony Gibbs & Sons, which from the early 1840s held a *de facto* monopoly over the guano trade between Peru and Europe. However, nationalization did not last long. By 1869, facing a precarious fiscal situation and rising government debt, the Peruvian state granted an exclusive European sales concession to Dreyfus Frères in order to secure financial advances and stabilize its foreign obligations.[2]

For approximately seven years, between 1862 and 1869, the exploitation and sale of guano—particularly in the British market—were managed by the national *Compañía de Consignatarios del Guano* [3]. The inability of national firms, or *bourgeoisie*, to manage the Guano industry points out Peru dependence of foreign players to exploit its most valuable national wealth. However, that dependence of a external power in this early Latin America commodity boom was beyond the activity of foreign firms.

Britain was by far the main destination for Peru's exports in the second half of the nineteenth century. Beyond trade, Britain was also essential as a source of external finance. Thanks to guano revenues, Peru resumed sovereign debt payments in 1849 after the wave of post-independence defaults. This was rela-

[2]On July 5, 1869, Peruvian commissioners Toribio Sanz and Juan M. Echenique, acting under the direction of then Minister of Finance Nicolás de Piérola, signed an exclusive contract for the purchase and sale of two million tons of guano with the French financier Auguste Dreyffus (also known as Augusto Dreyfus). This agreement transferred control of Peru's guano wealth from a consortium of Peruvian capitalists—often referred to as the "commercial-landowning bourgeoisie"—to a foreign financier. The abrupt shift, executed by the administrations of Castilla and Balta, triggered a political rupture that would shape Peruvian politics from the late 1860s into the early twentieth century.

[3]Several members of the *Compañía de Consignatarios del Guano* were part of the country's political elite, particularly within the *Sociedad Independencia Electoral*, which later evolved into the *Partido Civil*, led by Manuel Pardo. In contrast, Nicolás de Piérola founded a political movement known as *pierolismo*, which by the early twentieth century became the *Partido Demócrata*. Thus, the disputes over guano revenues led to a lasting division in Peruvian political life, with civilismo and pierolismo emerging as the dominant forces for nearly four decades of republican history.

tively early by Latin American standards, preceded only by Chile which resumed payments in 1842. The lack of access to international capital markets remained a major constraint on the region's economic take-off during the nineteenth century (Luzardo-Luna 2019). Peru fulfilled this precondition for growth well before most other countries in the region, allowing it to re-enter the London capital market and secure fresh loans between 1849 and 1876, when Peru went again into default.

Peru also had another important characteristic relatively common in informal empires, its strategic infrastructure for exports depended on British companies, namely *the Pacific Steam Navigation Company*, until 1870 when the *the Southern Railway* was inaugurated, which connected Mollendo with Arequipa and was from the national capital. By granting a private, foreign-controlled corporation extensive authority over key economic infrastructure in exchange for debt relief, the arrangement functioned as an informal empire, allowing external interests to exert long-term economic influence without formal political control.

During the ensuing Guano era, Peru experienced a clear episode of debt-led growth rooted in its renewed access to international capital markets. The credibility generated by resumed debt service, combined with booming guano exports, encouraged British investors and lenders to channel large volumes of capital into the Peruvian economy (Vizcarra 2009). These inflows financed public spending and infrastructure well beyond what contemporaneous fiscal capacity could sustainably support, as external borrowing substituted for the development of a robust domestic tax base. While this model initially accelerated growth and state expansion, it left Peru highly exposed to fluctuations in export revenues and international credit conditions, culminating in the renewed default of 1876 once guano revenues declined and debt obligations became unmanageable.

The outbreak of the War of the Pacific (1879–1883) marked a major turning point in Peru's economic trajectory and contributed to a long-lasting divergence from its earlier growth path, as presented in Figure 3. The war resulted in territorial losses, the destruction of infrastructure, and a severe fiscal crisis, undermining the foundations of Peru's export economy and state capacity. In contrast to Chile, which emerged from the conflict with control over nitrate-rich territories and strengthened public finances, Peru faced prolonged economic dislocations.

Peru's postwar economy was shaped by the Grace Contract of 1890, which led to the creation of the Peruvian Corporation as a mechanism to resolve the country's external debt crisis. Under this arrangement, foreign bondholders obtained long-term control over railways, guano revenues, and other strategic assets in exchange for debt relief and the restoration of Peru's creditworthiness. This framework reestab-

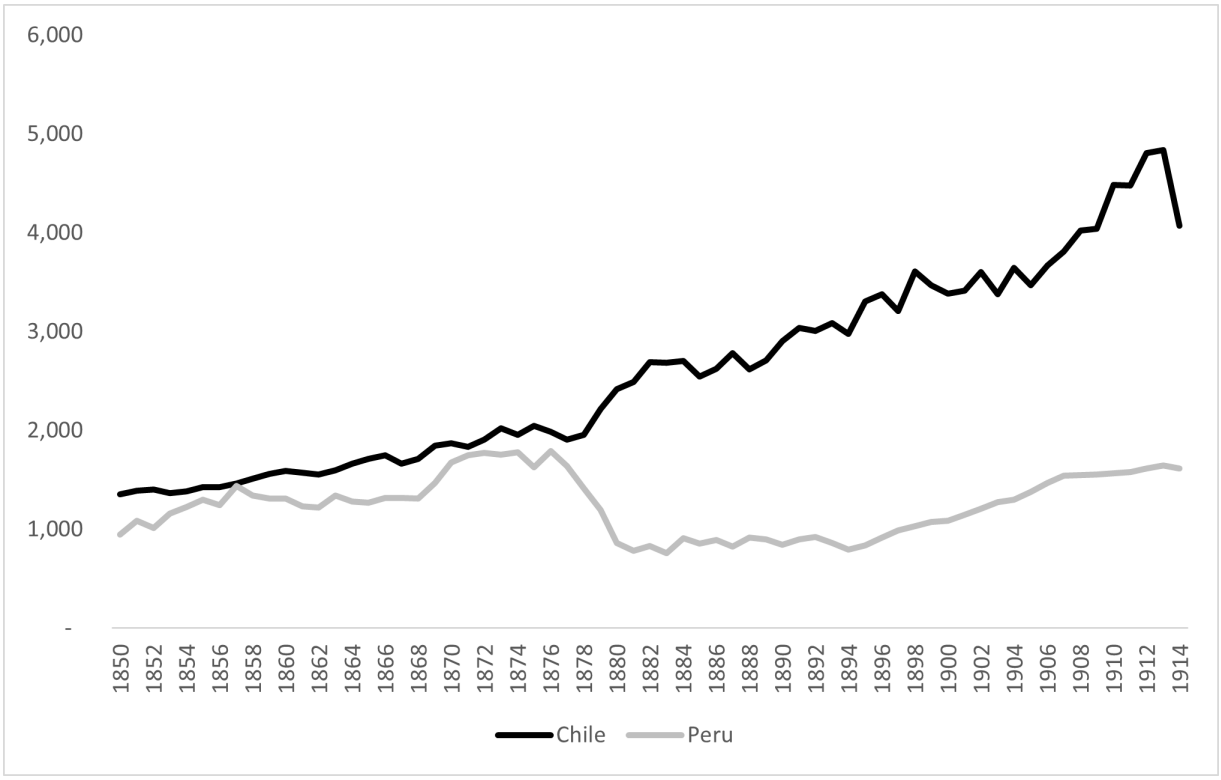

FIGURE 3: CHILE AND PERU GDP PER CAPITA, 1850-1914

lished Peru's export capacity by stabilizing key infrastructure and securing access to international markets. However, the degree of foreign control embedded in the Peruvian Corporation exceeded the typical patterns of informal empire, resembling a more formalized system of external economic governance despite the absence of direct political rule.

In the early twentieth century, Peru became increasingly integrated into a new informal empire centered on the United States, particularly through the expansion of American mining interests. The Cerro de Pasco Corporation emerged as a dominant actor in copper extraction, controlling large-scale mining operations, transport infrastructure, and export channels. This corporate presence linked Peruvian economic performance closely to U.S. capital, technology, and markets, reinforcing external influence over a strategic sector. As in earlier periods, this arrangement shaped Peru's development trajectory through corporate control rather than formal political domination, consistent with the logic of informal empire. By the early twentieth century, copper had become Peru's main export, surpassing sugar and cotton, which were industries largely managed by the domestic elite.

Peru's reliance on external finance resurfaced in the 1920s (Pastor 2012; Kaminsky and Vega-García 2014), when the Leguía administration (1919–1930) pursued an ambitious public investment program

financed in large part by rapidly rising external public debt, deepening a renewed episode of debt-led growth. When global conditions turned—commodity prices fell, capital markets seized up, and export revenues collapsed—Peru, like most of the region's large economies, suspended service and entered default during the Great Depression, as the 1920s borrowing boom gave way to a sharp stop in foreign lending and a sovereign debt crisis.

2.2 Chile's early political centralization and informal empires during the nitrate and copper eras

Political centralization is one of the defining features of Chile's state-building model and represents a distinctive trait compared to other Latin American cases (Centeno 2002). Beginning in the 1830s, centralism was forcefully imposed as the framework for territorial, political, and economic administration under a cohesive conservative elite. By 1830, the conservatives, largely based in the Santiago–Valparaíso region, had defeated the liberals, effectively ending any attempt to establish federalism in Chile. As a result, there was no significant tension between the central government in Santiago and the provinces.

The key to this political stability may lie in the swift resolution of military conflict between conservatives (aligned with the armed forces) and liberals. The victorious faction of the country's economic elite—primarily conservative landowners—formed a relatively homogeneous group, capable of reaching consensus on economic policies that served their interests (Matus et al. 2021). The success of the conservative project was the elite's ability to exert control across all levels of government and to maintain direct access to resources (Collier and Sater 2004). The consensus between the executive branch and the commercial-economic elite—represented in legislative chambers—was both a product and a driver of administrative reform, creating a feedback loop. As a result of this alignment, the government was able to implement fiscal and commercial policies with little resistance from the provinces. These policies, which favored elite interests, enabled a reorganization of public finances and the consolidation of the national treasury.Taverne (2014).

After a period of sustained export-led growth beginning in the 1850s, largely based on wheat exports to California and Australia during their gold rushes, Chile accumulated enough capital to invest in the nitrate industry in the then-Peruvian and Bolivian territories of Tarapacá and Antofagasta, respectively. Following the War of the Pacific, these territories were annexed by Chile and became the new core of its export-oriented expansion. From the 1880s onward, Chile's nitrate industry entered a major boom that

lasted until 1914, when the development of synthetic nitrates brought the cycle to an end.

Between 1850 and 1914, Britain maintained a dominant position in Chile in terms of foreign investment and control over critical export infrastructure, initially centered on the *Pacific Steam Navigation Company* and, from 1882 onward, on the *Nitrate Railway*. The government's scrupulous repayment of external debt certainly contributed to the dynamism of capital flows, although Chile diverged from Britain in its adherence to the gold standard. Chile joined the gold standard only briefly, between 1895 and 1898, following a prolonged dispute between the *papeleros*, who opposed the adoption of a hard currency, and the *oreros*, the pro-gold faction.

The British informal empire in Chile flourished around the nitrate industry, which became the country's principal export sector in the late nineteenth century. British firms such as Gibbs & Sons and Antony Gibbs, along with the *Nitrate Railways Company*, played a central role in organizing production, transportation, and export, giving British capital effective control over the industry's key bottlenecks. In particular, the Nitrate Railways Company was crucial in linking inland nitrate fields to coastal ports, allowing British interests to exert sustained economic influence over Chile's export economy without formal political control. Through this corporate and financial presence, nitrate exports closely tied Chile's economic fortunes to British markets and investment networks.

After the decline of the nitrate industry, a new informal empire consolidated in Chile around copper during the early twentieth century. American capital, most notably through the *Kennecott Copper Corporation*, became dominant in large-scale copper extraction and export. Kennecott controlled not only mining operations but also key infrastructure, including transport facilities and smelters, reinforcing foreign influence over a strategic sector of the Chilean economy. As in the nitrate era, this corporate dominance shaped Chile's development trajectory through economic control rather than formal political rule, consistent with the logic of informal empire.

During the 1920s, Chile experienced a renewed episode of debt-led growth under a new informal imperial configuration centered on copper and the United States. Large-scale U.S. investment in copper mining boosted export capacity and reinforced expectations of external repayment, facilitating a rapid expansion of external public borrowing to finance state spending and development projects. As in earlier episodes, this growth model proved fragile. When the Great Depression triggered a collapse in copper prices and a sudden stop in international capital flows, Chile entered default, one of the most severe cases in the region.

The shock also fed into a period of acute political instability: the economic collapse helped bring down the government of President Carlos Ibáñez del Campo in July 1931, and the following year President Juan Esteban Montero was overthrown in the 4 June 1932 coup, which ushered in a succession of short-lived juntas and the brief Socialist Republic (June–September 1932) before a return to more stable constitutional rule later that year.

Even though Chile did not fully nationalize its copper industry until 1971, when the Chilean Congress approved legislation transferring ownership of the major mines to the state under President Salvador Allende, the Great Depression marked the end of the United States–linked external finance and debt-led growth of the 1920s. By the mid-twentieth century, the Chilean state initiated a gradual process of "Chileanization", acquiring partial stakes in foreign-owned copper companies during the 1950s and 1960s; however, while foreign capital and commercial credit continued to play a role, access to external finance never returned to the scale or function it had assumed during the interwar period, effectively bringing the earlier informal imperial arrangement to a close.

2.3 Argentina, British railroads and informal empire

In 1860, Bartolomé Mitre owed his election as governor of Buenos Aires to his support for the program of national union, which called for the province to abandon its temporary status as a separate state—established in 1854—and rejoin the Argentine Confederation. Following his triumph at the Battle of Pavón (1861), Mitre became the first president of a unified Argentina (1862–1868), symbolizing the consolidation of Buenos Aires' dominance over the provinces. He curtailed the autonomy of regional caudillos by strengthening the national army and integrating provincial revenues into a centralized fiscal system (Mazzuca 2010).

Commanding strong support from foreign diplomats, investors, and merchants, Mitre opened the country to European trade and settlement. He invested in railroads, telegraphs, and public education to physically and ideologically bind the provinces to the central government. His cultural initiatives, including the promotion of national history and Spanish-language standardization, sought to foster a unified identity. Through electoral manipulation and strategic alliances, he ensured Buenos Aires' political supremacy. His leadership in the War of the Triple Alliance further reinforced national unity and justified the expansion of centralized military power Rock (1999).

The 1860s marked a pivotal decade in Argentina's economic transformation. In 1862, the Buenos Aires

Great Southern Railway was launched, connecting the fertile Pampas to the port of Buenos Aires and facilitating the export of agricultural commodities—especially wool, hides, and later beef—to European markets. Before the railway, goods arrived in Buenos Aires via slow and costly cart transport; in 1860 alone, over 7,000 carts brought wool and leather to the city, each carrying up to 2.5 tons. The railway enabled bulk transport over long distances, opening up previously inaccessible regions for commercial agriculture and helping transform Argentina into a major exporter of temperate agricultural products. This laid the foundation for its role as a global food supplier in the late 19th century.

The consolidation of national authority was closely linked to the expansion of Argentina's railway network, which became a central instrument of economic and political integration. The backbone of the railway system was formed by four major British-owned lines, the *Buenos Aires Great Southern*, *Buenos Aires Western*, Aires and Pacific, and *Central Argentine railways*, which together dominated railway investment and operations (Lewis 1983). The expansion of these lines was made possible by the Law of Guaranteed Returns of 1862, which ensured a 7 percent return on railway investments and significantly reduced the risks faced by foreign investors. This institutional framework encouraged sustained inflows of British capital and reinforced Buenos Aires' dominance over the national economy through control of transport infrastructure.

Railway expansion enabled large-scale agricultural exports. In the late nineteenth century, wheat and maize became the leading export crops, contributing to Argentina's emergence as the *granary of the world*. From the 1890s onward, technological advances in refrigeration supported the expansion of frozen meat exports, which became a central component of the export economy. Together, grain and meat exports defined Argentina's export-led growth during this period (Cortés Conde 1997).

The first successful shipment of frozen meat from Argentina occurred in 1877, when the steamer Paraguay carried frozen mutton to France, proving the viability of refrigerated shipping. By 1882, Argentina had joined New Zealand and Australia in regular shipments of frozen meat to Britain, enabled by the widespread adoption of compression refrigeration technology on ships. Britain rapidly emerged as the dominant importer, acquiring an almost monopsonist position in the global meat trade. This technological and commercial breakthrough marked the beginning of Argentina's rise as a global leader in beef exports, with Britain as its primary market well into the 20th century.

The *River Plate Fresh Meat Company* emerged as the main corporate player in the development of Argentina's meat export industry. By undertaking substantial sunk investments in slaughterhouses, cold-

storage facilities, and refrigerated transport, the company helped establish the infrastructure necessary for large-scale frozen meat exports. These investments lowered entry barriers and generated positive spillovers that ultimately benefited the industry as a whole, facilitating the expansion of meat exports beyond the firm itself (Bucheli 2011).

Over the twentieth century, grain and meat continued to dominate Argentina's exports. Unlike Chile or Peru, where corporations based in the United States became pivotal in strategic mineral sectors, Argentina did not experience a comparable shift toward a second informal empire centered on American capital. The country's export economy remained primarily anchored in agro-livestock production and long-established commercial networks, limiting the scope for a single foreign corporate actor to control a key export enclave. As a result, external influence operated more diffusely through markets and finance rather than through a new, highly concentrated American corporate presence.

In Argentina's case, Britain continued to function as the dominant informal empire throughout the interwar period, reinforcing long-standing trade, financial, and institutional ties rather than being supplanted by the United States. This continuity partially explain Argentina's persistent efforts to maintain external debt repayment during the Great Depression (Dornbusch and de Pablo 1990; Della Paolera and Taylor 1999), in contrast to most large economies in the region that defaulted: preserving access to London markets and sustaining credibility with British investors remained a central policy objective. Crucially, however, the eventual unwinding of this informal imperial relationship did not result from a breakdown of debt-led growth and sovereign default, but instead from the structural decline of Britain as a global hegemon, a process that became more evident after World War II.

2.4 Uruguay, intraelite conflicts and informal empire

Armed conflict between Uruguay's two historic political factions—the liberal Colorados and the conservative Blancos—began in 1832 and persisted until the final military defeat of the Blancos in 1904. This prolonged struggle reflected deep ideological and social divisions within the country. The Colorados, supported primarily by urban middle classes, merchants, professionals, and intellectuals, championed modernization, liberal reforms, and a centralized government (Finch 2005). In contrast, the Blancos drew strength from rural areas and traditionalist sectors, advocating for agrarian values and a more decentralized political structure. The revolutions of 1870 and 1897 were key episodes in this broader conflict, illustrating the Blancos' continued resistance to exclusion and their demand for political representation,

even as the Colorados consolidated power and shaped Uruguay's emerging liberal state.

Uruguay's informal empire took shape around the export of wool and meat, which became the backbone of the country's export economy in the late nineteenth and early twentieth centuries. British capital played a central role in this process, particularly through investment in processing facilities, export houses, and transport infrastructure. The Central Uruguay Railway Company, largely financed and managed by British interests, was crucial in linking pastoral regions to the port of Montevideo and facilitating the large-scale export of livestock products.

A central corporate actor that materialized Uruguay's informal empire in meat packing was Liebig's Extract of Meat Company. Established with British capital, the company developed large-scale meat-processing facilities at Fray Bentos and integrated Uruguayan livestock production into international markets through the export of meat extracts and related products. By controlling processing technology, branding, and access to foreign markets, Liebig's exercised substantial influence over a strategic segment of the export economy without direct political control, exemplifying the operation of informal empire through corporate power (Bucheli 2014).

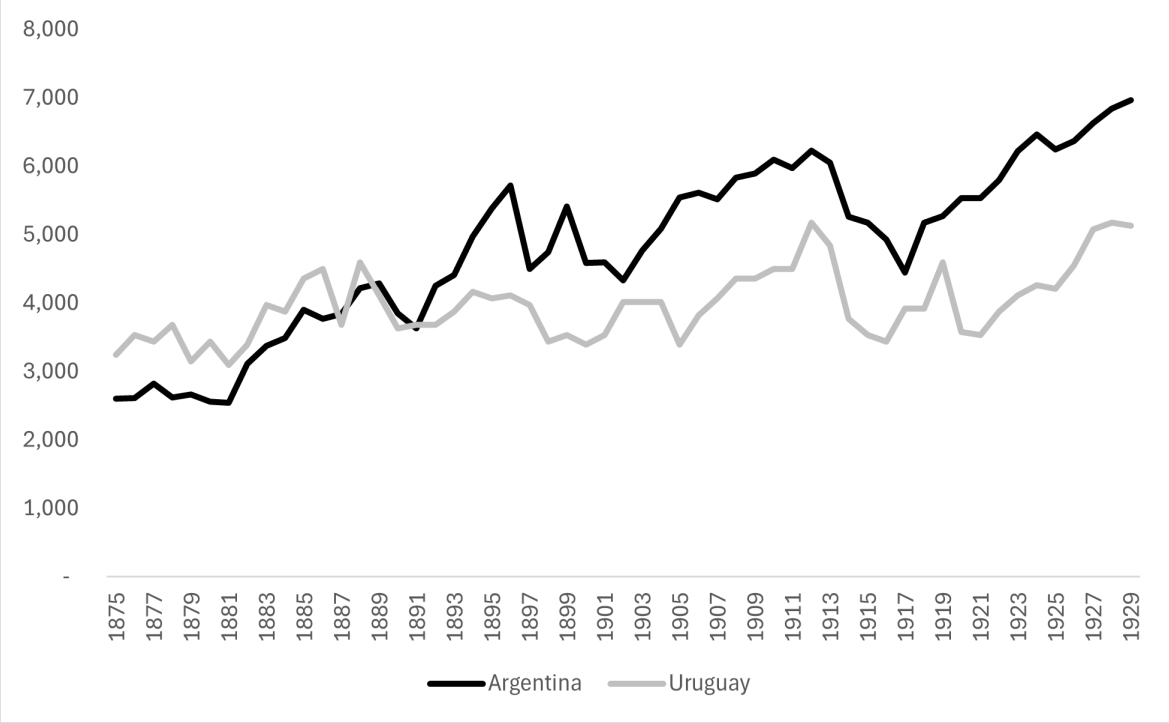

FIGURE 4: ARGENTINA AND URUGUAY GDP PER CAPITA

Figure 4 shows that Uruguay initially displayed higher income per capita than Argentina. The decisive divergence emerged after the early 1890s crisis associated with the Baring collapse, when Argentina

experienced a rapid recovery, while Uruguay entered a period of relative stagnation. From the mid-1890s onward, Argentina's income per capita followed a markedly stronger upward trajectory, leading to a widening gap between the two countries over time.

Uruguay followed a pattern similar to Argentina in that it did not experience a strong United States–centered informal empire during the 1920s. Its external economic relations remained largely anchored in European—especially British—trade and financial networks, reflecting long-established links in meat exports, shipping, and sovereign finance rather than a shift toward American corporate dominance or control over a strategic export enclave. Howerver, Uruguay participated in the interwar international lending boom (Marichal 1989) and suspended external debt service during the Great Depression.

2.5 Cuba: Sugar and the Making of an Informal Empire

Cuba's independence from Spain at the end of the nineteenth century was closely intertwined with the intervention of the United States during the Spanish–American War of 1898. Although formal independence was achieved in 1902, U.S. involvement continued through military occupation and institutional arrangements such as the Platt Amendment, which granted the United States extensive rights to intervene in Cuban affairs. These mechanisms limited Cuban sovereignty while preserving formal political independence, creating a framework in which external influence operated through legal, economic, and strategic means. As a result, Cuba entered the twentieth century as a formally independent state embedded within an informal empire centered on the United States.

The sugar industry became the cornerstone of Cuba's economy in the early twentieth century, with American corporations playing a dominant role in its development. U.S. capital heavily invested in large-scale sugar plantations, mills, and refining operations, which were concentrated in the hands of a few American firms. This concentration of control allowed U.S. corporations to exercise significant influence over Cuban agricultural production and export markets, effectively shaping the island's economic structure.

Figure 5 shows a marked acceleration in sugar output per capita from around 1900 through the late 1920s, reflecting the rapid expansion and consolidation of the sugar industry during the early twentieth century. This upward trend was abruptly reversed with the onset of the Great Depression, which led to a sharp contraction in output as global demand and prices collapsed. During World War II, sugar production per capita recovered as international demand revived and wartime conditions stabilized export

markets, although output did not fully return to its pre-Depression peak.

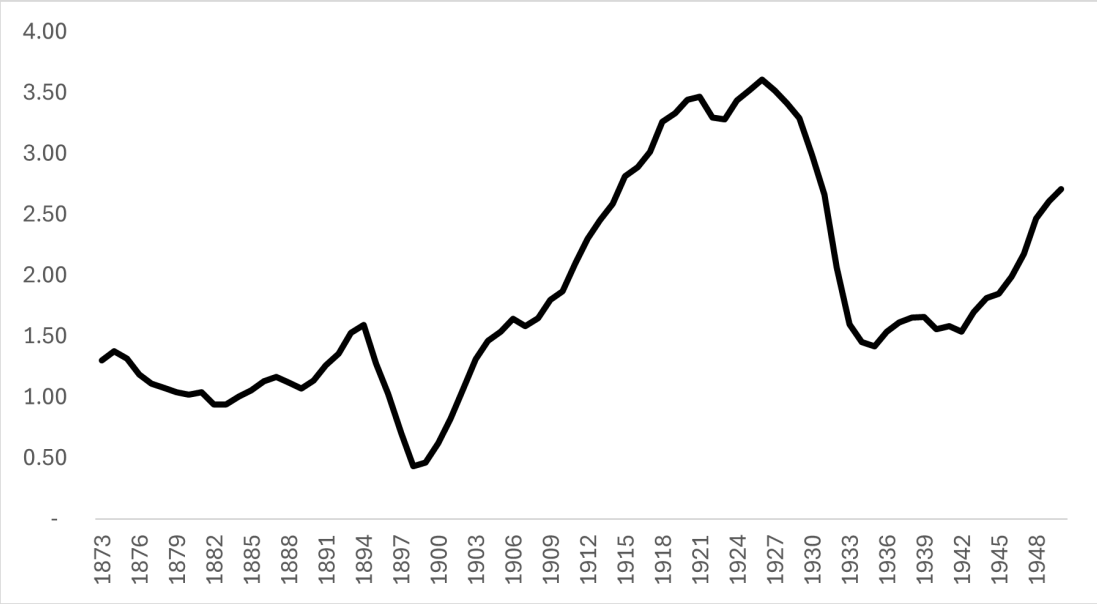

FIGURE 5: CUBA SUGAR OUTPUT PER CAPITA INDEX (1900=100, 4 YEARS ROLLING AVERAGE)

American corporations expanded Cuba's sugar output by increasing the scale and capital intensity of production, combining large landholdings with modern industrial processing. They invested heavily in centrales—large, centralized sugar mills equipped with advanced machinery—along with rail links, port facilities, and credit arrangements that ensured a steady flow of cane to the mills and reliable access to export markets. This model favored concentration and vertical coordination, as control over mills was often linked to control over surrounding cane lands and transport networks. Firms such as the Cuban American Sugar Company, United Fruit Company, and the American Sugar Refining Company exemplify how American corporate investment and managerial capacity facilitated economies of scale and drove the expansion of sugar production in the early twentieth century (Ayala 1999).

The Great Depression marked a severe turning point for Cuba's sugar economy. The collapse of international demand and the sharp fall in sugar prices reduced export earnings and undermined the financial viability of many mills and plantations. Production contracted as credit dried up, investment was postponed, and firms sought to limit losses through shutdowns and shorter milling seasons.

2.6 Colombia: Oil and the Formation of an Informal Empire

The origins of the oil industry in Colombia can be traced back to the second half of the 19th century, when—inspired by the rise and consolidation of the oil industry in Pennsylvania—several adventurers

explored the north of the country, albeit with limited success and with a significant production. The first steps in the development of the oil industry occurred in 1905 with the granting of two private concessions, de Mares and Barco, in the Santander region (east of Colombia), which borders Venezuela. This geographic proximity has led some observers to consider it an extension of the Venezuelan oil region around Lake Maracaibo.

The entrepreneurs behind those concessions were essentially middlemen without the financial resources to actually extract oil. They likely aimed to resell the concessions to foreign companies, which is precisely what happened in 1919 with de Mares concession, when the Tropical Oil Company- TOC, a branch of the Standard Oil Company—SOC, acquired it. The company initiated its activities in 1922 and began refining operations in 1923. In 1924, the Andean National Corporation, another subsidiary of the SOC, began constructing a pipeline to transport oil from Santander to Cartagena. It was inaugurated in 1926, thereby completing the necessary infrastructure to enable large-scale oil exports.

The geopolitics of the period played a significant role in the development of the oil industry, which foreign firms largely drove. In the late 1910s, Colombia was still grappling with the political and economic ramifications of Panama's secession in 1903, which the United States had supported. During the administration of President Marco Fidel Suárez (1918–1921), the Colombian government sought to restore diplomatic relations with the United States, culminating in the ratification of the Thomson-Urrutia Treaty in 1921, initiating a period of *informal empire*. The treaty, ratified by the United States Senate on 20 April 1921, provided Colombia with financial compensation of $25 million in reparation. Those resources were directed toward transportation infrastructure and broader modernization efforts, such as the establishment of the Banco de la República (Central Bank of Colombia) and the Superintendencia Bancaria (Banking Regulatory Administration) in 1923, but also significantly enhanced Colombia's integration into international financial markets.

The relationship between the Thomson-Urrutia Treaty and the development of Colombia's oil industry has been extensively documented in the literature (Parks 1935; Lael 1987; Durán and Bucheli 2017). According to (Durán and Bucheli 2017), the Standard Oil Company (SOC) influenced the United States Senate's decision to ratify the Thomson-Urrutia Treaty due to its interest in Colombia's oil production prospects. These interests competed with those of the British, which is why SOC sought to influence the U.S. Department of State's decision to offer $20 million in reparations to Colombia for the separation of Panama in 1913—an agreement that the U.S. Senate would not ratify until nearly a decade later.

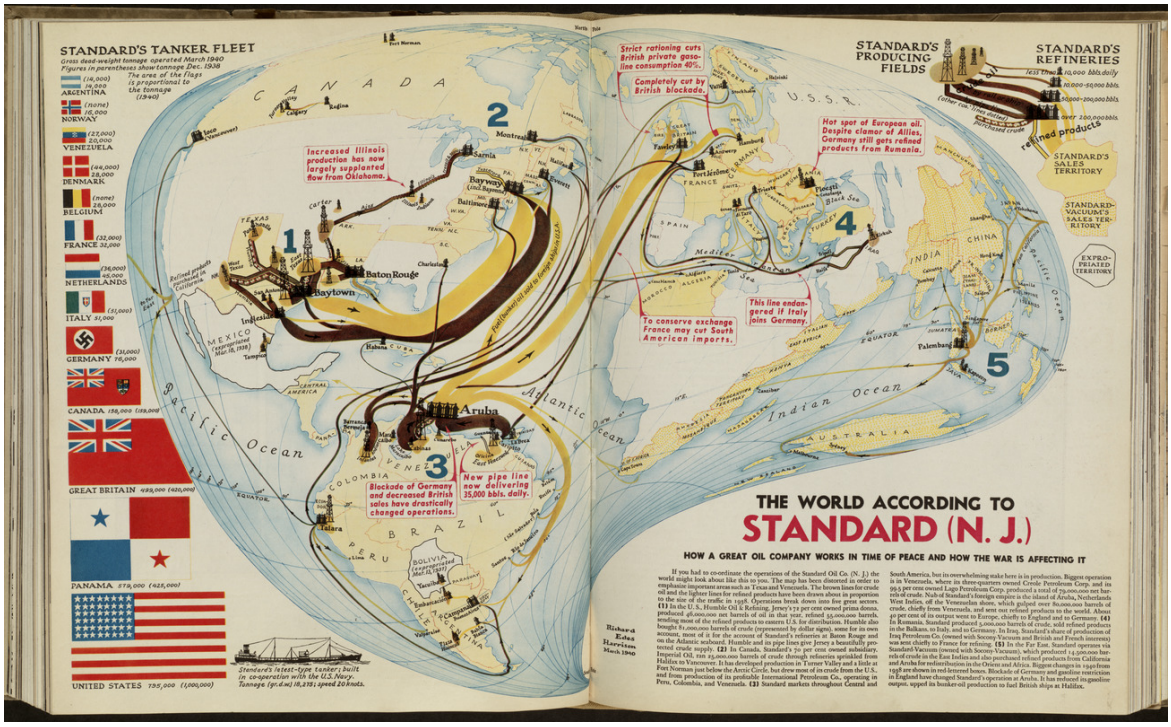

FIGURE 6: THE WORLD ACCORDING TO STANDARD (N.J.)
SOURCE: RICHARD HARRISON EDES. BOSTON PUBLIC LIBRARY

As shown in Figure 7, Colombia's oil production took off in 1926, when the Andean pipeline became operational. Important as this achievement was, Colombia's oil production stabilized in 1928 and, unlike the case of Venezuela, remained relatively constant in the following years. In fact, as shown in Figure 8, Colombia's oil production lagged far behind that of Venezuela during the initial decade of the industry in the region. This gap persisted throughout the remainder of the century and significantly contributed to the income disparity between the two countries.

Despite the SOC continued its operation until 1951, the development of the oil industry in Colombia underwent a major shift in 1931 with the enactment of Law 37, promulgated during the administration of President Enrique Olaya Herrera (1930–1934). This law introduced stronger state regulation—including preferential employment provisions for Colombians and a clearer regime of royalties and taxes—reflecting the broader wave of resource nationalism in the region that intensified after Mexico's 1917 constitutional settlement. However, the SOC via the TOC remained as the dominant player in the oil industry in Colombia until 1951, when Colombian government founded the Colombian Petroleum Corporation (ECOPETROL).

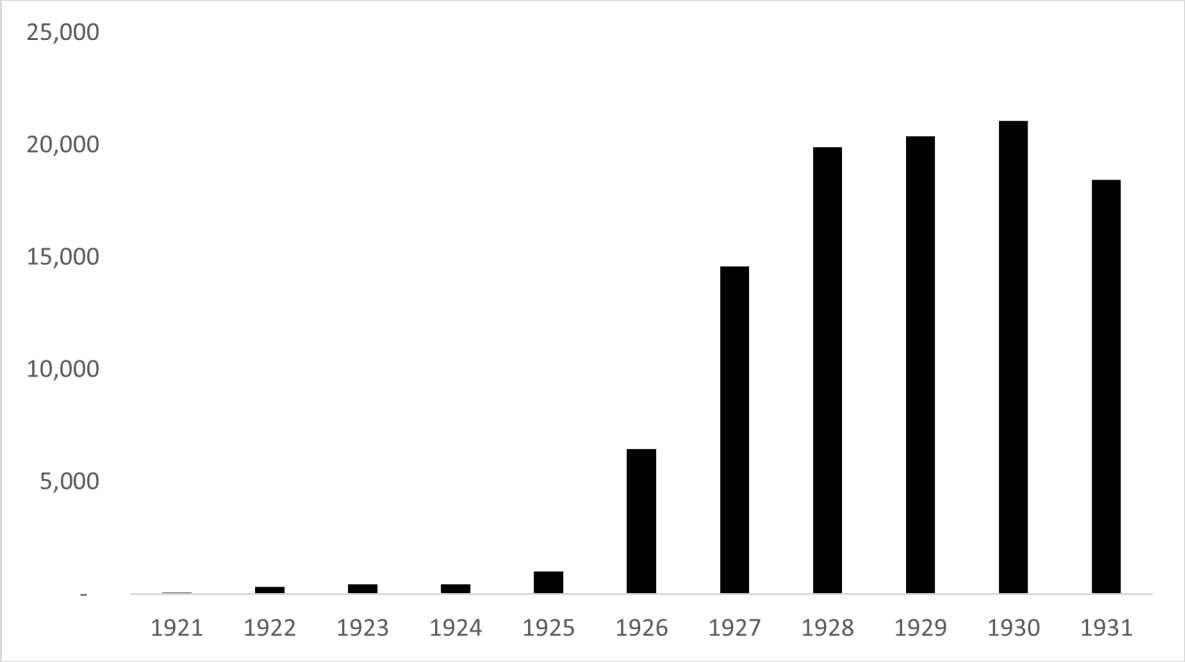

FIGURE 7: COLOMBIA OIL PRODUCTION (MILLION OF BARRELS)
SOURCE: ANUARIOS ESTADÍSTICOS DE COLOMBIA

2.7 Large-Scale Oil and Informal Empire in Venezuela

In December 1902, Germany, Britain, and Italy launched a decisive naval blockade of Venezuela, marking a turning point in the nation's history. This intervention was prompted by the government's default on European-owned railroad companies and concerns over the safety and rights of European nationals residing in the country. A volunteer corps was formed through a government initiative to defend the territory, as President Cipriano Castro (1899-1908) planned to oppose the invaders with a war to the death. [4]

Venezuela served as the "laboratory" in which Germany examined its drive toward the Caribbean basin—and its resulting clash with the self-appointed hemispheric guardian, the United States (Herwig 1986, p. 3). The United States stepped in as a mediator to resolve the crisis, and the involved parties signed the Washington Protocols, effectively lifting the naval blockade. Represented by the United States' Ambassador Herbert W. Bowen, Venezuela agreed to allocate 30% of its customs revenues to settle the claims of the European powers. These claims were fully resolved by January 1913, and by 1930, Venezuela had freed itself from external debt and the financial burdens inherited from the War of Independence

[4] "More than one hundred thousand Venezuelans went to the civil headquarters to seek weapons to join the patriotic army. Jewelry and money poured into the government's coffers. It is the largest army ever formed in the country." Rangel (1974)

in the early nineteenth century. The country completed the repayment of its external debt during the centenary of Simón Bolivar's death in 1930, while military expenditures reached 17.5% of the national budget McBeth (2002, p. 113).

At the time of the blockade, the Venezuelan government was also grappling with internal unrest: ´La Revolución Libertadora' —a civil war led by regional elites—posed a serious threat to national stability. The convergence of foreign pressure and domestic rebellion underscored Venezuela's fragility at the dawn of the twentieth century. However, the signing of the Washington Protocols marked a tipping point. With international tensions easing, internal opposition to President Cipriano Castro began to lose momentum. The rebellion was decisively crushed in July 1903 at the Battle of Ciudad Bolívar, following a siege led by General Juan Vicente Gómez. Peace exploded in Venezuela for the rest of the century Caballero (1998).

Due to the crisis, two significant doctrines emerged: the Roosevelt Corollary to the Monroe Doctrine and the Drago Doctrine. The former, articulated by President Theodore Roosevelt in his 1904 address to Congress, asserted the United States' right to intervene in the economic affairs of Caribbean and Central American nations that were unable to meet their international debt obligations. This policy aimed to prevent European powers from using force to collect debts, reinforcing U.S. hegemony in the Western Hemisphere. In contrast, the Drago Doctrine, formulated by Argentine Foreign Minister Luis Mara Drago, rejected the use of armed intervention by foreign powers to enforce the repayment of sovereign debt in the Americas.

This moment marked a pivotal moment in Venezuela's history, setting in motion a gradual transformation toward a more unified and modern state. This process would continue over the next four decades (McBeth 2001, p. 100). President Cipriano Castro and his ally Juan Vicente Gómez—often referred to as *Los Compadres* and originally from the same region of Tachira —devised a strategy to attract foreign investment by investing in infrastructure, establishing a professional military, and honoring Venezuela's foreign debt obligations. [5] These reforms not only stabilized the country's finances but also catalyzed a new political movement that ultimately facilitated Gómez's ascent to power McBeth (2001, p. 3)

As president, Juan Vicente Gómez (1908-1935) maintained cordial relations with foreign powers and international companies, aiming to prevent another blockade McBeth (2001, p.257). He recognized the strategic importance of the oil sector well before the industry was fully established in Venezuela, distributing informational pamphlets and engaging in confidential negotiations with foreign companies Mc-

[5]The majority of Venezuelan historians agree that the centralization of political power under the *Andean hegemony* was a process that temporally preceded the emergence of petroleum Rodríguez and Gomolin (2009)

Beth (2002, p 30). This proactive approach proved effective: oil companies were drawn not only by the promise of substantial petroleum reserves but also by Venezuela's favorable legal framework, relative political stability, and attractive contractual terms.

Under the rule of Juan Vicente Gómez, Venezuela became the world's second-largest oil producer, with exports increasing by an astonishing 790% between 1908 and 1929 McBeth (2002, pp. 1–4, 109). This oil boom significantly consolidated Gómez's political power, enabling him to maintain authoritarian control while enriching himself and his close associates Karl (1997a). Despite this dramatic growth in exports, oil accounted for only 4.6% of Venezuela's GDP by 1930, indicating that the country had yet to fully harness the broader economic potential of its petroleum wealth McBeth (2002, p. 129). Meanwhile, traditional exports declined in relative importance. For instance, by 1913 Colombia had surpassed Venezuela as the world's second-largest coffee exporter McBeth (2002, p. 117).

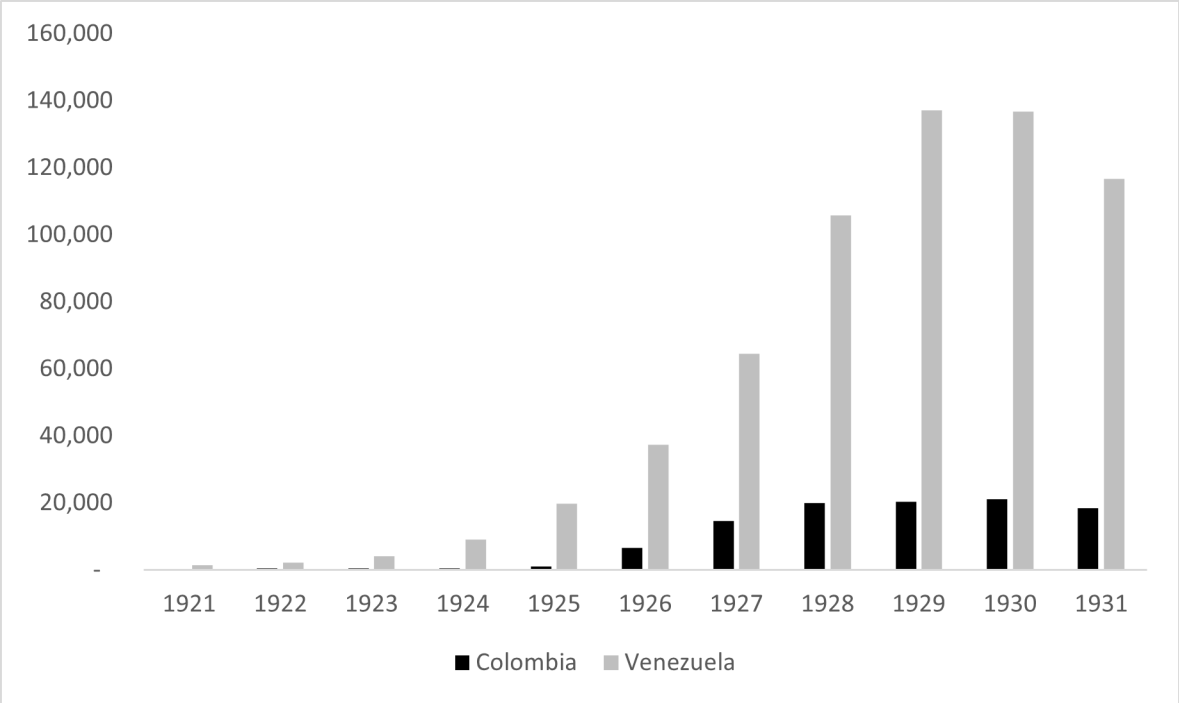

FIGURE 8: COLOMBIA AND VENEZUELA OIL PRODUCTION (MILLION OF BARRELS)
SOURCE: ANUARIOS ESTADÍSTICOS DE COLOMBIA

A milestone to attract oil investments was the 1909 Mining Code, which was more liberal than the former 1904; taxes were reduced to 1% of gross production, and customs duties were exonerated, but at the same time increased government supervision of mining activities McBeth (2002, p. 7). The objective was ' to increase the number of firms established' (Lisandro Alvarado, President of the Senate).' Alvarado said the Law reflected Gómez´s economic aspirations for the country because it would open a new investment

period, immigration, and roads. McBeth (2002, p. 7).

Colombia, which the oil fraternity viewed as a much more promising producer, found that the enactment of its 1919 Oil Law scared many prospective oil companies away. Venezuela was in an excellent position, offering favorable operating terms and the stability needed by oil companies McBeth (2002, p. 32).

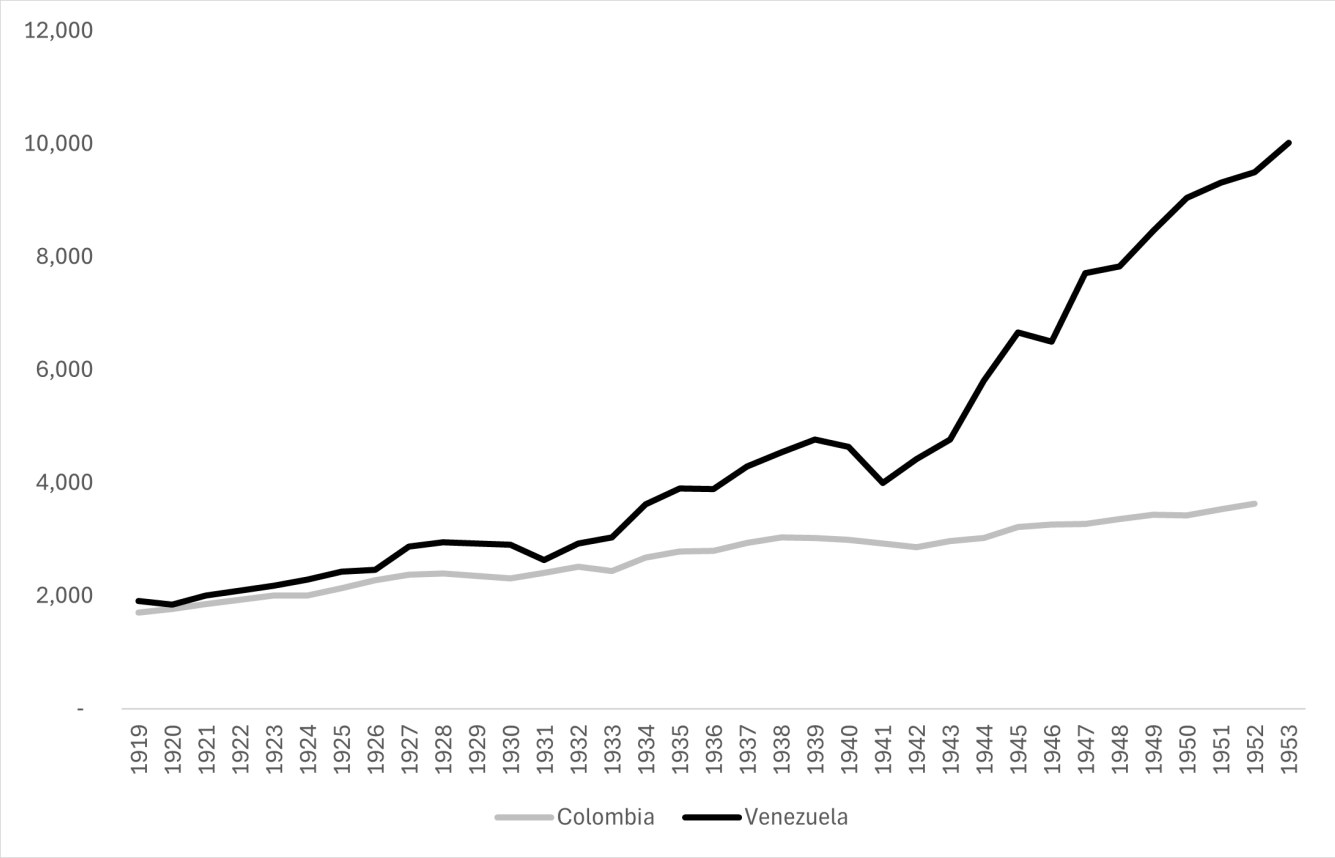

FIGURE 9: COLOMBIA AND VENEZUELA GDP PER CAPITA

Geoeconomics also played a role as well in the development of the oil industry. Maracaibo is closer to New York than Tampico (México), and the Dutch Islands in the Caribbean Sea were a haven for the Oil Companies. Logistics production problems, such as near-sea transport, were far fewer than those in the Middle East. Thus, Venezuela became part of a global strategy to control and market petroleum, as well as to punish hostile, revolutionary governments in Russia and Mexico by shifting production elsewhere Karl (1997b). The international oil situation benefited Venezuela dramatically after the First World War, with both the British and American governments actively promoting their oil companies to seek new oil supplies McBeth (2002, p. 323).

Creole Petroleum, a subsidiary of Standard Oil of New Jersey, was one of the principal foreign oil

firms operating in Venezuela, alongside the Royal Dutch/Shell group (McBeth 2002). During the early 1930s, Shell held a leading position in Venezuelan oil production, while the Standard Oil group—through Creole and Lago—expanded its influence and assumed a dominant role from the mid-1930s onward (McBeth 2009). Within this context of concentrated foreign corporate control, Creole's ambitions extended beyond oil extraction. In 1935, Nelson Rockefeller traveled to Venezuela to promote the diversification of Creole's activities into broader areas of economic development, and in 1939 he established the Compañía de Fomento Venezolano (CFV) as part of this strategy (McBeth 2002).

3 Empiral Strategy

Our empirical strategy relies on an error-correction model (ECM) framework to analyze the long- and short-run dynamics between commodity production and broader economic outcomes. The analysis covers seven countries—Argentina, Uruguay, Peru, Chile, Cuba, Colombia, and Venezuela—over the period 1850 to 1950. For several countries, multiple commodities are observed, so the cross-sectional unit of the panel is defined at the commodity–country level. As a result of data availability constraints, the panel is unbalanced, since not all commodities are observed for all years.

The dependent variable captures commodity performance and is measured either as output or exports, depending on data availability for each commodity–country pair. To ensure comparability across series, the output variable is normalized to 1900, or to the first year available in cases where the commodity was not yet produced in 1900. This normalization allows us to focus on relative dynamics rather than absolute levels. Table 3 summarizes the information used to construct the panel. Depending on data availability, the output variable corresponds either to commodity output or, when output data were unavailable, to exports.

Information from commodity output was obtained from Mitchell (1998), while information about commodity prices is from Jacks (2024). When output information was only available after 1900, it was normalized to the earliest available year, as in the case of petroleum production. Informal empire is measured through a deterministic indicator that takes the value of 1 when a foreign corporation is the key player in the production of the relevant commodity, and 0 otherwise. This sector-specific approach is preferable to aggregate, national measures of informal empire because external influence often operated through particular industries rather than across the entire economy. In many cases, foreign corporate control was concentrated in strategic export enclaves, while other sectors remained largely under do-

TABLE 3: COUNTRY, COMMODITY, AND ASSOCIATED FOREIGN CORPORATION

Country	Commodity	Output	Foreign Corporation	Period of Informal Empire
Argentina	Meat	Exports	River Plate Fresh Meat Company	1883–1946
Argentina	Corn	Exports	Central Argentine Railway	1882–1932
Argentina	Wheat	Exports	The Buenos Aires Great Southern Railway	1865–1932
Argentina	Wool	Exports	The Buenos Aires Great Southern Railway	1865–1947
Argentina	Petroleum	Output	None	–
Chile	Saltpeter	Output	Liverpool Nitrate Company	1882–1913
			Anglo–Chilean Consolidated Nitrate Corporation	1926–1933
Chile	Coal	Output	None	–
Chile	Wheat	Output	None	–
Chile	Copper	Output	Kennecott Copper Corporation	1915–1964
Chile	Silver	Output	None	–
Colombia	Coffee	Exports	None	–
Colombia	Petroleum	Exports	Tropical Oil Company (Troco)	1922–1951
Cuba	Sugar	Exports	U.S.–Cuba Reciprocity Treaty (1902/1903)	1902–1959
Peru	Sugar	Output	None	–
Peru	Copper	Exports	Cerro de Pasco Copper Corporation	1902–1970
Peru	Silver	Output	Cerro de Pasco Copper Corporation	1902–1970
Peru	Cotton	Exports	None	–
Uruguay	Wheat	Output	None	–
Uruguay	Wool	Exports	Central Uruguay Railway Company	1878–1949
Uruguay	Meat	Exports	Liebig's Extract of Meat Company	1865–1932
Venezuela	Cocoa	Output	None	–
Venezuela	Petroleum	Exports	Shell / SOC / Gulf	1922–1971

mestic ownership and management. For example, in Chile the nitrate economy relied heavily on foreign corporations, whereas coal production remained mainly in national hands; similarly, in Colombia foreign corporations were central to oil, but not to coffee, which was the country's main export and largely organized through domestic producers and institutions.

The error-correction panel framework addresses concerns related to endogeneity and limited time-series length. By modeling both long-run relationships and short-run adjustments within a panel setting, the ECM reduces bias arising from simultaneity between commodity performance and foreign corporate presence, while exploiting variation across commodity–country units. In addition, given the relatively small number of observations available for individual time series, a panel ECM is preferable to country-specific vector error-correction models, as it increases estimation efficiency by pooling information across units. This makes the approach particularly suitable for historical data characterized by sparse coverage and structural breaks.

The exclusion of additional explanatory variables reflects both conceptual and data considerations. The empirical framework is designed to capture the core mechanisms through which informal empire operated—namely, international price dynamics and foreign corporate control—while avoiding over-parameterization in a historical setting characterized by limited and uneven data coverage, where parsimonious specifications are generally preferred (Hendry 1995).

3.1 Results

Table 4 reports the main results from the panel error-correction models and the associated long-run cointegration estimates. Panel A shows that the error-correction term is consistently positive and statistically significant across most specifications, indicating the presence of a stable long-run relationship and meaningful short-run adjustment dynamics. The short-run coefficients suggest that price movements play a limited and unstable role, while the informal empire indicator is positive and statistically significant in the full sample and in several exclusion exercises. Notably, the short-run effect of informal empire weakens when Venezuela or Cuba are excluded, indicating that these cases contribute disproportionately to the estimated short-run dynamics.

Panel B presents the long-run cointegration results, which reveal a strong and robust negative relationship between output and the price index across all specifications. This finding is consistent with the idea that adverse price movements constrain long-run commodity performance. The stability of the long-

run coefficients across alternative samples suggests that the cointegrating relationship is not driven by any single country or commodity.

TABLE 4: ERROR-CORRECTION MODELS AND COINTEGRATION – MAIN SPECIFICATIONS

	(1) All	(2) No Arg.	(3) No Ven.	(4) No Cuba	(5) No Petroleum
Panel A: Short-run ECM (dependent variable: ΔOutput_Index)					
ΔPrice_index	13.173	16.389	0.095	13.707	0.202*
	(8.336)	(11.443)	(0.137)	(8.816)	(0.112)
IE_Index	5.874*	7.746*	0.015	5.902	0.134**
	(3.565)	(4.612)	(0.133)	(4.049)	(0.063)
ECT_{t-1}	0.0913***	0.0913***	0.0002	0.0913***	0.0001
	(0.0002)	(0.0001)	(0.0005)	(0.0002)	(0.0004)
Panel B: Long-run cointegration (dependent variable: Output_Index)					
Price_index (long run)	−96.499***	−114.483***	−1.397***	−103.841***	−1.403***
	(35.141)	(43.254)	(0.502)	(37.428)	(0.144)
R^2 (long-run FE)	0.005	0.005	0.005	0.005	0.059
Observations (ECM)	1 645	1 293	1 561	1 564	1 536
Countries	22	17	20	21	19

Notes: Panel A reports within-estimator error-correction models with country fixed effects; robust standard errors clustered by panel unit in parentheses. Panel B reports fixed-effects cointegration regressions of Output_Index on Price_index for the corresponding sample. $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.10$.

Table 5 presents a robustness check that restricts the estimation to sector-specific samples, distinguishing between plantation crops (coffee, cacao, and sugar), minerals, and petroleum. This exercise strengthens the empirical strategy by testing whether the main results are driven by aggregation across heterogeneous commodities or instead persist within more homogeneous sectors. Given that informal empire often operated through specific industries rather than entire economies, estimating separate models by sector provides a more demanding test of the underlying mechanism and reduces concerns that the baseline results are driven by compositional effects.

The results confirm substantial heterogeneity across sectors while preserving the core findings. In the plantation sector, the informal empire indicator remains positive and statistically significant in the short run, suggesting that foreign corporate presence affected adjustment dynamics even in agricultural exports, while the long-run cointegration results show a strong and significant negative relationship with prices. For minerals, both the short-run error-correction term and the informal empire indicator are statistically significant, indicating faster adjustment toward long-run equilibrium and reinforcing the importance of foreign corporate control in extractive industries. In the petroleum sector, the coefficients

TABLE 5: ROBUSTNESS CHECKS: SECTOR-SPECIFIC ERROR-CORRECTION AND COINTEGRATION MODELS

	Plantation Only	Minerals Only	Petroleum Only
Panel A: Error-Correction Models (Short Run)			
ΔPrice Index	-0.1170 (0.1034)	0.7916 (0.4630)	646.49 (917.99)
	[1.1318]	[1.7100]	[0.7043]
	0.2587	0.0882†	0.4841
IE Index	0.11736 (0.03657)**	0.14591 (0.08799)†	33.29 (28.82)
	[3.2095]	[1.6583]	[1.1553]
	0.00148**	0.0982†	0.2527
ECT_{t-1}	-0.000155 (0.000593)	0.000086 (0.000039)*	0.1036 (0.03527)**
	[-0.2618]	[2.2433]	[2.9368]
	0.7936	0.0255*	0.0047**
Panel B: Fixed-Effects Cointegration Models (Long Run)			
Price Index	-2.07881 (0.26029)***	-2.20456 (0.36712)***	4681.8 (1515.4)**
	[-7.9867]	[-6.0051]	[3.0895]
	3.13e-14***	4.84e-09***	0.0030**
Observations	300	351	109
Countries	4	4	3
R^2 (Long Run)	0.178	0.094	0.134
Adj. R^2 (Long Run)	0.166	0.084	-0.510
F-statistic (Long Run)	63.79***	36.06***	9.545**

Notes: Panel A reports within-estimator error-correction models for restricted samples of plantation crops, mineral commodities, and petroleum products, respectively. Panel B reports the corresponding fixed-effects cointegration regressions. Robust standard errors (clustered by panel) in parentheses; t-statistics in brackets. $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.10$, $^{\dagger}p < 0.15$.

are larger and more volatile, reflecting the small sample size and high capital intensity of oil production, but the error-correction term remains significant and the long-run price effect is strong. Overall, these sector-specific results support the baseline conclusions by showing that the relationship between informal empire, adjustment dynamics, and commodity performance is not confined to a particular commodity group, while also highlighting meaningful differences in how these mechanisms operated across sectors.

Table 6 presents the results from estimations using output per capita as the dependent variable. This specification accounts for differences in population size and demographic change, providing a clearer measure of production intensity and facilitating more meaningful comparisons across countries and commodity sectors. The long-run cointegration estimates show a consistently negative and statistically significant relationship between prices and per-capita export output across all specifications, indicating that adverse price movements are associated with lower long-run export performance once population is taken into account. This relationship remains stable when Argentina, Venezuela, or Cuba are excluded, suggesting that the long-run results are not driven by a single country.

The short-run dynamics further highlight the role of informal empire. The informal empire index

TABLE 6: ERROR–CORRECTION MODELS FOR PER–CAPITA EXPORT OUTPUT

	Model 1 All Countries	**Model 2** No Argentina	**Model 3** No Venezuela	**Model 4** No Cuba
Long–Run Cointegration (FE)				
Price_index	-76.82^{**}	240.22^{***}	-0.76^{**}	-82.82^{***}
SE	(23.53)	(46.87)	(0.25)	(25.06)
R^2	0.0065	0.0218	0.0060	0.0070
Short–Run ECM (Robust)				
dPrice_index	7.33	462.92^{***}	-0.064	7.80
SE	(5.52)	(93.19)	(0.106)	(5.84)
IE_Index	0.992^{***}	416.72^{***}	0.028	0.915^{***}
SE	(0.265)	(77.55)	(0.190)	(0.283)
ECT_lag	0.0413^{***}	0.0179	-0.127^{***}	0.0412^{***}
SE	(0.00028)	(0.0245)	(0.0146)	(0.000265)
Observations	1633	1303	1571	1574
Countries	22	21	20	21
Years (min–max)	33–100	1–17	36–101	34–101

Notes: All models estimated with the within–estimator. Robust standard errors (clustered by country) shown in parentheses. The cointegration vectors come from fixed–effects regressions of long–run output on price. $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.10$.

is positive and statistically significant in the full sample and in the specifications excluding Argentina and Cuba, indicating that foreign corporate dominance is associated with stronger short-run adjustments in per-capita export performance. By contrast, the coefficient becomes small and insignificant when Venezuela is excluded, underscoring the importance of large-scale oil exporters for the estimated effect. The error-correction term is significant and correctly signed in most specifications, confirming convergence toward the long-run equilibrium. Overall, the per-capita results reinforce the main findings by showing that the effects of informal empire operate not only through aggregate output, but also through export intensity relative to population size.

Table 7 reports robustness checks based on error-correction models estimated separately by commodity group. The estimates show a consistent and statistically significant role for informal empire across all three sectors. The coefficient on the Informal Empire Index is positive and significant in plantation crops, minerals, and petroleum, with substantially larger magnitudes in extractive sectors, particularly petroleum. The error-correction term is negative and significant in all cases, confirming convergence toward a long-run equilibrium and validating the ECM specification. By contrast, short-run price effects are small and statistically insignificant, reinforcing the view that sector-specific corporate control, rather than short-run price fluctuations, plays a central role in shaping adjustment dynamics. Overall, these robustness checks support the main conclusion that informal empire exerted a meaningful and systematic influence on commodity performance across different sectors.

The loss of statistical significance when Venezuela is excluded reflects the exceptional scale and con-

TABLE 7: ROBUSTNESS CHECKS: ERROR–CORRECTION MODELS BY COMMODITY GROUP

	Plantation	Minerals	Petroleum
Short-run: ΔPrice Index	-0.0079 (0.0448)	1.732 (1.035)*	65.52 (30.92)*
Informal Empire (IE Index)	0.03547 (0.00264)***	0.05836 (0.08851)	10.8047 (0.3402)***
ECM Term (ECT_{lag})	-0.05783 (0.00322)***	-0.08894 (0.03395)**	0.04029 (0.00301)***
Observations	300	202	119
Countries	4	2	3
Model Type	FE–ECM	FE–ECM	FE–ECM

Notes: Table reports within–estimator error–correction models for restricted samples by commodity group. Robust standard errors (clustered by panel) in parentheses. $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.10$.

centration of foreign corporate control in the Venezuelan oil sector, combined with greater heterogeneity and smaller effect sizes in other country–commodity cases. This pattern suggests not the absence of informal empire elsewhere, but rather that Venezuela represents its most economically consequential manifestation. The results indicate that informal empire had its most clearly identifiable and economically consequential impact in Venezuela, where foreign corporate dominance in oil operated at large scale. While similar mechanisms existed in other countries and sectors, their effects appear weaker, more heterogeneous, and less precisely estimated in the available historical data.

4 Informal Empire and the *golden age* Venezuela's economic growth

Venezuela stands out within the sample as an exceptional case in the operation of informal empire. Unlike other countries, foreign corporate control in Venezuela was concentrated in a single, capital-intensive sector, oil, that rapidly became the dominant source of exports and fiscal revenue. This combination of scale, concentration, and strategic importance helps explain why the empirical effects of informal empire are most clearly identified in the Venezuelan case.

In the early twentieth century, neither Colombia nor Venezuela had yet begun their transition to modern economic growth. After a long period of instability and civil wars that characterized the nineteenth century, both countries finally achieved a minimum level of political centralization by the turn of the century and experienced their economic take-off in the 1920s. Figure 10 shows Venezuela's GDP per capita relative to that of Colombia. Venezuela entered the twentieth century with a relatively higher income per capita. However, between 1900 and 1920, there was a gradual convergence between the two countries.

Table 10 highlights a *golden age* of economic growth in Venezuela between the 1930s and the early 1960s. Rather than implementing policies associated with the import-substitution industrialization model, as many major Latin American economies did, Venezuela continued to follow an export-led growth model

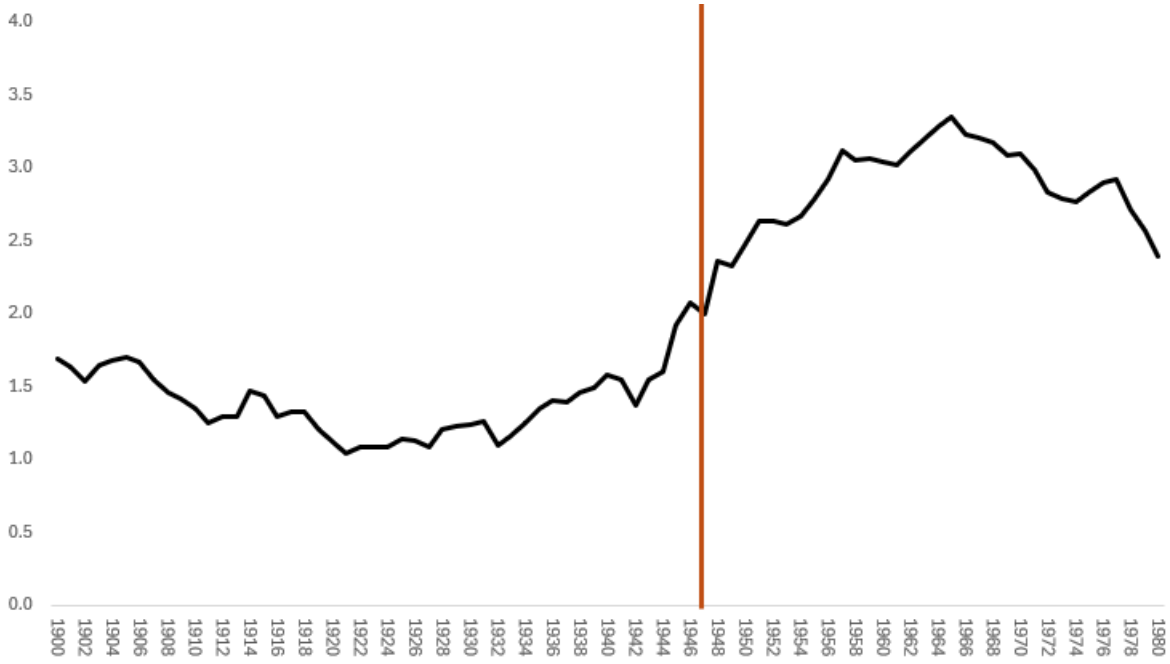

FIGURE 10: VENEZUELA GDP RELATIVE TO THAT OF COLOMBIA

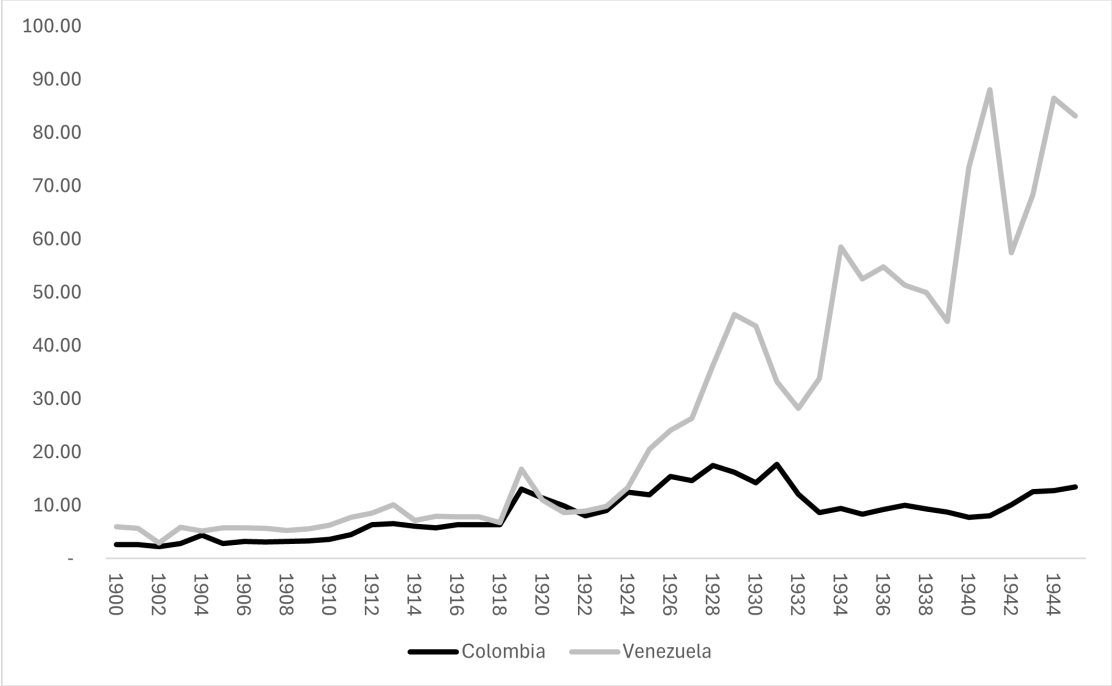

FIGURE 11: COLOMBIA AND VENEZUELA EXPORTS PER CAPITA 1900-45
SOURCE: MITCHELL (1998)

centered on the oil industry until the mid-1950s. Venezuela's distinctive pattern of economic growth within Latin America can be identified by contrasting it with Colombia, which was also initially subject to an informal empire centered on oil but did not persist under that model after the Great Depression.

We complement the analysis of Venezuela's divergence within the Latin American context with a synthetic control model, which quantifies the impact of the policy decision to remain under an informal empire regime centered on oil and to avoid the implementation of import-substitution industrialization policies.

We present two models in which Venezuela is the treated unit, and nine other major Latin American economies compose the donor pool. The first model uses 1945 as the treatment year following the results of the structural break test. The second model uses 1931, when the Great Depression escalated from a crisis to a major depression following the Chicago stock market crash. In that year, several major economies in the region—such as Argentina, Brazil, and Colombia—implemented capital controls, and it is commonly regarded as the beginning of the ISI model in Latin America. Even though Mexico and Peru did not implement capital controls, Venezuela's situation was unique in Latin America, as the country did not carry the burden of external debt, which substantially conditioned Latin American policymakers decisions during the interwar period.

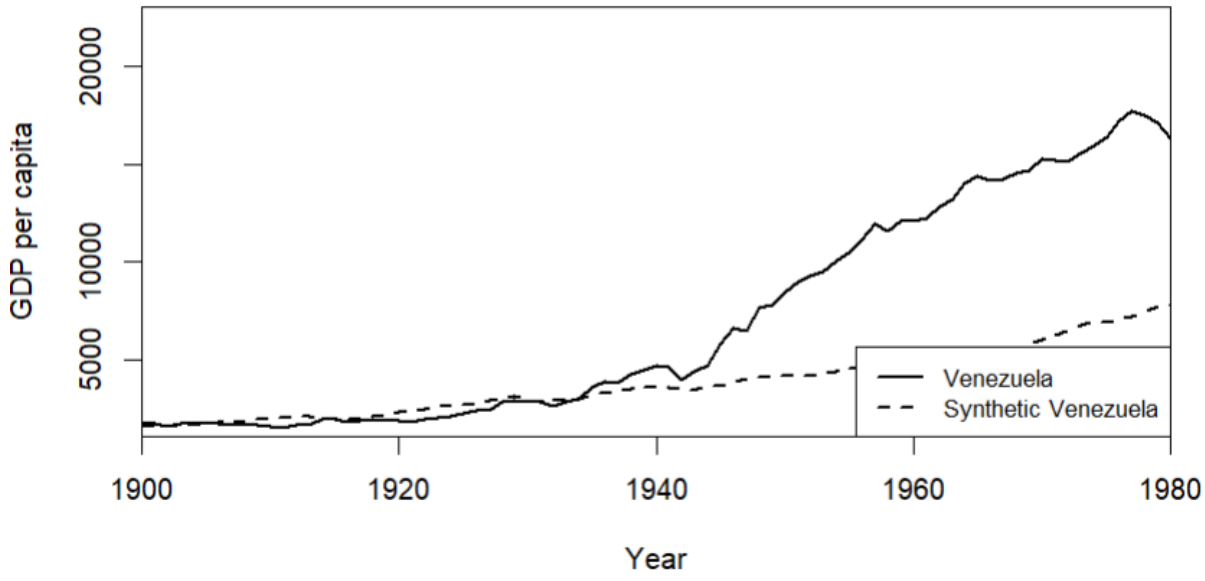

FIGURE 12: SYNTHETIC VENEZUELA 1931

Figures 12 and 13 present the results of the synthetic control models with treatments in 1931 and 1945, respectively. Likewise, Table 8 present the weights and MSPE ratios. The results presented in Table 8 show that both treatments had a significant impact; however, the MSPE ratio is higher when the treatment is

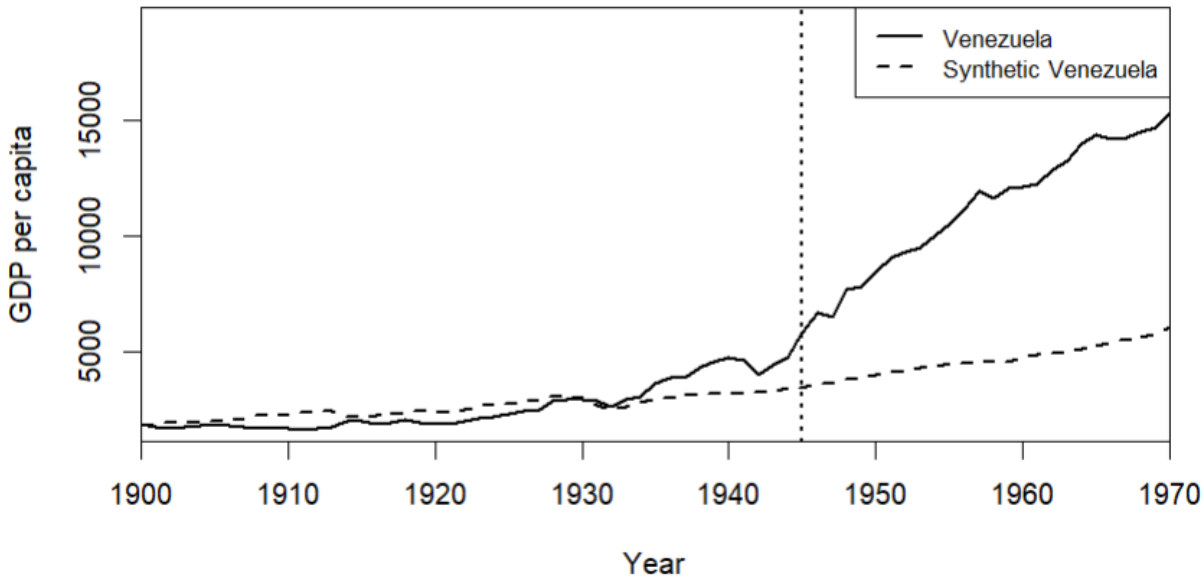

FIGURE 13: SYNTHETIC VENEZUELA 1945

set in 1931. This finding is consistent with the hypothesis of Venezuela's unique position at the peak of the Great Depression. Without the pressure of external debt and the urgency for liquidity, Venezuelan policymakers were able to resist adopting the economic policies associated with the ISI model.

Country	**Treatment 1931**	**Treatment 1945**
Argentina	0.01	0.17
Brazil	0.18	0.00
Bolivia	0.03	0.00
Chile	0.01	0.00
Colombia	0.52	0.83
Ecuador	0.05	0.00
Mexico	0.02	0.00
Peru	0.02	0.00
Uruguay	0.17	0.00
Pre-treatment MSPE	34,036	311,414
Post-treatment MSPE	46,887,847	59,117,355
MSPE Ratio	1,378	190

TABLE 8: SYNTHETIC CONTROL WEIGHTS AND MSPE METRICS FOR VENEZUELA UNDER TWO TREATMENT YEARS (1931 AND 1945).

Figures 14 and 15 present the placebo test for both models. While the endogenous structural break test identifies 1945 as the turning point in Venezuela's relative GDP per capita, our synthetic control analysis finds the strongest divergence when treatment is assumed to occur in 1931. This suggests that the foun-

dations of Venezuela's divergence may have been laid earlier. The policy decisions in the management of the Great Depression settled a latent pathway for economic divergence that fully materialized around 1945.

Table 8 shows that, regardless of whether the treatment year is 1931 or 1945, Colombia received the highest weight in the donor pool. This confirms that Colombia and Venezuela had similar economic performance prior to the Great Depression. When the treatment year is set to 1931, Colombia accounts for 52% of the synthetic Venezuela estimate; when the treatment is set to 1945, that weight increases to 83%. Following Venezuela's economic divergence in 1945, the synthetic results suggest that Colombia serves as a strong counterfactual for Venezuela.

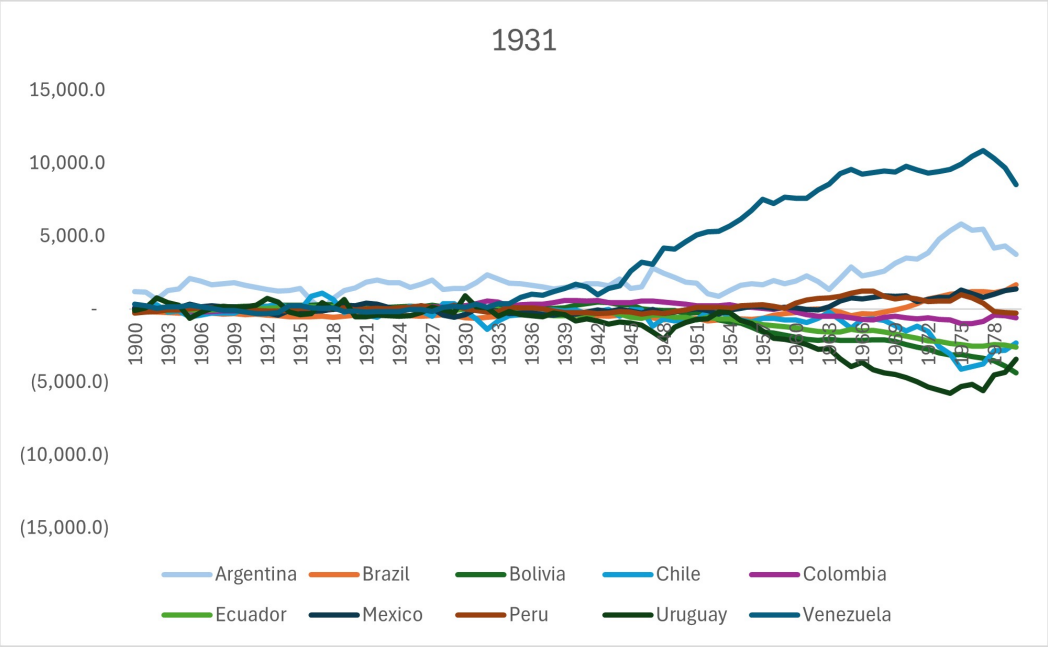

FIGURE 14: PLACEBO TEST WITH TREATMENT IN 1931

4.1 Oil Industry, economic take-off, and state capacity in Venezuela

World War II marked another turning point for Venezuela's oil industry, dramatically enhancing its strategic and economic importance. Venezuela emerged as a vital alternative supplier as the German navy disrupted oil supply routes from the Persian Gulf to Allied nations. During the war's most intense years, the country provided over 80% of Britain's fuel needs, with distribution facilitated through Shell Guerra (2021). This surge in global demand for Venezuelan oil translated into substantial fiscal gains. The fall of Paris to Hitler in 1940 symbolically severed Venezuela's superficial Francophilia, creating a vacuum that

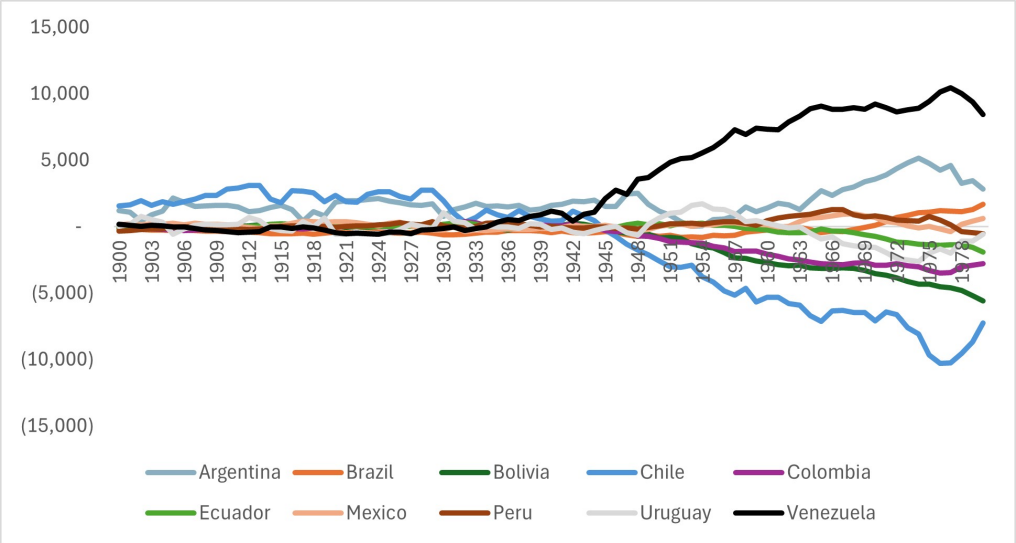

FIGURE 15: PLACEBO TEST WITH TREATMENT IN 1945

American institutions were eager to fill. With support from President Medina (1936-1945) and Education Minister Arturo Uslar Pietri, and funding from oil companies and the United States Information Agency (USIA)—a government body devoted to propaganda—the founding of the Centro Venezolano Americano (CVA) in 1941,CVA became a strategic platform for cultural diplomacy and soft power.

By 1943, a new income tax was introduced, requiring oil companies to contribute a larger share of their profits to the National Treasury. As a result, government revenues nearly doubled—from Bs. 329 million in 1940 to Bs. 660 million in 1945. Remarkably, during this period, Venezuela avoided contracting external public loans, and by 1945, its internal debt stood at just Bs. 25 million—less than 4% of ordinary fiscal income. The war not only elevated Venezuela's geopolitical relevance but also laid the foundation for a more robust and self-sustaining national economy.

The Venezuelan government promoted the 50:50 law under the leadership of President Rómulo Gallegos (1948) and later implemented it during the administration of Carlos Delgado Chalbaud (1948-1950). This law marked a significant shift in Venezuela's oil policy, giving the country greater control over its resources and setting a precedent for other nations.

The 50:50 law established an equal profit-sharing model between the Venezuelan government and foreign oil companies. It was a groundbreaking move in the global oil industry, setting a precedent for other oil-producing nations. The law mandated that 50% of the profits from oil production would go to the Venezuelan government, while the oil companies would retain the remaining 50%. Additionally, foreign companies established export refineries in the country. It marked a shift in the balance of power,

giving Venezuela greater control over its natural resources and increasing its revenue from oil exports, which boosted national income and fueled rapid internal economic growth.

This model inspired similar arrangements in other oil-producing countries, particularly in the Middle East. The 50:50 law was a stepping stone toward Venezuela's eventual nationalization of its oil industry in the 1970s. It also marked a defining moment in the oil strategy of Venezuela's first democratic government (1945–1948), setting a precedent for future resource governance in the democratic period (1958-1998) in which governments strongly advocated for the revision of existing oil concessions and contracts under the slogan "No More Concessions." [6]

The divergence in GDP performance between Venezuela and Colombia (10) became increasingly pronounced between 1945 and 1958, a period marked by Venezuela's first democratic experiment under Rómulo Gallegos and the end of Andean military hegemony under Marcos Pérez Jiménez. By the early 1960s, the number of Americans in Venezuela formed the largest postwar American expatriate community in the world.

However, greater economic convergence between the two countries is evident during the subsequent democratic period, when Venezuela finally adopted Import Substitution Industrialization (ISI) policies after 1958.[7]

4.2 A Debt-Free Country and the Management of the Great Depression

After World War I, U.S. bankers and investors rapidly moved to displace the relatively strong British position in Latin America, established in the late nineteenth century (Stallings 1987). In the context of this lending boom, Latin American countries experienced a large inflow of U.S. capital, which financed not only direct foreign investment but also government debt, opening the potential of a new era of debt-led growth. Among those countries which received large capital inflows were Colombia and Venezuela, which by 1924 registered similar levels of external debt. However, by 1927, the paths of public debt had diverged between the two countries. While Colombia's external debt accelerated between 1927 and 1928, Venezuela followed a sound fiscal policy that allowed it to reduce and fully repay its external debt by

[6] The democratic parties viewed many of these agreements as detrimental to Venezuela's national interests, having been negotiated under authoritarian regimes with limited transparency—specifically during the dictatorships of Juan Vicente Gómez (1908–1935) and Marcos Pérez Jiménez (1952–1958). Both regimes were accused of pursuing oil policies that heavily favored foreign interests, particularly U.S. and European oil companies, granting them generous concessions with minimal state oversight.

[7] The new political leadership in Venezuela set the country in a path of state-led, big push natural resource based heavy industrialization that focused in the development of state-owned enterprises in steel, aluminium, petrochemical, oil refining and hydroelectric power Di John (2009).

1930. By the early stages of the Great Depression, Venezuela had become an external debt–free country, an exceptional case not only in Latin America but also in the world economy.

Contrasting the cases of Colombia and Venezuela highlights the factors behind the relatively greater impact of the informal empire in Venezuela compared with the rest of Latin America. The Thomson-Urrutia Treaty and the consolidation of the TOC production not only placed Colombia on the global oil production map but also integrated the country into international capital markets, which experienced large capital inflows during the *Roaring Twenties*, when government foreign borrowing accelerated. The increase in government debt coincided with the beginning of oil exports and its significant expansion. By 1928, Colombia was the world's eighth-largest oil producer (Durán and Bucheli 2017), and until 1951, when the Standard Oil Company's concession ended, nearly all oil produced and exported in Colombia was managed by SOC.

The integration of Latin American countries, including Colombia, into U.S. capital markets was facilitated by the so-called *Kemmerer Missions*, which was motivated by the influx of financial resources that followed the ratification of the Thomson-Urrutia Treaty. These were a series of financial advisory missions led by the influential American economist Edwin Kemmerer, aimed at modernizing monetary and financial systems in Latin America following an orthodox economic approach. By recommendation of the State Department, Kemmerer Mission was implemented in Colombia in 1923.

Similar missions were later implemented in countries such as Chile (1925), Ecuador (1926), Bolivia (1927), and Peru (1931); however, with the exception of Chile, their impact was considerably more limited. The Kemmerer missions, and the reforms they inspired, served as a *seal of approval* (Drake, 1989), intended to signal to international investors that Colombia was committed to credible and disciplined monetary and fiscal policies, thereby ensuring the country's capacity to repay its external debt. In other words, the Kemmerer missions can be seen as a *discipline* mechanism in the informal empire association.

While Venezuela responded to the U.S. capital inflow boom of the 1920s by facilitating oil investment and repaying external debt, Colombia increased its government borrowing, which, like much of the region, ended in default in the early 1930s following the shock of the Great Depression. Similar to most major countries in the region after the Great Depression, Colombia shifted toward import-substitution industrialization (ISI) policies aimed at fostering domestic industry through tariffs, subsidies, and state-led planning.

Venezuela, by contrast, systematically repaid its external debt obligations and, in doing so, avoided

the capital flight and sudden stops in credit that severely affected many other Latin American countries during this period. This proactive policy not only insulated Venezuela from the worst financial dislocations of the Great Depression but also had lasting consequences for its economic trajectory and institutional response to external shocks. Table 9 shows that Venezuela's trajectory of external government debt was distinctive in the Latin American context during the 1920s. Rather than adopting a debt-led growth strategy, Venezuela chose to repay its external obligations using oil revenues. By doing so, Venezuela mitigated the worst effects of the Great Depression and reduced the incentives to adopt the policy framework associated with import-substitution industrialization.

TABLE 9: EXTERNAL GOVERNMENT DEBT PER CAPITA (USD)

Year	Argentina	Chile	Colombia	Peru	Venezuela
1922	24.90	57.14	–	–	–
1923	23.69	61.29	–	–	–
1924	26.88	66.10	3.41	2.88	4.47
1925	22.53	62.13	2.96	3.41	4.33
1926	31.81	61.26	2.65	4.46	3.95
1927	34.74	58.81	2.28	4.68	3.60
1928	36.33	73.43	1.87	6.95	3.20
1929	41.03	75.20	4.67	15.40	2.87
1930	39.29	88.14	8.64	17.26	2.53
1931	36.22	96.03	8.24	14.96	2.05
1932	30.61	109.29	8.94	13.53	1.27

Source: Total External Government Debt from Global Financial Data. Population from the Maddison Project Dataset.

The Latin American shift toward Import-Substitution Industrialization (ISI), which came to define much of the region's economic strategy for several decades, is closely connected to how countries responded to the Depression-era crisis. As extensively documented in the literature, the origins of ISI in Latin America were rooted in the external shocks of the early 1930s (Bulmer-Thomas 2003; Luzardo-Luna 2019). The collapse of international trade, the rise of global protectionism, and the abrupt contraction in capital inflows significantly diminished the appeal of outward-oriented growth strategies. These conditions prompted many governments to turn inward, adopting policies aimed at fostering domestic industry through tariffs, subsidies, and state-led planning.

However, Venezuela's relative insulation from the Depression's most severe financial consequences meant that it faced neither the same balance-of-payments pressures nor the same urgency to restructure its economic model. By avoiding the deep external shock that triggered policy overhauls elsewhere, Venezuela lacked the political and economic incentives to fully embrace ISI. Instead, it continued to pur-

sue an export-led growth model centered on the booming oil sector, a strategy that remained largely intact through the 1940s and into the early 1950s. In this way, Venezuela's distinctive response to the interwar crises not only set it apart from its regional peers but also shaped the timing and nature of its eventual industrialization policies.

5 Conclusions

Informal empire functioned as a critical, complementary precondition for economic growth in countries such as Venezuela, shaping its trajectory during the first half of the twentieth century. The interaction between a highly capital-intensive staple—oil—and a sufficient degree of political centralization, combined with the decision to repay rather than accumulate external debt, helps explain the rapid expansion of Venezuela's energy sector. By contrast, Colombia, despite geographical proximity and partial similarities in resource endowments, failed to capitalize on this opportunity due to political fragmentation and reliance on foreign borrowing, which produced a more vulnerable, debt-dependent development path. In Chile, informal empire proved less effective primarily because high levels of external debt constrained economic policy, despite the country's relatively early political centralization.

Our empirical strategy employs an error-correction model (ECM) to examine the long- and short-run dynamics between commodity production and broader economic outcomes across seven countries—Argentina, Uruguay, Peru, Chile, Cuba, Colombia, and Venezuela—over the period 1850–1950. The results indicate that the economic effects associated with informal empire were strongest and most consequential in Venezuela, where foreign corporate dominance in oil operated on a large scale.

A key distinguishing feature of the Venezuelan case is that, unlike most countries in the region, it did not pursue a debt-led growth strategy during the 1920s; instead, it used oil revenues to reduce and ultimately repay its external public debt. While similar mechanisms were present elsewhere, their effects appear weaker, more heterogeneous, and less precisely estimated in the historical data, particularly where growth was financed through external borrowing.

Venezuela's early integration into the global oil economy, supported by U.S. investment and reinforced by domestic political consolidation, allowed it to sustain an export-led growth model without falling into the debt-led patterns that constrained countries such as Colombia and Chile. As a result, informal empire proved more durable in Venezuela, surviving the Great Depression without a fundamental rupture

in the relationship between the state and foreign corporations. Unlike other major countries in the region, Venezuela did not substantially alter its approach toward foreign firms during the interwar crisis, allowing informal empire arrangements to persist well beyond the 1930s

References

Acemoglu, D. (2002). Technical change, inequality, and the labor market. *Journal of economic literature*, 40(1):7–72.

Acemoglu, D., Johnson, S., and Robinson, J. A. (2001). The colonial origins of comparative development: An empirical investigation. *American economic review*, 91(5):1369–1401.

Acemoglu, D., Johnson, S., and Robinson, J. A. (2005). Institutions as a fundamental cause of long-run growth. *Handbook of economic growth*, 1:385–472.

Acemoglu, D., Robinson, J. A., and Torvik, R. (2020). The political agenda effect and state centralization. *Journal of Comparative Economics*, 48(4):749–778.

Amini, S. and Toms, S. (2021). Elite directors, london finance, and british overseas expansion: Victorian railway networks, 1860–1900. *The Economic History Review*, 74(2):496–521.

Ayala, C. J. (1999). *American Sugar Kingdom: The Plantation Economy of the Spanish Caribbean, 1898–1934*. University of North Carolina Press, Chapel Hill.

Besley, T. and Persson, T. (2011). *Pillars of prosperity: The political economics of development clusters*. Princeton University Press.

Blattman, C. and Miguel, E. (2009). Civil war. Working Paper 14801, National Bureau of Economic Research.

Brown, M. (2009). *Informal empire in Latin America: culture, commerce and capital*. John Wiley & Sons.

Bucheli, M. (2011). British multinationals in the argentine meat industry. *Business History*, 53(4):525–551.

Bucheli, M. (2014). *Bananas and Business: The United Fruit Company in Colombia, 1899–2000*. New York University Press, New York.

Bucheli, M., Ciravegna, L., and Saenz, L. F. (2023). The octopus that shrank: A historical analysis of how multinationals address policy and contractual uncertainty in a global value chain. *Strategic Management Journal*, 44(13):3289–3323.

Bulmer-Thomas, V. (2003). *The Economic History of Latin America since Independence*. Cambridge University Press, Cambridge, 3 edition.

Caballero, M. (1998). *Las crisis de la Venezuela contemporánea*. Monte Ávila Editores, Caracas.

Campbell, G., Gallagher, A., and Grossman, R. S. (2024). Remote investing in latin america, 1869–1929. Working Paper 11562, CESifo. Available at SSRN: `https://ssrn.com/abstract=5073275`.

Cavaca, I. B. and Meurer, R. (2021). International monetary policy spillovers: Linkages between u.s. and south american yield curves. *International Review of Economics & Finance*, 76:737–754.

Centeno, M. A. (2002). *Blood and Debt: War and the Nation-State in Latin America*. Penn State Press.

Collier, S. and Sater, W. F. (2004). *A History of Chile, 1808–2002*. Cambridge University Press, Cambridge.

Cortés Conde, R. (1997). *The Political Economy of Argentina in the Twentieth Century*. Cambridge University Press, Cambridge.

Darwin, J. (2009). *The Empire Project: The Rise and Fall of the British World-System, 1830–1970*. Cambridge University Press, Cambridge.

Della Paolera, G. and Taylor, A. M. (1999). Economic recovery from the argentine great depression: Institutions, expectations, and the change of macroeconomic regime. *The Journal of Economic History*, 59(3):567–599.

Di John, J. (2009). *From Windfall to Curse?: Oil and Industrialization in Venezuela, 1920 to the Present*. Penn State Press, University Park, PA.

Dincecco, M. and Katz, G. (2016). State capacity and long-run economic performance. *The Economic Journal*, 126(590):189–218. Accessed: 2025-10-22.

Dornbusch, R. and de Pablo, J. C. (1990). Some debt history. In Sachs, J. D., editor, *Developing Country Debt and Economic Performance, Volume 2: The Country Studies – Argentina, Bolivia, Brazil, Mexico*, pages 54–63. University of Chicago Press.

Durán, X. and Bucheli, M. (2017). Holding up the empire: How colombian political elites formed the legal backbone of a commercial empire in the 1920s. *Business History Review*, 91(4):751–777.

Ferns, H. S. (1960). *Britain and Argentina in the Nineteenth Century*. Oxford University Press, Oxford.

Finch, H. (2005). *Uruguay since 1870*. Cambridge University Press, Cambridge.

Flores Zendejas, J. (2020). Explaining latin america's persistent defaults: an analysis of the debtor–creditor relations in london, 1822–1914. *Financial History Review*, 27(3):319–339.

Gallagher, J. and Robinson, R. (1953). The imperialism of free trade. *The Economic History Review*, 6(1):1–15.

Gennaioli, N. and Rainer, I. (2007). The modern impact of precolonial centralization in africa. *Journal of Economic Growth*, 12(3):185–234.

Gross, S. (2023). Introduction: The foundations of soft power and informal empire. In *Export Empire*. Cambridge University Press, Cambridge.

Guerra, J. (2021). *Anatomía de una catástrofe: Las políticas económicas de los Gobiernos venezolanos 1920–2020*. Editorial Dahbar, Caracas.

Hall, R. E. and Jones, C. I. (1999). Why do some countries produce so much more output per worker than others? *The Quarterly Journal of Economics*, 114(1):83–116.

Hendry, D. F. (1995). *Dynamic Econometrics*. Oxford University Press, Oxford.

Herbst, J. (2000). *States and Power in Africa: Comparative Lessons in Authority and Control*, volume 149. Princeton University Press, second edition edition.

Herwig, H. H. (1986). *Germany's Vision of Empire in Venezuela, 1871–1914*, volume 475. Princeton University Press.

Hopkins, A. G. (1994). Informal empire in argentina: An alternative view. *Journal of Latin American Studies*, 26(2):469–484.

Jacks, D. S. (2024). From boom to bust: Real commodity prices from 1850. ICPSR 198401, Inter-university Consortium for Political and Social Research [distributor].

Kaminsky, G. L. and Vega-García, P. (2014). Varieties of sovereign crises: Latin america 1820–1931. NBER Working Paper 20042, National Bureau of Economic Research.

Karl, T. L. (1997a). *The Paradox of Plenty: Oil Booms and Petro-States*, volume 26. University of California Press.

Karl, T. L. (1997b). *The paradox of plenty: Oil booms and petro-states*, volume 26. Univ of California Press.

Lael, R. L. (1987). Struggle for ratification: Wilson, lodge, and the thomson–urrutia treaty. *Diplomatic History*, 11(2):123–138.

Lewis, C. M. (1983). *British Railways in Argentina, 1857–1914: A Case Study of Foreign Investment*. Athlone Press, London.

Luzardo-Luna, I. (2019). *The Price of the Regeneration: How Colombia Missed the Belle-Époque, 1870–1914*, pages 11–37. Springer International Publishing, Cham.

Marichal, C. (1989). *A Century of Debt Crises in Latin America: From Independence to the Great Depression, 1820–1930*. Princeton University Press, Princeton, NJ.

Matus, M., Reyes, N., Miller, R., et al. (2021). Historia económica de chile desde la independencia.

Mazzuca, S. L. (2010). Access to power versus exercise of power: Reconceptualizing the quality of democracy in latin america. *Studies in Comparative International Development*, 45(3):334–357.

McBeth, B. S. (2001). *Gunboats, Corruption, and Claims: Foreign Intervention in Venezuela, 1899–1908*. Greenwood Press, Westport, Conn.

McBeth, B. S. (2002). *Juan Vicente Gómez and the Oil Companies in Venezuela, 1908–1935*, volume 43. Cambridge University Press.

McBeth, B. S. (2009). Venezuela's nascent oil industry and the 1932 u.s. tariff on crude oil imports, 1927–1935. *Revista de Historia Económica / Journal of Iberian and Latin American Economic History*, 27(3):427–462.

Méndez-Chacón, E. and Van Patten, D. (2022). Multinationals, monopsony, and local development: Evidence from the united fruit company. *Econometrica*, 90(6):2685–2721.

Michalopoulos, S. and Papaioannou, E. (2013a). National institutions and subnational development in africa *. *The Quarterly Journal of Economics*, 129(1):151–213.

Michalopoulos, S. and Papaioannou, E. (2013b). Pre-colonial ethnic institutions and contemporary african development. *Econometrica*, 81(1):113–152.

Miller, R. M. (2014). *Britain and Latin America in the Nineteenth and Twentieth Centuries*. Routledge, London.

Mitchell, B. R. (1998). *International Historical Statistics: Americas 1750–1993*. Palgrave Macmillan, London, 1 edition.

North, D. C. (1990). *Institutions, Institutional Change and Economic Performance*. Cambridge University Press, Cambridge.

North, D. C. and Thomas, R. P. (1973). *The Rise of the Western World: A New Economic History*. Cambridge University Press, Cambridge.

Paquette, G. (2013). The construction of imperial britain's informal empire in latin america, c.1800–1870. *The Historical Journal*, 56(2):363–388.

Parks, T. (1935). *Colombia and the United States, 1765–1934*. Russell & Russell, New York.

Parra-Pérez, C. (1947). Carta. Venezuela, en *Nelson A. Rockefeller Personal Papers, Countries, Series E: Venezuela*, Rockefeller Archive Center.

Pastor, G. (2012). Peru: Monetary and exchange rate policies, 1930–1980. IMF Working Paper WP/12/166, International Monetary Fund.

Rangel, D. A. (1974). *Los andinos en el poder*. Vadell hermanos.

Reinhart, C. M., Rogoff, K. S., and Savastano, M. A. (2003). Debt intolerance. *Brookings Papers on Economic Activity*, 2003(1):1–74.

Rock, D. (1999). Argentina under mitre: Porteño liberalism in the 1860s. *The Americas*, 56(1):31–63.

Rodríguez, F. and Gomolin, A. J. (2009). Anarchy, state, and dystopia: Venezuelan economic institutions before the advent of oil. *Bulletin of Latin American Research*, 28(1):102–121.

Stallings, B. (1987). *Banker to the Third World: U.S. Portfolio Investment in Latin America, 1900–1986*. University of California Press, Berkeley, CA.

Stone, I. (1977). British direct and portfolio investment in latin america before 1914. *Journal of Economic History*, 37(3):690–722.

Taverne, E. L. (2014). *El proceso de construcción estatal en Chile: hacienda pública y burocracia (1817-1860)*. Dirección de Bibliotecas Archivos y Museos.

Taylor, A. M. (2003). Foreign capital in latin america in the nineteenth and twentieth centuries. NBER Working Paper 9580, National Bureau of Economic Research.

Vizcarra, C. (2009). Guano, credible commitments, and sovereign debt repayment in nineteenth-century peru. *The Journal of Economic History*, 69(2):358–387.