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The Pearl of the Empire? Private Capital and Concession

Rubber in Indochina, 1910-1945

Simon Bittmann (CNRS-SAGE) and Sebastian García Cornejo (PSE-EHESS)

Abstract:

In this paper, we provide an estimate of “colonial returns” in the French Empire, using a case study on Indochinese rubber plantations between 1910 and 1945. While French colonial capitalism is often distinguished from British and Dutch cases as purely mercantilist and speculative, we show that capital investments and profits were sustained and long-lasting for a number of firms in this context. Relying on an exhaustive list of listed and non-listed companies, along with capital stock, equity prices, surfaces, tonnage, and labor usage, we explain how rubber became, in less than three decades, the colony’s primary crop in export value. In doing so, this paper makes three contributions to the economic history of late colonialism. First, we provide a comparison to recent studies of “colonial returns” in South East Asia: as a late-comer to the industry, Indochina benefited from innovations implemented elsewhere, and remained insulated from global limitations on production during the 1920s and 1930s, along with a rise in the global demand. Second, we show that the main driver of capital flows was a new iteration of the concession regime – the *mise en valeur* -, which provided firms a lenient access to land and unfree, contract labor in exchange for strict equity and cultivation clauses. As a result, Indochinese plantations had much larger surfaces than elsewhere and a more limited share of smallholder production, but also experienced less speculation than in other parts of the Empire. Third, we show that much of the gains happened after 1935, following a massive support from the French government during the Great Depression and a shift of exports from France to the U.S. These gains persisted well into the war, following a wave of concentration at the benefit of a small number of firms; pointing to the long, postcolonial legacies of colonial capital.

1. Introduction and research question

Did French colonial capitalism ever experience an “imperialistic¹” phase, where capital exports turned overseas investment opportunities into sustained profits? For the Second Colonial Empire, the prevailing hypothesis remains that of a “parasitic mercantilism”: French capital remained essentially confined to commercial extraction, benefiting established trade companies (*sociétés de traite*) engaged in the plundering of resources and exploitation of labor (Coquery-Vidrovitch 1975, Coquery-Vidrovitch 2001, Marseille 1984, Bairoch 1988, Dormois and Crouzet 1998), or capital subscriptions tied to speculative “bluff” (Jacob and Koerner 1972, Marseille 1984, 165-167²). Investments were never “serious” or “productive”, and profits mostly stemmed from a “de facto monopoly” secured by a few firms on the import of manufactured goods and export of primary commodities (Suret-Canale 1962, 201) - making it overall “hard to see how the empire really made economic sense” (Fitzgerald 1988). Rather, by providing a “situational rent” to “the *patronat* the most retrograde”, twentieth-century colonies supposedly “anchored [French capitalism] in the XIXth century” (Thobie et al. 1991, II, 141), or, as phrased by Dormois and Crouzet (1998), the Empire was “uneconomic in the short-term and unprofitable in the long”. This “archaic and Malthusian vision of French colonial imperialism” (Coquery-Vidrovitch 1975) - a singularity that would set apart French colonial capitalism from Dutch and British trajectories - has been little explored in the past decades, let alone challenged by empirical work.

¹ While discussing the various theories of imperialism lies beyond the scope of this paper, the literature commonly refers to the “Hobson-Lenine hypothesis” to emphasize two basic traits: capital exports (colonial and foreign) as a result of diminishing domestic returns around the turn of the twentieth century, and labor exploitation through lower wages for indigenous workers. In the French case, these predictions have been famously challenged by Marseille (1984), who showed that investments in the colonies started before 1914, and that industrialization remained very limited, at least before 1945. Here, we rely on a more minimal definition of “imperialism”, tied to exports of financial capital channeled through banks, and industrial groups, rather than purely commercial firms, with the support of the colonial state. We stand closer to the intuitions developed by Hilferding (1910), despite his overemphasis on the covert power of “finance capital”.

² This conclusion thus provides a strange meeting ground for Marxist and liberal economic historians, looking to emphasize the speculative, and non-productive nature of colonial investments. Famously, the notion of “bluff” was central to Marseille’s argument (1984), allowing him to reconcile the massive rise in capital exports during the interwar, with his blanket rejection of theories of “imperialism”. As Marseille wrote, “the wave of capital subscriptions of the years 1900-1930 was but an illusion. If capital was indeed ‘exported’, from the metropole, it never ‘implanted’ on the ground and neither did it ever disrupt backward economies”. Here we argue that investments were substantial and extractive, and that they did carry long lasting transformations of local and metropolitan economies.

Following Cogneau (2023 412-413), we argue that the role of private capital in the Empire has been largely underestimated for the period ranging from 1918 to the independences, especially for areas such as Indochina, North Africa, the Pacific, or Madagascar³; partly because of an overemphasis on aggregate trade balances at the expense of capital returns (Cogneau et al. 2024). On top of lacking consistent data, this established narrative suffers from three main limitations: *geographic* – with a restricted focus on sub-Saharan Africa -, *temporal* – mostly limited to the pre-1914 era, and *sectorial* – with trade being overemphasized at the expense of other, more capital-intensive activities such as mining, banking or plantations. Our paper thus revisits and challenges the hypothesis of a “financial burden” (Cogneau et al. 2024), from the point of view of capital returns, through a triple focus shift, by studying rubber plantations in Indochina between 1918 and 1945. As Brocheux and Hémerly (2009, 152; 170) have suggested, “of all the French colonies, Indochina was without a doubt the most profitable” yet there is still no “satisfactory evaluations of the tides of capital that irrigated the Indochinese economy up until 1945”, and “no serious surveys” of the profits and failures of Indochinese corporations (see also Cogneau 2023, 412). Was this colonial territory, commonly referred to as the “pearl of the Empire” profitable, and why?

More generally, this paper contributes to a growing literature dedicated to colonial returns in the twentieth century, with a recent focus shift from Africa to South East Asia (Buelens and Frankema 2013, 2016, Rönnbäck and Broberg 2019, Rönnbäck et al. 2022): research dedicated to colonial rubber in Malaysia and East Sumatra (under British and Dutch rules) thus provides relevant comparative counterfactuals for Indochinese plantations. On top of offering a French counterpoint, we suggest a sectorial approach to colonial capital: rather than comparing profits levels for samples of companies, we build an exhaustive list of rubber firms from plantation data, along with detailed firm-level information. Tracking the complete ecology of firms thus allows us to study the distribution of capital, profits, total surface and cultivated surface among individual companies, making possible to disentangle the main drivers of survival. Despite a growing body of research, the literature on colonial returns still struggles to provide a clear story – with competing yet perfectly compatible narratives including labor exploitation, risk premiums and fluctuations in commodity prices -, partly

because of blanket, cross-sectorial approach that provides little insight into the actual behavior of firms often operating within different markets and policy contexts.

In the case of Indochina rubber, we argue that government support and intervention, through the concession policy regime known as “mise en valeur”, proves key in explaining not only investments and profit levels, but which firms experienced success throughout the period. In this system, the risk and cost of economic colonization was partially delegated to private actors. Amid growing concerns among metropolitan constituencies regarding the cost of colonial dependences, this was an explicit way to pass on some of the expenses and risk to the private sector (Rabut 1979, Cleary 2003, Veerer 2013, Cogneau 2023). In turn, this drastically reduced firms’ transaction costs: colonialism generally guaranteed the application of property rights overseas - allowing easy control over rent-generating assets, such as plantations or mines (Frieden 1994), along with the provision of infrastructure, access to labor, and protective tariffs – yet the financial devices used to incentivize capital exports have varied across space and time. For instance, during the early modern period, limited liability and joint-stock corporations facilitated the expansion of merchant capital towards colonial ventures (Gelderblom et al. 2013), and mortgage-backed securities were occasionally used to finance plantations economies through debt contracts (De Jong et al. 2023).

In twentieth century Indochina, a unique concession regime, at least within colonial political economies (Figart 1924, Rabut 1979, Persell 1983, Veerer 2013) explains both the use of equity over debt, and firms’ decision to invest in long-term endeavors (plantations required seven years before yielding results) despite strong short-term fluctuation cycles in commodity prices (Figure 1bis). In this system, the bulk of the production came for large firms with access to huge land parcels, authorized to import contract labor from North Vietnam, and benefiting from a preferential fiscal regime (Bittmann 2024a). In return, concessions entailed strong obligations to prevent moral hazard: these included capital requirements and strict cultivation clauses, meant to hamper speculation, with the French looking to prevent another failure as had occurred in French East Africa (Suret-Canale 1962, Rabut 1979, Coquery 1975, 2001). Additionally, the state provided critical support in case of crises, through subsidies and preferential export duties, especially as the Great Depression hit right at the time when many plantations were reaching maturity.

Overall, Indochinese rubber proved a cornerstone of imperial “mise en valeur”, with the crop experiencing an unprecedented boom after 1918, and capital flowing massively to

Cochinchina and later Cambodia to implant *heveas brasiliensis* on the fertile red soils lining the Mekong River (Brocheux and Hemery 2009, Aso 2018, Bittmann 2024a, Bittmann 2024b). Hence, contrary to a literature often presenting the French Empire as a “burden” rather than a “boon” (Marseille 1984, Fitzgerald 1988, Lefeuvre 2005), we show that French firms reaped large profits in Indochina, along with limited speculation, thanks to strong incentive tied to the concession regime and a facilitated access to unfree labor. Those were generated during a first, short period for pioneer firms, between 1925 and 1929, and then, despite a significant slump tied to both a commodity crisis in the late 1920s and the Great Depression, picked up steeply after 1934. This followed substantial financial and fiscal support provided by the French government – which bore no equivalent in the British and Dutch cases. However, those were unequally distributed among firms, as the specific political economy benefited a small number of large financial groups, leading to a wave of consolidation with many post-war ramifications.

2. Attracting metropolitan capital: Rubber concessions and the *mise en valeur*

During the phase of active colonization, between early military conquests of the 1850s and the incorporation of the Indochinese Union in 1887, most the “colonial development was founded on Cochinchinese rice” (Brocheux and Hémerly 2009, 116). Through a system of small lots leased by large landowners to highly indebted farmers, and Chinese and French businessmen handling most of the processing and exports, this “latifundia capitalism” supplied exports to both metropolitan France and other Asian countries (ibid, 121). Despite the gradual increase of French entrepreneurs, rice growing remained essentially traditional, with acreage expansion being driven by infrastructures such as irrigation canals and the dredging of rivers: between 1860 and 1928, rice export increased thirtyfold, making Indochina one the rare French colonies not strictly dependent on the metropolitan market for revenues (Nørlund 2000). In the late 1880s, coal mining became a second major source of growth, with Tonkinese anthracite deposits being exploited by a few large firms backed by banking capital (Brocheux and Hémerly 2009, 124, Jeoung 2018). Then, for the period stretching from 1897 until the end of the First World War, Sasges (2015) talks of an “Indochinese moment”, when

“an impressive programme of economic development” followed the expansion of the colonial foothold: through the cancellation of local government debt and new bond issues, the administration was able to expand its scope and decrease its dependence on Chinese enterprises, often dominant in key trades until the late nineteenth century. This upsurge in public expenditure was the primary engine of investment in both public works and “colonial conglomerates” (Brocheux and Hémery 2009, 129-131, Sasges 2015), with local entrepreneurs securing “officially monopolized” commodities or services such as tobacco, opium, alcohol, maritime transportation, public works, etc., and capital ^{3[OBJ]}.

However, after 1919, public spending gave way to private capital inflows as the main engine of investment in Indochina (Sasges 2015): while figures remain uncertain in the absence of “systematic studies”, estimates ranging from 1.4 to 5 billion 1914 francs have been suggested, with a peak reached between 1924-1930 (Robequain 1935, Brocheux et Hémery 2009, 158-159). While many of these established firms continued to operate and expand, some like Colonel Bernard’s Messageries Fluviales de Cochinchine eventually becoming key actors of rubber growing (Bittmann 2024b), they were supplanted by capital exports from mainland France, and new investors now mostly located in Paris. For this mainstream capital - including powerful industrial and financial actors, members of the French *patronat* and the *Haute Banque* (Brocheux and Hémery 2009, 167) - such a keen interest in colonial ventures was somehow unprecedented, and was tied to the “post-war commodity boom” as well as the general financial context. Sovereign debt markets were plummeting (Marseille 1984, Barreyre and Delalande 2020), a ban on foreign capital export was installed from 1918 to 1928 (Debeir 1976), restraining investment opportunities, as the Paris stock exchange was experiencing a late and unprecedented growth (Le Bris and Hautcoeur 2010, Riva and Lagneau-Ymonet 2015), and the Indochinese piaster provided “an investment shelter” for “metropolitan capital” in the face of several waves of franc devaluation (Brocheux and Hémery 2009, 140). However, such a gear-change in capital exports was also the direct consequence of *mise en valeur* and the “efforts by governments in Hanoi and Paris to promote the colony as a site of investment” (Sasges 2015)⁴, especially in the plantation economy. This regime had been originally designed by Albert Sarraut, Minister of Colonies during the late 1910s, and

³ Some of the most prominent trading figures of French colonialism, including Ulysse Pila, the Denis Brothers or A.R. Fontaine.

⁴ Crucially, as Coquery (2001) has shown, the concessionary system in Congo and East Africa never attracted mainstream bank and industrial (Parisian) capital, mostly benefiting already established trade companies.

implemented locally by Governors Alexandre Varenne and Pierre Pasquier until the mid-1930s, relied primarily on a modernized and bureaucratized iteration of the concession system (Persell 1983, Veese 2013).

Table 1: Capital social of colonial firms in Indochina, sector shares

Sector	1900	1914	1929	1939
A Plantations	0	3.3	13.5	12.9
A Rubber	0	12.7	17.4	19.8
A Food	0	2.3	3.6	4.1
B Railroads	6.9	12.7	4.8	4.3
B Water and Electricity	5.1	4.8	4.5	5.9
B Industry	7.9	2.3	3.3	4.5
C Banks	48.1	24.7	18.6	17.4
C Real Estate	0.6	0.2	1	0.9
D Mines	28.7	9.1	12.7	12.5
E Trade	0	12.7	13.2	11.2
E Transport	2.7	15.2	7.5	6.5

Through various reforms of the land attribution regime, a dual system was put in place, with free concessions under 300 hectares allocated by the local administration, and onerous ones generally sold on public auction, with applications being screened either by the Governor General or a dedicated body, the *Commission des concessions coloniales et du domaine*, for parcels larger than 2,000 hectares (and 4,000 hectares after 1928, Hue 1931 183-185, Cleary 2003). The goals were ambivalent, this since was both meant to foster the “small colonization” of French settlers akin to Algeria, but also, taking inspiration from the Dutch East Indies (DEI), to attract investors with the financial firepower necessary to deforest and plant on a large scale. Legally speaking, concessions were a pure colonial creation, with the state appropriating land deemed “vacant” as its “private domain”, and hence transferable to private actors (Fabre 2012). In Indochina, this gave rise to major tensions since most plantation potential came for large, unconquered forest and mountain areas in Cochinchina and Cambodia, populated by semi-nomadic ethnic groups. Those secured their livelihoods from harvesting wild crops and timber (Fabre 2012, Aso 2018, Bittmann 2024a), and practiced informal property rights often dismissed by the French cadastral administration. As a dual tool of “civilization” through the extension of property rights, and “economic development”, concessions therefore served both public and private colonial interests; with the state confiding its role to the provision of

export infrastructures (roads, ports, and railroads mostly after the completion of the Transindochinese in 1937) and policing in case of labor protests.

Yet following several scandals of sensational land grants in the Darlac region (Hue 1931, 168, Boucheret 2008), a major reform was adopted in 1928, with Alexandre Varenne establishing a stricter bureaucratic framework for *cessionnaires*. The new ordinances introduced minimal capital requirements for applicants, between 100 and 120 piasters per hectares, half of which needed to be raised from the start, and large concessions could only be granted by a commission in Paris. Additionally, firms had to abide by strict cultivation clauses: full exploitation was expected within seven years along with intermediate goals in order to obtain the full rights to 99 years lease. Sales or transfer of shares were forbidden for the first two years following attribution, and neither were companies allowed to go public until the full and complete attribution. Hence, paradoxically, in looking to prevent land speculation and ensure the flow of “serious” investments, the state also facilitated the rise of very large concessions, with smallholder production occupying a more limited fraction of production than in British Malaysia (BM) or the DEI (Cleary 2003, Bittmann 2024b).

This discrepancy was evident to many actors of the times (Hue 1931): in 1923, the *Agence Economique de l'Indochine* wrote back to a schoolteacher in the North of France, inquiring into the possibility of starting a rubber plantation in Indochina. The administration strongly discouraging him to do so, explaining that “contrary to Algeria and Tunisia for example, Indochina is not a country of good agricultural prospects for the small European colonization: only powerful corporations and big capitalists can contemplate growing the rich crops adapted to the local climate, and hence lucrative exportations”⁵. While concessions were attributed for a range of crops including rice, coffee, coprah, pepper, corn or tea, “rubber trees played the biggest role in the expansion of the Indochinese plantation economy and stood out as its greatest success” (Brocheux and Hémerly 2009, 126). To be sure, rubber growing had started with agronomic experiments in the late 1890s, yet large-scale cultivation begun in the 1910s and skyrocketed only after 1918, with a shift away from wild rubber in Africa and the Americas to plantation rubber in South East Asia (Figure 1). As a late bloomer in South Asia, Indochinese rubber was thus able to employ productivity-enhancing innovations tried elsewhere, such as budgrafts, seasonally alternated tapping and a Taylorian approach to

⁵ Letter from the Direction of Economics Affaires, Minister of Colonies, to Mr Branchereau, March 26, 1923. 4 AFFECO 33, Archives nationales de l'outre-mer (ANOM).

labor exploitation (Brocheux and Hémary 2009, 128, Bittmann 2024a), to a higher degree than its main regional competitors in BM and DEI.

Thus by 1940 the “Indochinese plantation was the most modern in Asia and the most competitive in the world” with respect to planting and tapping techniques (Brocheux and Hemery 2009, 128), a feat reflected in the evolution of the relative value of exports over the period (Figure 2): by 1942, despite the total rubber acreage (133,000 hectares) representing one eighteenth of rice growing (2,303,000 hectares), this crop generated about 33.4% of export values, compared to 44.9% for rice. In Malaysia and Sumatra the changes were much more incremental, with rubber coming slowly to the forefront of export earnings (Barlow and Drabble 1990, 189). Key in understanding this was a shift in the global demand for rubber, with the U.S. becoming the world primary importer during the 1920s (Figure 4), along with a rise in domestic automobile production. This is directly observable for Indochina during the 1930s (Figure 3): as we will see, the rise in production and company profits corresponded to this transfer of exports from metropolitan France to U.S. (and global markets), further suggesting that the discussion about “colonial returns” must be decoupled from that about the Empire as a “financial burden” (Cogneau 2023, 402).

Figure 1: Rubber production in the world

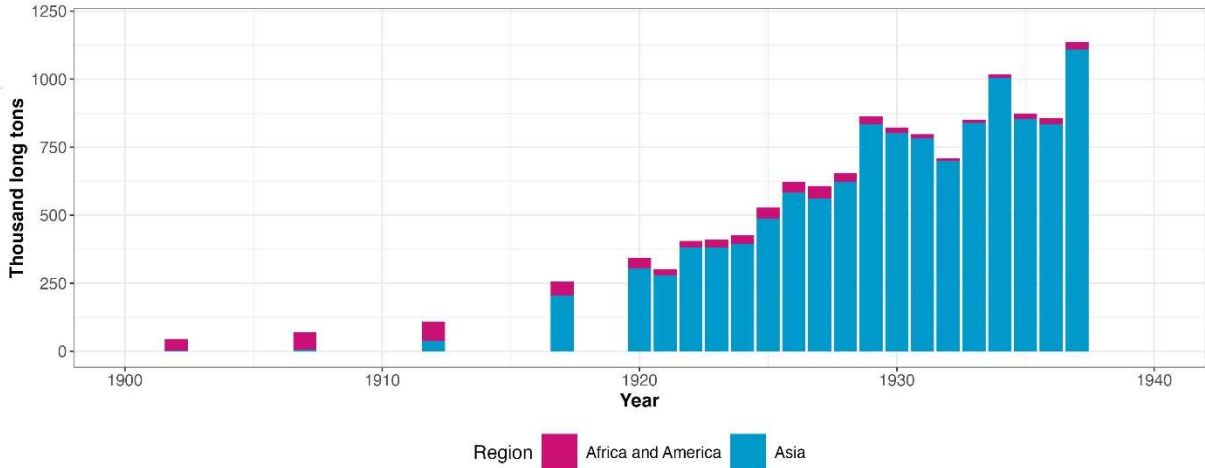
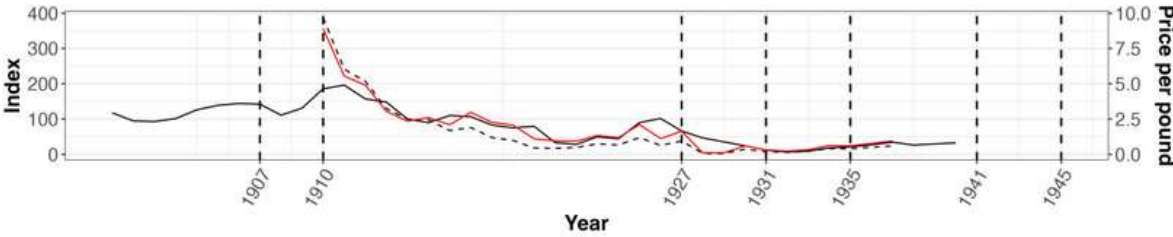
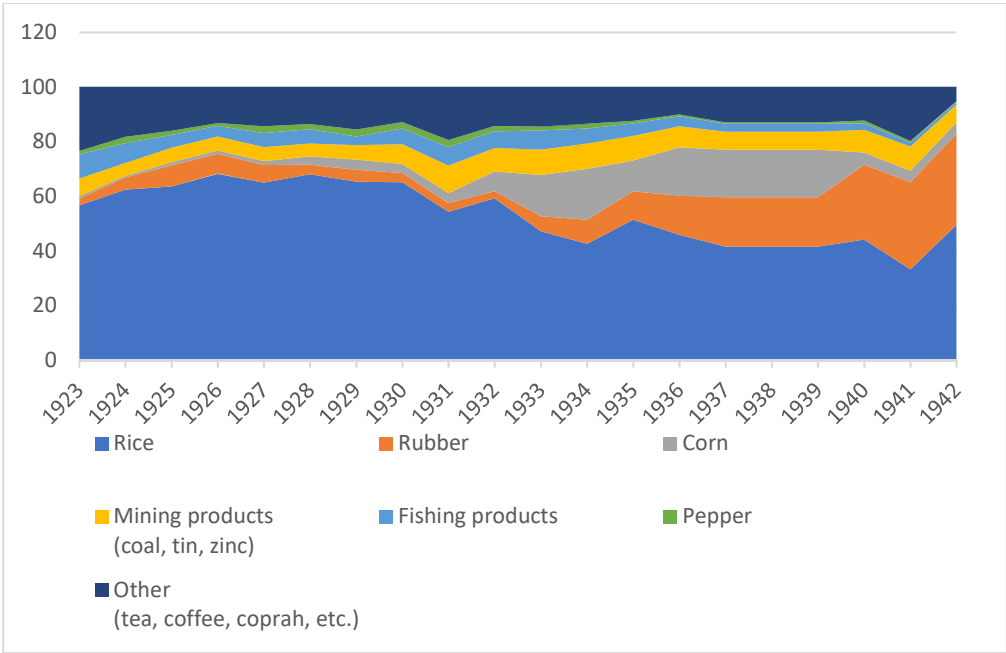


Figure 1bis: The evolution of world and Indochinese rubber prices



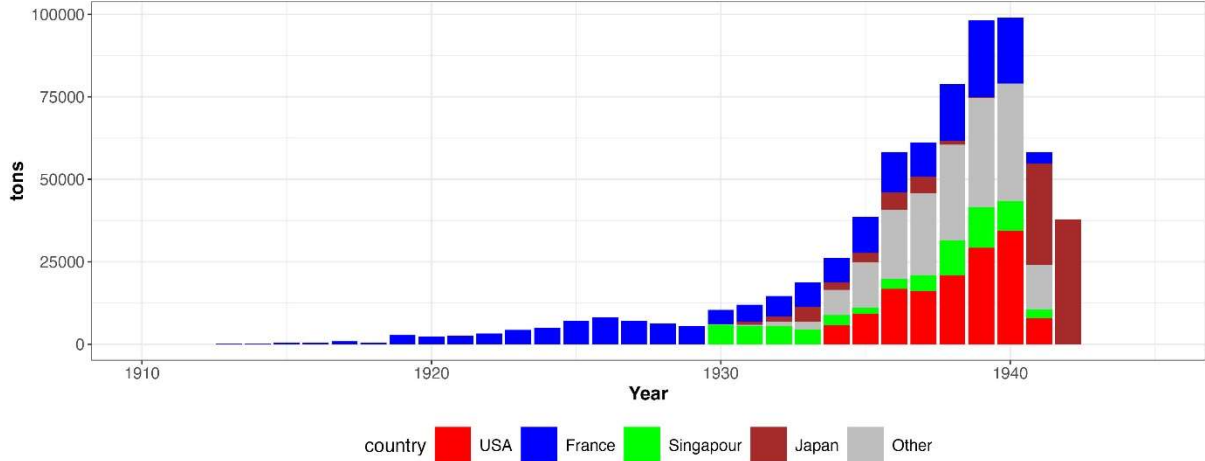
Sources: Bulletin économique de l’Indochine, 1^{er} mars 1934, Gallica; U.S. Tariff Commission Report No. 6, September, 1944.

Figure 2: Indochina: Main commodities, export value



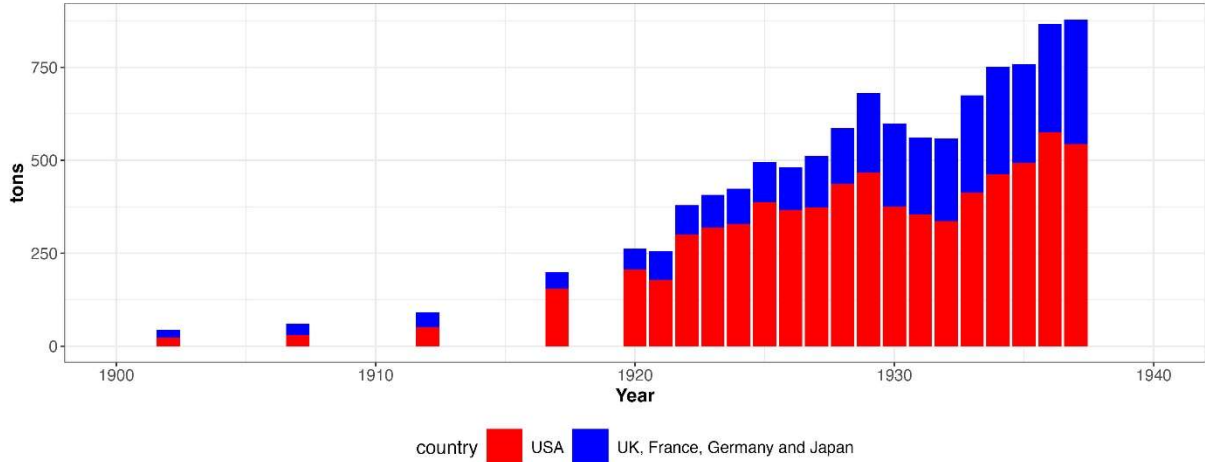
Source: *Annuaire statistique de l’Indochine, 1923-1942, ANOM.*

Figure 3: Indochina rubber exports by destination



Source: Annales économiques de l’Indochine, ANOM

Figure 4: Main importers of world rubber



Source: Survey of current business - United States Department of Commerce, August 1938

3. The Political Economies of Concession Rubber in South East Asia

To what end was this concession system designed and how specific was it to the French context? Up until the nineteenth century, the main tool of economic and military conquest used by European powers had been chartered companies (Erickson et al. 2015): as “European rulers lacked the means to project power across continents”, they “outsourced” sovereign

capacities to a few private actors, often incorporated in large “company-states” with *de jure* monopolies (Philipps and Sharman 2021). Yet with “European states’ growing capacities for direct overseas expansion and rule” (ibid) in the second half of the nineteenth century, the chartered model gave way to concession contracts, whereby states retained sovereign powers while strictly delegating economic colonization to a multitude of private partners (Veese 2013). This proved particularly useful for rubber, as global demand rose starkly from the late nineteenth century onwards, driven first by bicycle tires, then for military purposes during the First World War, and later to meet the demand of the automobile industry (Figart 1924). South Asia was deemed suitable for implantation because of land availability and low environmental risks (Figart 1924, Clarence Smith 2013, 194-195, Buelens and Frankema 2016), yet as *hevea brasiliensis* was not a native crop of the region, plantations had to be developed on a large scale, requiring massive capital inflows⁶.

The main reason for this was the massive labor force necessary to set up plantations and carry rubber tapping, in an industry characterized by few returns to scale and a very limited mechanization (Bauer 1948, Clarence-Smith 2013, 196, Bittmann 2024a). From the state’s point of view, this explains the push for equity over debt for large plantations, as it allowed capital to be pooled across multiple investors based on individual initiatives. Additionally, contrary to earlier plantation economies (De Jong et al. 2023), information asymmetries were now a limited issue because of new information and management technologies which allowed a close monitoring of plantations by directors and shareholders (Bittmann 2024a, Bittmann 2024b). However, while all European colonial powers relied on some version of the concession system, there was considerable variation within legal and institutional regimes. Table 2 summarizes the main differences between South East Asia’s main producers: Indochina, East Sumatra and British Malaysia. While all areas suffered major problems of high capital costs, labor shortages and risks of market saturation (Figart 1924, Bauer 1948, Barlow and Drabble 1990, Clarence-Smith 2013), the solutions implemented by colonial governments to remedy those varied drastically.

In BM, land was attributed in perpetuity by the local colonial administration, with a low premium, few restrictions and limited cultivation clauses (Figart 1924, 160-162, Drabble 1972, Barlow and Drabble 1990, 199, Rönnbäck et al. 2022). Land scarcity was more an issue than

⁶ On the largely unsuccessful attempts to implant rubber production in Belgian Congo, during the same period, in part because of chronic labor shortages, see Clarence-Smith 2013.

land control, since early implantation in the 1870s had left limited areas for new large concessions as the rubber boom hit in the late 1910s (Drabble 1972, Rönnbäck et al. 2022). Plantations were of medium size, most under 500 hectares, and by 1940 about 60% of estates owned by British commercial agencies based in London or Singapore. Capital was usually spread across a portfolio of firms, and 40% owned by Asian capital, either Chinese, South Indian or Ceylonese both through equity and mortgage contracts for the smallest ventures (Drabble 1972, Barlow and Drabble 1990, 187). Native Malay rubber growing was banned because of a long-standing British concern for local rice supply, with indigenous rubber developing illegally after 1918 (Figart 1924, 159-160, Booth 2012, 85-86). Since contract labor was abolished in 1910 across the Empire, most workers were freely recruited primarily in South India through local *Kanganis* agents (with smaller communities of Chinese and Javanese tappers, Barlow and Drabble 1990, 200) and demands handled by the Indian Immigration Fund: companies would pay a limited recruitment allowance, but were charged a tax of 2£ per worker quarterly (Figart 1924, 165-171, Gordon 2001, Rönnbäck et al. 2022). The British imposed a limited export duty of 2.5c per pound and no corporate taxes, but closely monitored production, first through the Stevenson Plan (1922-1928), and after 1931 through restrictive quotas: those weighed unfairly upon “smallholders” and gave rise to a large secondary market for coupons right, further at the advantage of large producers (Soliva 1931, Bauer 1948, Gordon 2001). This *supervised liberalism* thus allowed to spread production across a large amount of mid-sized estates and smallholders, with the British choosing to centralize labor recruitment and production restrictions, rather than land control or tariffs.

In East Sumatra, large rubber companies started expanding in the 1910s, with production skyrocketing during the Stevenson Plan which restricted the production coming out of British colonies (Barlow and Drabble 1990, 195, Gordon 2001, Clarence-Smith 2013, 201). Land attribution decisions were left to local monarchs, with no cultivation clauses, a limit of 75 years, and no upper limit on surfaces (Figart 1924, 207, Stoler 1985, 22-23). Moreover, the Dutch maintained an “open-door policy” (Stoler 1985, 16) towards foreign interests, with about 40% of capital owned by non-Dutch firms (especially from the U.S. and Switzerland), yet with a strong corporatist control by Dutch planters. Tariffs were relatively higher than elsewhere, in the form of income and profit taxes, as well as sliding export duties up to 7c of guilders per kilogram. The bulk of the workforce were indentured laborers recruited from Java - the more populated island - through the powerful Dutch planters’ association AVROS, which

fixed high recruiting and membership costs (Hotchkiss 1924, Figart 1924, 213-214, Stoler 1985, Yacob 2007). Although the penal sanction for breach of contract was never lifted, and work conditions remained exploitative until Independence, some government supervision was introduced in 1915, following social movements in Holland, with provisions for health, wages, and repatriation in case of poor treatment (Stoler 1985, 58-61, Figart 1924, 210, Gordon 2001, Yacob 2007). Contrary to Malaysia, a large part of the production came from native "smallholders" – about 54% by 1940 (Barlow and Drabble 1990, 187) -, with historians documenting a higher productivity tied to rotating crops and much lower labor costs (Bauer 1948, Gordon 2001): large plantations were "inefficient dinosaurs" and "Dutch support [...] was therefore crucial to their continued prominence" (Clarence-Smith 2013, 196). On top of labor control and liberal land grants for AVROS members, agronomic research was concentrated on helping Western plantations, leading to the introduction of budgrafts which drastically increased productivity at the expense of soil regeneration (Barlow and Drabble 1990, 201-202). But more importantly, "Westerners clamored for protection against swelling smallholder" (Clarence-Smith 2013, 197), eventually leading to the introduction of a special export tax for "native" production in 1931 (Soliva 1931, Gordon 2001), rising up to 28c of guilders per half kilogram

Although Indochinese firms and public officials frequently referred to East Sumatra as a blueprint for rubber development, the actual economic model differed in many ways from the Dutch case. According to Figart's (1924, 69) comparative study of Asian colonial rubber, the French colony was characterized by a "lenient labor legislation, cheaper opening costs, and freedom from taxation", at least for the first seven years of exploitation, compared to high tariffs applied to foreign imports into the Empire⁷. Labor recruitment was constantly invoked as the main source of uncertainty for large firms (Bittmann 2024a), since free local labor could only accommodate the needs of smaller plantations. Yet rather than opting for a centralized body, the French authorized licensed agencies to act as intermediaries to enroll and transport workers. Those were often deceived as to their actual stipend and food rations, with recruiters being regularly accused of "trafficking yellow flesh" by left-leaning voices in metropolitan France (Kalikiti 2000). This system thus allowed both the administration and companies to

⁷ An export duty was eventually introduced in 1926 yet intense lobbying from planters was able to cut down the rate from 5% originally suggested by the government to 2%, the lowest rate applied across rubber growing colonies (see Tran 2018 and Boucheret 2008).

reject the blame on recruiting middlemen whenever scandals of labor exploitation, which were recurrent and widespread, would arise. In the late 1920s, some improvements were introduced to tackle rampant mortality rates, such as malaria treatments or the construction of proper barracks, but indentured labor continued until 1954 and the French labor law was never extended to Indochina, even during the *Front Populaire*. However, the two main distinctive features of the French model were minimal capital requirements, and the application of a national preference— with three-fourths of board members being required to hold French citizenship - , preventing foreign investments. On top of this, concession contracts frequently required that the French government should receive a share of stocks, on top of an *ad valorem* tax on eventual output⁸.

This led to Indochinese rubber being concentrated in the hands of large plantations, with “smallholder” production occupying a much lower share of the sector than in BM and DEI⁹. With respect to ownership, while many colonial officials and local businessmen were able to secure mid-sized plantations, most settlers and native planters were concentrated on very small exploitations (Bittmann 2024b)¹⁰, with archaic planting and tapping techniques – the bulk of innovation coming from large companies, through international circulations or collaborations with the Pasteur Institute (Aso 2018). Indochina was thus characterized by a form of *financialized protectionism*, with a direct involvement of the state in the support and control of French concessionary firms: rather than monitoring production, labor recruitment or tariffs, the French opted for a dual system of strong financial incentives and strict bureaucratic oversight over land attribution and development, in order to limit moral hazard. As we will see in Section 5, this resulted in a massive outflow of capital towards Indochinese

⁸ For prominent industrial groups such as Michelin, this participation of the French government was a major bone of contention, leading to intense conflict with the concession commission. Minutes of the Commission des concessions coloniales et du domaine (CCCD), Jan. 22, 1931, 4AFFECO48; Concession request, Michelin firm, 4AFFECO51, ANOM.

⁹ According to the data in Figart (1924) and Barlow and Drabble (1990, 192-195), “smallholding” areas in Java, Sumatra, and Borneo occupy 22.6% of total surfaces, and 77,4% for estates in 1922, with most smallholders cultivating “between 10 and 40 hectares”. In all of British Malaysia, in 1921, the distribution was 41.4% of planted areas for smallholders and 58.6% for estates. By comparison, in Indochina, using the 1931 data when concessions peaked, plantations under 50 hectares represented only 3.4% of surfaces. See Bittmann (2024b) for a more detailed longitudinal analysis of the distribution of surfaces by plantation type, which unfortunately cannot be compared to DEI and BM because of the lack of equivalent fine-grained data in the literature.

¹⁰ Despite politicians relentlessly insisting on “small colonization”, the policies designed to facilitate land access were limited in scope: in 1926, a special program for war veterans was implemented, yet only 2,000 hectares were attributed overall, in lots of 50 hectares along and with a small starter pack.

rubber, as well as important profits especially after 1935, along with a concentration of the industry within a few firms with long-lasting impact on French capitalism.

Table 2: The political economy of rubber in South Asia, 1900-1945

	Indochina	British Malaysia	Dutch East Sumatra
Policy Regime	<i>Financialized protectionism</i>	<i>Supervised liberalism</i>	<i>Open-door corporatism</i>
Main instrument	<i>Concession contracts</i>	<i>Production quotas</i>	<i>Tax regime</i>
Surfaces	Very large plantations and "small colonization"	Mid-sized, generally < 500 ha	Large and small, local plantations
Capital	3/4 of board members must be French citizens for joint-stock companies, also non-listed firms and few individual planters, French and Vietnamese	British estates and smallholders (around 40%) , Chinese and South Indian, few Malays	Open-door policy: around 40% of foreign capital in 1941, Dutch capital and about 25% of smallholder Indonesian production
Land attribution	Free and lenient for small concessions, centralized and regulated for large, strict cultivation clauses	Liberal attribution by local government, in perpetuity and with limited cultivation clauses	From native rulers, no cultivation clauses, leases of 75 years, some in perpetuity
Fiscal regime	Minimal export duty of 2% introduced in 1926, protectionist regime	Export duty 2,5c per pound but no corporate taxes	Income tax, tax on profits, sliding export duty up to 7%
Special regulation	Minimum capital requirements: between 100 and 120 p. per ha	Strict quotas through Stevenson Production quotas after 1931, to control smallholder production	Special export tax for smallholders introduced in 1931, up to 28c guilders per kg
Labor	Free and contract labor, through recruiting firms, lenient laws and low wages	Free labor after 1910, mainly migrant (Indian, Chinese, Javanese), through the Indian Immigration Fund, annual tax of 2£ per head per quarter	Contract labor, imported mostly from Java but regulated after 1915 handlers through centralized planters association (AVROS)

4. Data and Methods

While most of the literature builds a sample of listed firms from stock exchange records (Marseille 1984, Davis and Huttenback 1986, Buelens and Frankema 2015, Rönnbäck and Broberg 2019, Rönnbäck et al. 2022) we adopt a bottom-up strategy, identifying firms from a directory of rubber plantations, exhaustive with respect to rubber firms¹¹. Starting from the *Annuaire des Planteurs de Caoutchouc de l'Indochine* of 1931, where concessions reached their full extent, we recovered the 42 firms owning plantations, covering 200,573 hectares (69% of the total reported surface). Three firms require a special treatment: Michelin because its investment in rubber was part of a strategy of vertical expansion, to supply rubber for its tire production; the *Compagnie des Caoutchoucs de Padang*, since its main operations were in Dutch Sumatra; and *W.G. Hale et Cie, Saigon*, given that it lost its concessions in 1930 after a series of accusations, pushing us to drop the observation. We then recorded consistent individual level data for each firm, recovered both from company records, primarily from private bank archives, stock exchange data for listed firms (*Annuaire Desfossés*) and colonial press sources for non-listed firms and to complete missing information¹². We tracked the birth and data of each firm, along with the evolution of the *capital social* (capital stock), a proxy for face value equity, in order to capture firms' sizes as well as the magnitude of investments in rubber. Then, we extracted a measure of profits throughout the period, using each firm's reported "*compte des résultats*" (profit and loss accounts). Given the pronounced price volatility of commodities in international markets, we study production history: available surface, planted surface, and rubber production. Finally, using firms' balance sheet information, we study the reliance of firms on credit vis-à-vis capital social after the 1929-crisis, as an attempt to capture the importance of government intervention.

¹¹ While smallholders were often not listed, registering with the rubber planters' union (*Syndicat des planteurs de caoutchouc d'Indochine*) was mandatory for concession attribution, access to labor recruitment, and in order to benefit from specific government support negotiated by union delegates.

¹² The two main sources of were collected by financial analysts within the *Crédit Lyonnais*, today part of *Crédit Agricole*, and by the *Compagnie des agents de change*, a specialized group of stock broker analysts, now within the *Archives nationales des mondes du travail*. Additionally, two records of individual firms were retrieved, that of the *Compagnie des caoutchoucs du Mékong*, part of the *Banque de Paris et des Pays-Bas*, and the *Société indochinoise de commerce, d'agriculture et de finance*, today part of the *Société générale*. The main press titles explored were *L'éveil économique de l'Indochine*, *L'écho annamite* and *Les annales coloniales* - often reporting information on general assemblies, capital increases or general business conditions - available on the BNF-Gallica website.

For firms’ lifespans, we recovered the date of creation and extinction of each firm, beginning with legal incorporation into a “*société anonyme*” (joint-stock company, the only exception being Michelin, a limited partnership between the two brothers), then grouping endings in four categories: extinctions (liquidation, termination, bankruptcy or nationalization) for which we have an exact date for such event; absorptions for all firms acquired; survival for those that remain operative until 2023; and disappearances for firms for which we lose track through the historical sources. Our categorization is data driven mainly because of the importance of disappearances relative to extinctions, and the potential measurement error of these data points.

Table 3: Summary of firms’ end

End period	Type of end	Freq.
1931-1945	Absorption	16
	Disappearance	4
	Extinction	5
1946-2023	Absorption	3
	Disappearance	3
	Extinction	6
Operative	Survival	6
	Total	43

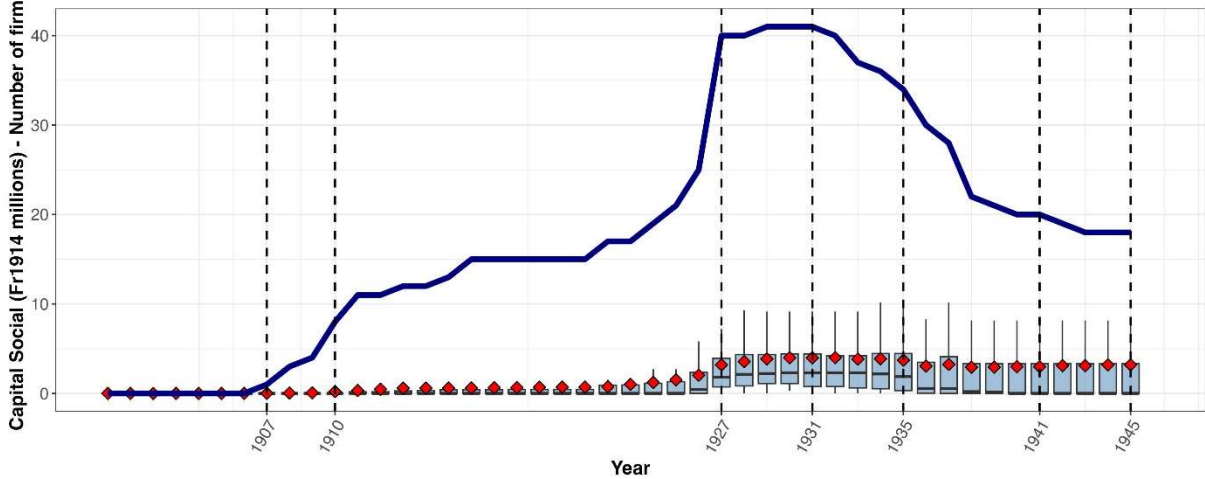
Sources: *Annuaire Desfossés*, Company records (Crédit agricole, ANMT), Colonial press archives (Gallica).

The firm’s “*capital social*” is the number of shares listed in the market times the face value price of the share, here represented aggregated (Figure 5) and by main business group (Figure 6). This measure is a lower bound of the amount of resources that a particular firm can actually collect in the market¹³. In order to build a trackable measure throughout the period, we relied on official exchange rates between piastres and francs, whenever necessary. Then we deflated marginal changes for each firm, using the yearly inflation of metropolitan France relative to 1914, hence creating a measure of *capital social* in 1914 francs. Despite being fundamentally different, we treat equity increments and reductions equally, unless explicitly indicated. Equity increments reflect a transfer of resources from investors into the firm, with

¹³ For example, a new firm can create 2,000 new shares with a face value price of 100 Francs, but decide to sell these at 200 Francs: the total capital stock will be 200,000 Francs, but the firm will have 400,000 Francs available to operate.

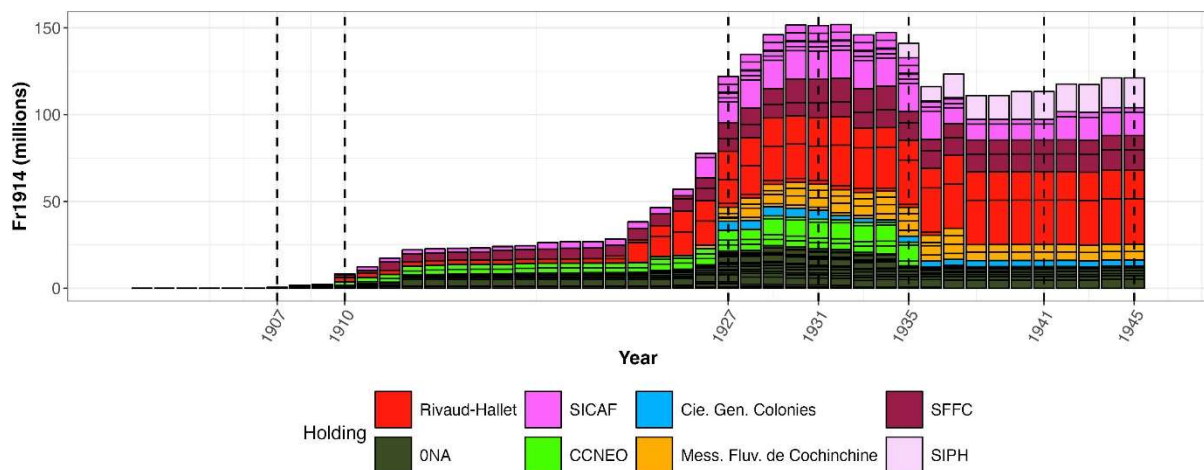
the simplest example being the emission of new shares. Unlike increments, whenever a firm reduces equity, it seldomly transfers resources from the firm back to investors. In particular for our list of 43 firms, reductions in *capital social* are always a reduction in wealth of shareholders. The most common operation of this type is the replacement of old shares by new ones, which either have a lower face value or are exchanged against a lower number of shares. We disregard this difference in order to maintain a measure that reflects the updated size of the firm. Finally, we disregard the problem of the timing in which the firm actually collects the resources from the investors. The main reason for this is the lack of systematic data on the subject. Luckily, specific regulation mandated that 50% of *capital social* be transferred the moment the shares were acquired, and most of the historical sources show that the 3rd and 4th quarters of “*capital social*” were usually called in immediately or within two years. This is not surprising given that the bulk of investments in plantations occur within the first years of operation. Finally, for firms listed on the Paris Stock of Exchange, we use information on the higher and lower stock prices to calculate a measure of market capitalization.

Figure 5: Average and aggregated capital social (Fr1914)



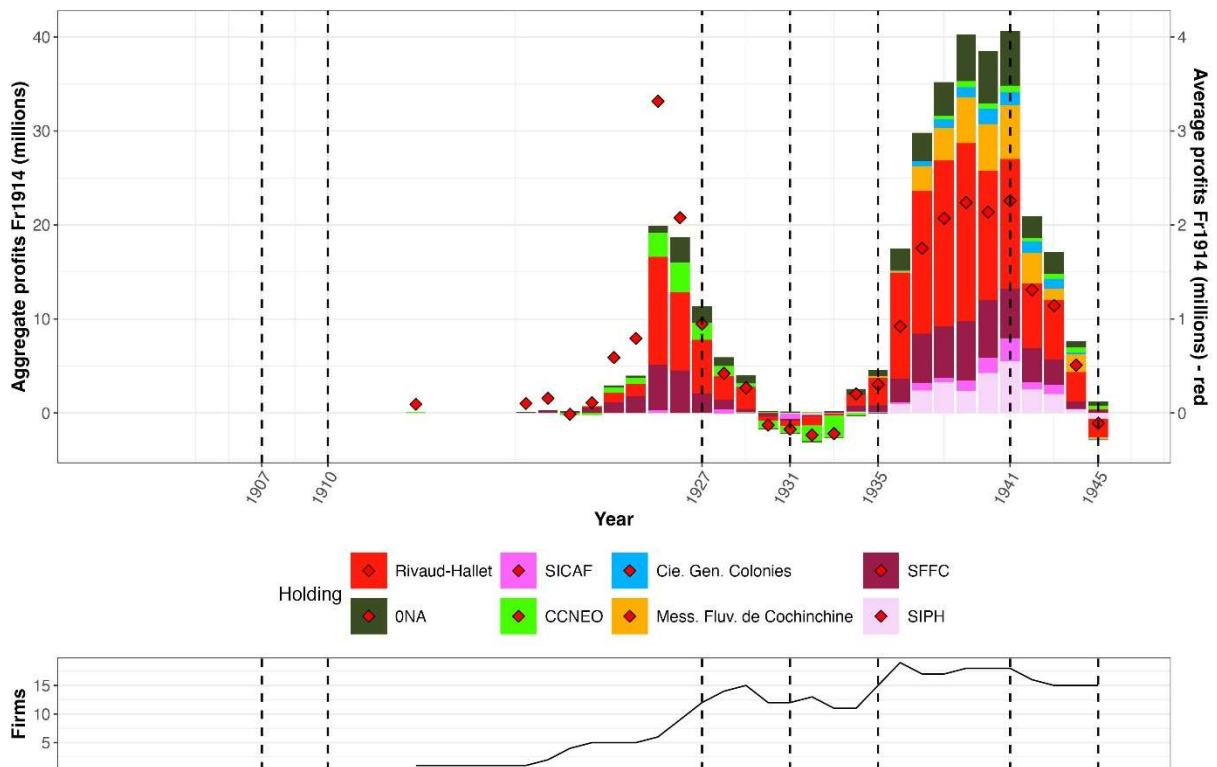
Sources: *Annuaire Desfossés*, *Company records (Crédit agricole, ANMT)*, *Colonial press archives (Gallica)*.

Figure 6: Aggregated capital social (Fr1914), by main business group



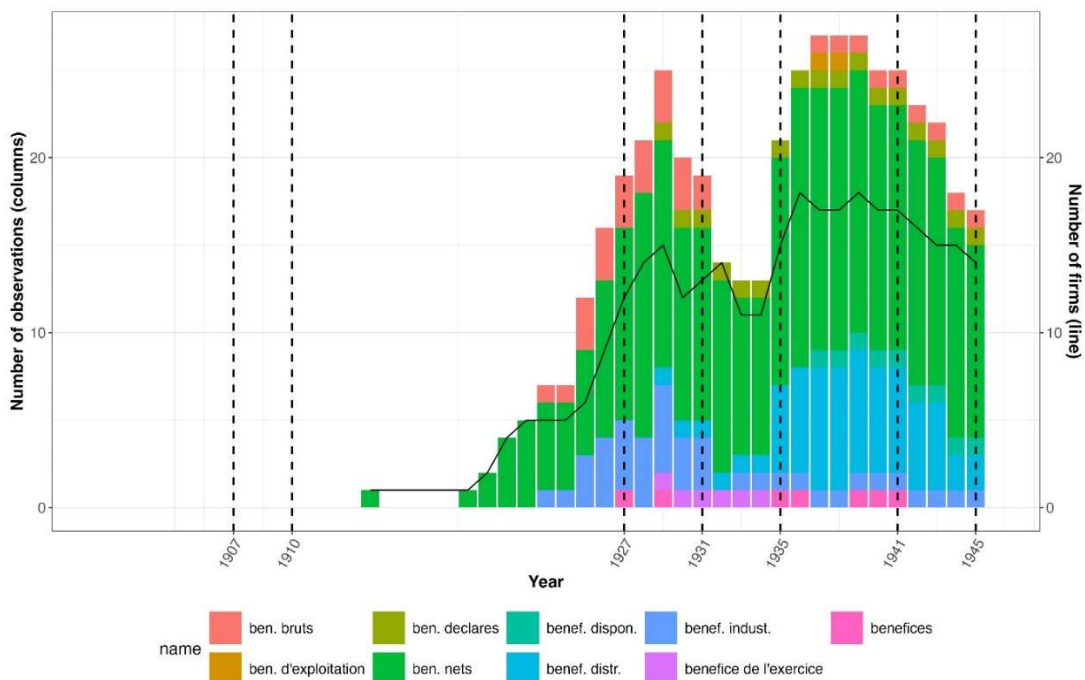
The calculation of profits presents historical challenges, for two main reasons. First, the information provided to the *Annuaire Desfossés* being voluntary, it could be subject to manipulation by firms in need of capital investments. We cross-checked, whenever possible, that the reported profits were the same than those appearing in the specialized press, from shareholders' general assemblies. Second, in some cases different accounting methods were used by firms, resulting in slightly different measures of profits. We use the measures available giving priority in the minimum value available. Different measures structure our final profit data: *bénéfices nets* (237 data points), *bénéfices de l'exercice* (6), *bénéfices* (7), *bénéfices déclarés* (10), *bénéfices industriels* (2), and *bénéfices disponibles* (9). We transform profits into Francs of 1914, and present aggregated and average profits in Figure 7. Figure 8 presents a more detailed assessment of profit data availability over time.

Figure 7: Aggregated and average profits by year



Sources: *Annuaire Desfossés*, *Company records (Crédit agricole, ANMT)*, *Colonial press archives (Gallica)*.

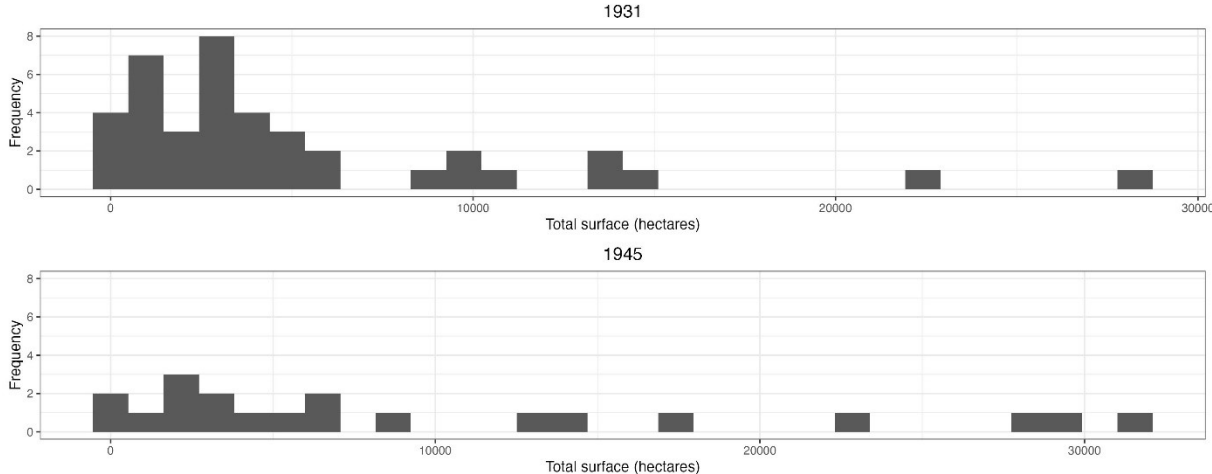
Figure 8: Profit measures, disaggregated by accounting method



Sources: *Annuaire Desfossés*, *Company records (Crédit agricole, ANMT)*, *Colonial press archives (Gallica)*.

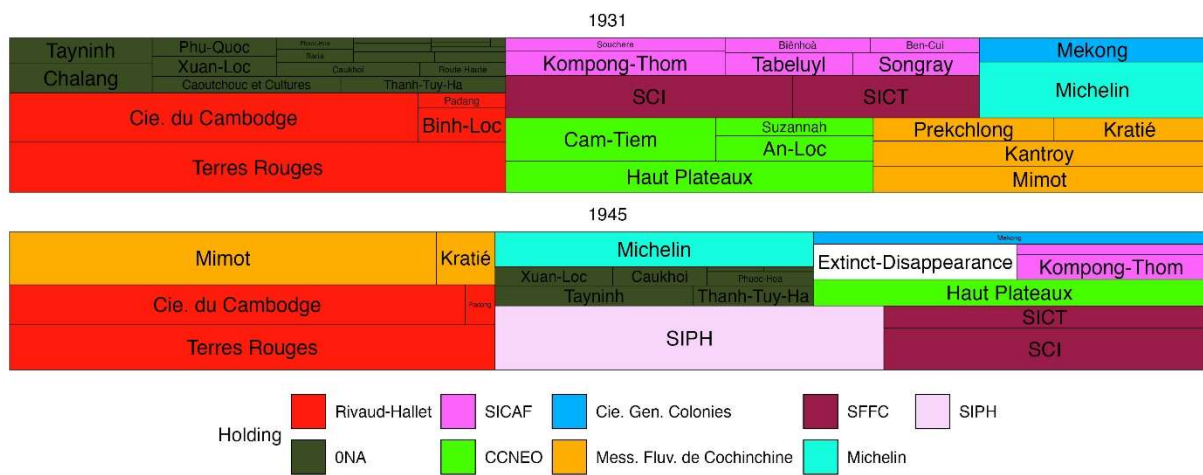
Following our historical sources, we study the history of total and planted surfaces for each firm until 1931 (Figures 9 and 10). For planted surfaces, we give priority to measures expressed in hectares, and whenever available, we complete such measures by using the rate of change of planted trees. We present aggregate figures of total plantation surfaces and planted surfaces. We also document the shift towards concentration by comparing the surface distribution between 1931 and 1945, after the wave of firm extinctions and absorptions (Figure 9 and 10). In addition, we document the production figures for each firm. We rely on the reported quantity in the different historical sources, and present aggregate and average levels of production in Figure 11.

Figure 9: Distribution of total surfaces, histograms for 1931 and 1945



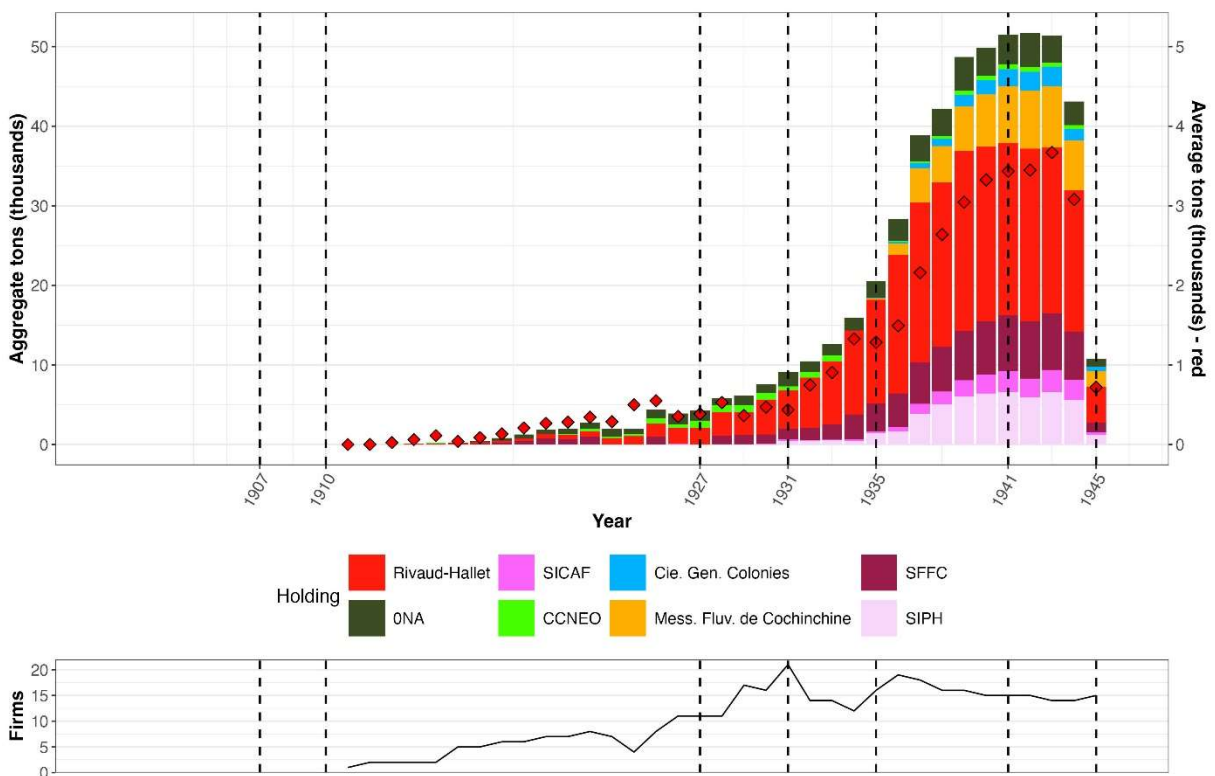
Sources: *Annuaire Desfossés*, *Company records (Crédit agricole, ANMT)*, *Colonial press archives (Gallica)*.

Figure 10: Surface distribution, by business group, 1931 and 1945



Sources: *Annuaire Desfossés*, *Company records (Crédit agricole, ANMT)*, *Colonial press archives (Gallica)*.

Figure 11: Rubber production, by main business group



Sources: *Annuaire Desfossés*, *Company records (Crédit agricole, ANMT)*, *Colonial press archives (Gallica)*.

5. Results

In the following, we present our main results, combining data about capital investments, the distribution of aggregate profits over the period and across firms, and state support especially during the 1930s. The results, organized chronologically, lead to three main conclusions: first, capital investments were massive and primarily occurred within a five-year span (1926-1931), with most land, and workers being secured by the early 1930s and raised capital plateauing afterwards. Within these investments, very few speculative projects were observed, as the concession regime provided both strong incentives to develop the land, and easy access to the labor necessary to do so. Second, aggregate profits were positive but small during an early period (1925-1929), concentrated on pioneer firms created in the 1910s, and spiked after 1935, with the global economy recovering and most plantations reaching production capacity; and these persisted during most of the Second World War. However, profits were not equally distributed among investors, as a small number of firms - either with preferential contracts with large French industrialists or selling on the global market – reaped most of the returns. Third, we observe a strong concentration of capital after 1935, as the worldwide commodity crisis offered opportunities for large investors – i.e. those who primarily benefited from state subsidies to sustain the crash - to buy out smaller, mature plantations, especially as Indochina was left unscathed by the International Rubber Agreements, signed in 1934 to limit global production.

5.1. 1910-1926. Rubber and the *mise en valeur*

One of the largest and oldest and plantation in Cochinchina, Loc Ninh, exemplifies how Indochina rubber emerged at the crossroads of international knowhow and French financial and industrial interests. In 1910, a French planter with experience in wild-rubber growing in Brazil (1443 CA), Paul Cibot, obtained a 1,500-hectare concession in the Thu Daut Mot region: he initially struck a deal with AVROS to secure the passage of 700 Javanese “coolies”, only for the Dutch government to later ban the recruitment of workers, for fear of labor flight¹⁴. With

¹⁴ Letter from P. Cibot to H. Richard, August 15, 1911. Private papers of Cibot, 31APC1, ANOM; Société des caoutchoucs de l'Indochine, Generaly Assembly, 1931, p. 9. DEEF41227, Archives Crédit Agricole (ACA).Tran (2018): 101-102.

good initial results, Cibot was quickly able to secure major backers, through French tycoon financier Octave Homberg and the soon-to-be director of the Bank of Indochina René Thion de la Chaume, along with an exclusive buying contract from the Bergougnan firm (Michelin's main competitor on the tire market). A joint-stock company was formed the same year, securing a concession now extended to 10,000 hectares, and the recruitment of 2,800 tonkinese contract workers, along with a manager with prior experience in Malaysia¹⁵. The technical direction was further entrusted to Adrien Hallet, a Belgian agronomer who headed the largest rubber investment group in the DEI - Rivaud-Hallet (Buelens and Frankema 2016, 1046). The *Société des caoutchoucs de l'Indochine* (SCI) was initially formed with 1.5 million francs, only to grow to a 60-million-franc firm by the 1960s, and would become the flagship Indochinese asset of the main French colonial holding, the *Société française financière et coloniale*, created in 1920 remaining one of the most profitable firms throughout our period: by 1945 it had accumulated around 4.8 times its capital social in profits.

Although still an oddity by the early 1920s (Figure 9), Loc Ninh would later become the organizational blueprint for other, similar financial ventures. While land attribution had originally been left entirely to local administrations, a series of ministerial decrees gradually increased administrative control during the 1910s, introducing public auctions, higher purchase fees, as well as safeguards for protecting local, non-Viet ethnic groups (Cleary 2003, Boucheret 2008). Although French land officials blatantly overlook local property rights, often informal and transmitted through kin ties and through oral agreements, the “civilizing mission” (Conklin 1997) commanded some degree of oversight: in 1912, about 45% of land requests were still “returned or rejected”, occasionally because the applicants encroached on native cultivation grounds (Cleary 2003). In the mid-1920s, rubber growing thus remained, aside from Loc Ninh (10,000 hectares) and the Rivaud-Hallet owned Courtenay plantation (4,070 hectares), mostly in the hands of local settlers, “prospective planters”, (Figart 1924, 227) civil servants, and “colonial conglomerates” (Sasges 2015) such as established trade, maritime or commercial firms seeking to diversify their business (Bittmann 2024b). A handful of firms, primarily from the latter type, held the lion's share of investments until 1925, with an aggregate capital still only limited to 55 million 1914 francs in 1925 (Figure 6). Additionally,

¹⁵ SCI, Status, 1910 and General Assembly 1912, Archives nationales des mondes du travail (ANMT); H. de lachevrotière, “Nos plantations. La plus grande plantation d'hévéas de l'Indochine”, *L'Impartial*, 1921, 36APC1, ANOM.

close to all exports were shipped to metropolitan France (Figure 3), often through exclusive contracts offered by industrialists, such as Bergougnan or Michelin.

Yet as the rubber boom hit during the 1920s, the pressure for land demands, along with the organized efforts of planters' interest groups, pushed the State to revise and rationalize the procedure (Hue 1931, Boucheret 2008). As concession demands were often not filed by companies, but local middlemen like Cibot (Bittmann 2024b) – who later transferred concession rights to joint-stock companies in exchange of preferential stocks –, this triggered feared of speculative land runs, reminiscent of the concession scramble in French East Africa. As explained by a member of the concession commission: "the reputation of concessions in French East Africa have often raised critiques in Parliament, and we need to make sure these do not reach Indochina"¹⁶. The 1926-1928 legal changes, implemented by Governor Varenne, were thus the result of a political compromise. On the one hand, procedures were clarified and accelerated, and a system of "indigenous reserves" was introduced for local populations, along with minimal pecuniary compensation, which facilitated expropriations (Cleary 2003, Boucheret 2008, Bittmann 2024a). Yet on the other, applicants now had to provide sufficient financial support, through a list of backers, the expected "capital social" - half of which needed to be raised from the start - along with a detailed business plan regarding land development, planting techniques and equipment, as well labor requests, which were expected to be kept at a minimal. Similarly, while some provisions were introduced for contract workers, with employers now required to build solid barracks, provide minimal health facilities and malaria treatment - wages and food rations were either reduced or remained unchanged until 1945 as the State further guaranteed that recruitments would meet the demands of expanding production.

5.2. 1926-1930. Scrambling for Equity

After 1927, the *Commission des concessions coloniales et du domaine*, located in Paris, thus quickly became a one-stop-shop where financial groups could defend their applications in front of a favorable crowd (Rabut 1979, Persell 1983, Veuser 2013). This evidently shifted

¹⁶ Minutes of the CCCD, Nov. 26, 1927, p. 18. 4AFFECO11, ANOM.

the power dynamics away from local French entrepreneurs. In 1926, Léon Caffort, an important arms and jewelry dealer in Saïgon, as well as colonial representative, applied for a 6,000 hectares lot in Cambodia: while the local land commission had recommended his application, emphasizing Caffort's "certain credit on the Saigon marketplace", the Paris commission rejected his demand for lack of "financial resources". Time and again, the commission judged that bank credit would not suffice to properly carry land development, preferring renowned financial groups with access to equity¹⁷. However, this didn't mean that those would get a free pass: when the commission evaluated a concession demand from the Rivaud-Hallet group, some members raised serious concerns about Olivier de Rivaud, a prominent investment banker and stock broker who had amassed an "important fortune by speculating on colonial values". The commission went as far as asking for a report from the Financial Division of the French Intelligence Services, proving that Rivaud had ties with Albert Oustric, a banker responsible for one of the most wide-ranging scandal of financial speculation of the interwar. When hearing about these concerns, one of the firm's administrator confessed his "profound indignation at this accusation", responding that no judiciary charge was carried ever against Rivaud, and endorsing the moral virtue of his associate. The commission eventually issued a positive decision, arguing that the group's financial capacity was "out of doubt", and praising its commitment to innovation through extending grafted trees¹⁸.

Overall, and despite larger plantations being consistently less cultivated than smaller concessions - with only 47% of surfaces being fully developed by 1928 for plantations above 1,000 hectares, compared to 70% for those under 100 hectares (Cleary 2003) - these various safeguards limited the number of overtly speculative ventures. Over our entire set of 43 firms, only two combined a short lifespan, no or limited output, and open warnings in the financial press¹⁹. Quite on the contrary, few firms went bankrupt or simply disappeared from records: many unsuccessful plantations were absorbed by larger groups, some of which largely

¹⁷ In rejecting the application of a local policeman, the commission ruled that his "financial guarantees [were] very thin", since "he builds only on his personal credit which is real but insufficient". As collateral, the policeman had offered 60,000 piasters in bank credit, and 36,000 piasters in annual revenue, but wasn't able to convince larger investors. Minutes of the CCCD, Nov. 26, 1927, p. 21; June 29, 1928, p. 1-7, 4AFFECO11, ANOM.

¹⁸ Report on Plantations des Terres Rouges, Jan. 7, 1930; Minutes of the CCCD, Jan. 22, 1931, p. 8-9; Letter from CCCD to the Governor of Cochinchina, Jan. 20, 1933, 4AFFECO48, ANOM.

¹⁹ These were the Compagnie agricole sud-indochinoise (1926-1936) and Les hévéas de Cochinchine (1925-1931), largely targeted as "shams" by the local press, such as in the financial pages of *L'éveil économique de l'Indochine* or *Indochine: Revue économique d'Extrême-Orient*.

outliving the end of the Indochina War (see below). And overall, the period spanning from 1927 and 1931 concentrated most of the land acquisition by rubber growers - although by then most still under conditional titles -, so much that by the early 1930s, there was no areas left for new concessions within an 80 kilometers radius around Saïgon (Cleary 2003). And with this evolution came a shift in the size and composition of private capital, which increased threefold between 1925 and 1930, hitting 150 million in 1914 francs by the dawn of the crisis (Figure 6). The number of joint-stock firms grew from 22 to 43 over the same period (Figure 5), with now a direct involvement of mainstream French banks and industrialists - such as the Banque de Paris et des Pays-Bas, Michelin, but also Mirabaud, or the Banque de l'Union Parisienne - and existing holdings largely expanding their positions (Bittmann 2024b).

However, production and profits remained small because of the lag between deforesting, planting and actual rubber tapping: 70% of company rubber, which represented about 50% of the total Indochinese output, was produced only by two firms in 1929 – Plantation des Terres-Rouges and SCI (Figure 11). These also made up most of the aggregate profits (Figure 7), which were already tumbling by 1927 because of diminishing prices linked to the end of the Stevenson Plan in 1926 (Figure 1bis). Some smaller firms who had invested early in rubber growing were also able to experience returns, but these were rare: this was the case for the Société de Thanh Huy Ha, founded in 1910 by an industrialist from the North of France in association with local colonial administrators, and which had benefited from major orders from the French military during the First World War (Bittmann 2024b). Following these good results, the firm would decide to be listed on the Paris Stock exchange in 1926. Finally, this was also a time of intense recruitments of contract labor: yearly rollouts grew fivefold between 1925 and 1926, and close to 70,000 workers were imported from Tonkin within just five years, which represented 57% of the total labor force displaced between 1912 and 1937 (Bittmann 2024a). Those were almost exclusively transferred towards firm-owned plantations, with many scandals of labor mistreatment, malaria outbreaks, and general inhumane work conditions being reported by labor inspectors and journalists alike (Kalikiti 2000, Aso 2018, Bittmann 2024a).

5.3. 1930-1934. Rescuing the Crown Crop

The world crisis took a massive toll on the Indochinese economy and rubber plantations, most of which had been gearing up from production by the late 1920s. The price of rice fell by 72% between April 1930 and June 1934 (Brocheux and Hémery 2009, 261, Gonjo 1993, Fig. 21), leading to massive waves of loan defaults among small farmers. About 13% of the total rice field area changed ownership between 1930 and 1934, through sales or foreclosures, primarily by colonial mortgages firms and Indian *chettiar* lenders. Yet this wasn't specific to the rice sector: between 1927 and 1938, 1,348 bankruptcy filings were recorded in Saigon (Robequain 1935, 186, Brocheux and Hemery 2009, 261). Moreover, the strong decline in the value of silver – diminishing the purchasing power of many Asian countries, such as China, Siam, or Burma (Gonjo 1993, VI 37) – further hit Indochinese exports, which fell by 30% in 1930 and again by 39% in 1931, and shifted towards France for most commodities except rubber. As a drastic measure, the French decided to peg the piaster to the gold-franc in 1931, which sparked local protests for export farmers dependent on regional, silver-denominated markets (Brocheux and Hémery 2009, 263, Gonjo 1993). As for rubber, while prices had already been on a downward slope since 1926, the end of the Stevenson Plan in 1928 along with the crisis precipitated a further drop: prices hit their low point in 1932, at about 1.70% of their peak nominal value of 1910 (Brocheux and Hémery 2009, 261). Additionally, the crisis unfolded as many plantations were approaching maturity, jeopardizing a large of part of the capital invested during the 1920s. Most rubber firms, from individual planters to multinational holdings, experienced destabilizing hardships, resulting in negative aggregate. These had long reaching ramifications, both for the sector and the workers or businessmen involved in it: one administrator of a small local plantations committed suicide in 1931, and worker exploitation increased drastically as firms were looking to increase labor returns (Brocheux 1976, Bittmann 2024a)²⁰.

Because of this macroeconomic situation and following the intense pressure of planting interests (Boucheret 2008, Tran 2018), both the colonial and metropolitan Government designed special measures for rubber recovery, involving direct subsidies, tariffs

²⁰ "Courrier de l'Indochine", *Les Annales coloniales*, Sept. 17, 1931, Gallica, BNF.

and labor cost cuts²¹. At the local level, the Indochinese Government backed special loans for planters and diminished land taxes, yet the most substantial decisions came from Paris. An export subsidy of 3 francs per kilo was introduced for all planters with production, to match the gap between market and cost prices²², financed by a corresponding duty of 0.3 francs per kilo for all foreign rubber imports into the Empire (Tissot 1936). But the most significant support came in the form of a 90 million francs fund, created to support plantations that hadn't "reached the period of tapping" through interest-free loans (Tran 2018, 339). This was financed through the issuance through the budget of the General Government of Indochina, and eventually through a sovereign bond issued in 1932 (Tran 2018, 341), thus transferring the cost of the program unto local taxpayers. All plantations could benefit from it, but through a sliding scale with higher rates per hectare for red soil areas (as opposed to cheaper, less productive grey soil surfaces), for those with budgrafted trees, and for those employing contract workers, as opposed to free day laborers (Tran 2018, 339). This last measure was meant to help companies retain their workforce hired through three-year contracts, and thus avoid massive layoffs, with the fear that unemployment would cause anti-colonial unrest since about 80,000 workers were employed on plantations. And while wages were initially kept at pre-crisis level, the local government decided, in 1932, to allow plantations to lower daily rates by 25% for men, women, and children²³. This later step was meant to facilitate the repayment of government advances, yet it triggered a wave of strikes and protests on the part of contract laborers, who already faced daunting work conditions, daily violence from overseers, and high sanitary risks.

Hence, despite these policies not explicitly targeting firms backed by equity capital, their features – access to productive soil, implementation of innovations, use of contract labor – were characteristic of large plantations. While the distribution of advances among firms and individuals was kept a well-guarded secret – even prompting public backlash in metropolitan

²¹ To be sure, other sectors also benefited from direct government support, but the amounts involved compared to no extent with rubber. For rice, see Norlund (2000), for mining (Jeoung 2018), and generally Brocheux (1976).

²² Although the *Caisse* for so underfunded that this subsidy was gradually reduced to 0.6 francs per kilo in 1934 (Tissot 1936).

²³ "Le sauvetage de l'hévéaculture en Indochine", *L'information d'Indochine, économique et financière*, Feb. 8, 1936, 1-4, 100APOM800, ANOM. The management at the Caoutchoucs du Mékong (BPPB) were more than happy to act on the "pressure put by the Administration to lower wages from \$0.4 to \$0.3". Letter, Petithughenin to Attalin, Nov. 9, 1932, 21CABET95, Archives BNP. See also Tran (2018, 451); General Assembly of Bienhoa industrielle et financière, 1933. DEEF 41226-2, ACA; General Assembly of Société des plantations de Kraité, 1934, 65AQJ807, ANMT.

France²⁴ – the gross aggregated data presented in Table 4 shows that joint-stock companies were the primary beneficiaries of these, with 84.6% of the loans going to 27 companies. Again, this came with strict obligations and increased state oversight: joint-stock companies were banned from paying dividends until full repayment, which was expected as soon as the economic would recover²⁵. As a corollary, the French Government undertook a series of “market cleaning” (“*politique d’assainissement*”) operations carried primarily through the Bank of Indochina, transformed in 1931 into a “mixed economy firm” (“*société d’économie mixte*”), with public capital and government officials nominated as board members (Gonjo 1993, VI 49-50). The Bank forced many indebted Indochinese companies to issue new stocks, attributed to it as compensation for debt cancellation, and restructured existing firms by merging “healthy” and “viable” businesses with “compromised” ones (Gonjo 1993, VI n.98). The most considerable operation focused on Octave Homberg’s SFFC, following what was called the “Homberg Krach”: with participations in nineteen major Indochinese firms, - including primary ownership of Loc Ninh - the potential downfall of the holding was seen as a major threat for the colony’s economy (Meuleau 1990, 382-384). A first loan of 105 million was granted, backed by the Bank of Indochina as well as other major institutions such as Lazard and the Banque de l’Union Parisienne, followed by smaller operations, in a financial saga that lasted until 1936. This eventually led to Homberg stepping down in favor of Edmond Giscard-d’Estaing (Meuleau 1990, Gonjo 1993, VI 24, Brocheux and Hémerly 2009, 265). Overall, as noted by Gonjo (1993, VI 51), by 1937 rubber had become the sector where the Bank’s participation was the highest. This “*assainissement*” was heavily criticized in Saigon, leading to protests from local businessowners, with one group even comparing the Bank to an old chartered firm: “the Bank of Indochina has become a new *Compagnie des Indes*, laying its hands on all the good businesses around the country” (Brocheux and Hémerly 2009, 269).

²⁴ A press article thus characterizes these loans as a “shameless squandering of public money”, an “unbelievable scandal” of “embezzlement” at the benefit of a few powerful joint-stock companies and their shareholders. “Le sauvetage de l’hévéaculture en Indochine”.

²⁵ Letter, General Government of Indochina to Fernand Bernard, President of the Indochinese Rubber Planters’ Union, Feb. 21, 1936, 100APOM800, ANOM.

Table 4: Loans from the French Government in support of Indochinese rubber, 1932

	Nb of beneficiaries	Amount of loans (million frcs 1932)
Joint-stock companies	27	76.8
Civil societies	21	4.5
Individual planters (French)	69	7.5
Individual planters (Indigenous)	23	2.0
Total	140	90.8

Source: “Le sauvetage de l’hévéaculture en Indochine”, *L’information d’Indochine, économique et financière*, Feb. 8, 1936, 1, 100APOM800, ANOM

5.4. 1934-1939. Reaping Profits on the World Stage

In the early 1930s, the French government had thus stepped in to salvage what was becoming Indochina’s crown crop. Both through direct support and indirect market operations, this involvement signaled a strong to protect a wave of capital exports, facilitated by a modernized concession regime. State support represented more than a “crutch”, as Marseille (1984) phrased it, it was a lifeline sent to prevent the early death of an industry. Hence, the scope and nature of this intervention bore no comparison to what was happening in BM or the DEI: both the British and Dutch government intervened to support the rubber sector, yet they had much less skin in the game. Since in both places, most plantations had already reached the production stage, meeting the metropolitan demand for rubber was less a concern that protecting the local economy from collapse or deadly competition. Hence, intervention mainly came in the form of production restrictions, through quotas or export duties, along with a massive cut in both wages and the labor force, with about half of contract workers being laid off in the wake of the global commodity crisis. Moreover, because of the weight of foreign capital - nonexistent in the French case - direct subsidies were less of an option, and both Dutch and British states sought to favor large plantations at the expense of smallholders as a way to rescue colonial investments (Bauer 1948, Gordon 2001).

However, with the situation still worsening by 1933, the British, Dutch, and French governments (as well as Sarawak and Siam) signed the International Rubber Agreements of 1934, fixing production quotas for each country and planning export reductions staggered accross the following four years. Crucially, Indochina benefited from a special regime because

of its status of late-comer, with an authorized maximum of 30,000 tons, still about three times higher than the 1931 production levels (Tissot 1936, Brocheux and Hémerly 2009, 262). The only obligation was that no further surfaces could be planted until 1938, which put a halt to firm creation, with raised capital basically stagnating between 1935 and 1945 (Figure 6). The agreements were successful in restoring the global balance between supply and demand by 1935 (Tissot 1936), with prices finally stabilizing at around 5 francs per kilo. And because the agreements left Indochinese producers unencumbered, this combined with intense government support, allowed production to finally take off, with rubber exports multiplied by six between 1930 and 1938. This along with the contraction of rice exports, now primarily shipped to mainland France and Madagascar, resulted in the stark increase in the relative export value of rubber (Figure 2). And contrary to many other crops across the Empire, this rise was primarily driven by foreign sales, especially to meet the skyrocketing U.S. demand for rubber, tied to the rise in automobile purchases U.S. imports of Indochinese overpassed that of metropolitan France in 1936, reaching 37,6% by the dawn of the Second World War. The period of high profits beginning in 1935 thus directly corresponds to the conjunction of these economic and political context with the timing of capital investments in rubber plantations.

Contrary to the pre-1930 era, rubber now became profitable for a wide set of firms across Cochinchina and Cambodia. The two main holdings, Rivaud-Hallet (Plantations des Terres Rouges, Compagnie du Cambodge) and the SFFC (Société des caoutchoucs de l'Indochine, Société Indochinoise des Cultures Tropicales) still concentrated about 1/3 of total surfaces, up to 80% of aggregate profits for certain years (excluding windfall from participation in other firms), but other companies owned by local entrepreneurs (such as Hévéas de Tayninh as Société agricole de Thanh Thuy Ha), as well as former trader or charter firms exhibited high returns until 1941. The case of the Messageries fluviales de Cochinchine is exemplary of the role played by rubber in capital transitioning from nineteenth century mercantilism to a twentieth century financial venture. Since the late 1880s, this chartered firm operated a monopoly on all transport on the Mekong river (from Indochina through Siam), and when its exclusive contract with the French state ended in 1926, it evolved into a "form of holding", investing in various agriculture and industrial ventures (Bittmann 2024b). Rubber proved key in this transformation, with the group securing very large lots in Cambodia precisely in 1926,

and eventually becoming the third highest profitable rubber group by 1940²⁶. This typical²⁷ trajectory underlines how older mercantile interests - usually associated with the backwardness of French colonial capitalism - morphed into portfolio companies by repositioning their capital during the interwar²⁸.

However, these gains were not equally distributed among all firms, as the first half of the 1930s saw a massive wave of plantation and firm concentration within the sector. This is directly visible in Figures 5 and 10 : starting in 1931, we see a drop in the number of existing firms, steeper after 1935, with the aggregate amount of capital remaining the same until 1945, and surfaces being increasingly concentrated among a few business groups. The rare existing literature has tended to exclusively emphasize the weight of takeovers by the BIC (Meuleau 1990, Gonjo 1993, Brocheux and Hemery 2009, 261-265): while these were one important factor, neither were they the only driver of concentration nor were they the only underlying cause. The BIC's main move was the creation of the *Société Indochinoise de Plantations d'Hévéas* (SIPH) in 1935, a conglomerate with strong financial backers (Bittmann 2024b) that and merged mid-sized plantations, totaling 10,000 planted hectares in 1937 (1551-1552). It justified its strategy as an "interest in the concentration of small and mid-sized firms in order to build larger units, the structure of which is better suited to the current conditions and offers more resistance in hard times". Some of these purchases were a direct consequences of the commodity crash, others of the recovery program: the famous La Souchère plantations, operated by powerful local businesswoman and one of the oldest in Indochina, defaulted in 1933 after failing to pay back government advances, and was purchased on auction by SIPH for a mere 100,000 piasters (Brocheux and Hémerly 2009, 269). This helped SIPH grow rapidly to a profitable business by 1939 (Figures 7, 10 and 11). Yet this trend was far from specific to the BIC: similar examples of mergers and acquisitions are often mentioned within company documents, with administrators looking to "take advantage of the current crisis to proceed with interesting acquisitions"²⁹.

²⁶ Three flagship joint-stock firms were created, one for each massive plantation in Cambodia: Société indochinoise des plantations de Kantroy, Société des plantations de Kratié, Société indochinoise des plantations réunies de Mimot.

²⁷ In Indochina, a similar story can be told about the *Compagnie de commerce et de navigation d'Extrême-Orient*, also a prominent holding in the rubber sector.

²⁸ Same for CCNEO in Indochina, but also SCOA, CFAO or Compagnie Lyonnaise de Madagascar, with long legacies.

²⁹ The quote comes from the Société indochinoise de commerce, d'agriculture et de finance, a plantation holding and agency handling bookkeeping for other companies. Minutes of the board meeting, Mars 17, 1930, Box 4913, Archives Société générale. Incidentally, Bittmann (2024b) has documented an equivalent consolidation among

5.5. After 1939. From Rubber Weaponization to Decolonial Legacies

In September 1940, Indochina was invaded by Japanese troops, and occupied metropolitan France became subject to the terms dictated by the German Armistice Commission in Wiesbaden, where the future of Indochinese rubber would be decided (Koerner 2010). Production quotas were defined by the Axis – 18,000 tons for occupied France, 25,000 tons for Germany and Japan, and initially 25,000 tons left to be sold on the international markets, in order to trade for import goods necessary to Indochina's economy. This clause was later suppressed by the German in order to cut off U.S. supplies, as rubber was gradually subject to "universal envy" for its key role in military equipment (Koerner 2010, Tran 2018, 410). While this context drastically curtailed French industrial capacity, its effects on rubber firms was limited until 1944, for both production and profits (Figures 7 and 11)³⁰. Japanese merchants settled in Saigon to specifically handle the redistribution of sales, and despite a drop in prices, established firms benefited from the high demand from the Axis powers (Tran 2018, 410). Additionally, illegal export channels were still organized towards Free France, through Switzerland, as suggested by evidence from the archives of the BPPB³¹, further fueling exports. Rubber firms only truly felt the consequences of the war towards the end of the conflict, with many plantations being targeted, damaged or directly taken over by Japanese officials, and production almost halting entirely by 1945.

After the end of the world conflict, many French planters sought to kickstart production, and rebuild damaged facilities, with the main issue still being labor recruitment, especially after the start of the Indochina War, with many Northerners joining the ranks of the Viet Minh or striking for higher wages and better working conditions³². While economic data

small indigenous rubber planters, suggesting that this trend in concentration wasn't restricted to joint-stock companies.

³⁰ The Compagnie du Mékong thus continued to sell on the "New York market [...] with relative ease" until March 1941, with prices still increasing until December 1940, and while the "freedom to transact" had been suspended in Indochina, there was "practically no restriction for production", with the new Rubber Offices looking to maximize output for war needs. Report to the Board of Compagnie du Mékong, March 1941. 21CABET96, Archives BNP.

³¹ Confidential note, Compagnie générale des colonies, 1943. D11AH281, Archives BNP.

³² The Compagnie du Mékong witnessed that the Japanese had left most of the equipment intact, pointing rather to the difficulties in getting new contract workers; still the "most vital question". Many had been conscripted by the Japanese army, and according to bank reports were now influenced by the "Viet Minh movement" - this "Ho Chi Minh gang [...] that surpasses in bestiality and horror everything one may believe" - pushing for strikes across

becomes too scarce and scattered to push our analysis beyond 1945, most firms continued to operate until the Geneva Conference of 1954, although the effects of the Indochina war were more directly felt than during most of the Japanese occupation (Aso 2018, 174-183). Since rubber plantations were located in former Cochinchina (and Cambodia), they remained South of the 17th parallel and none experienced the type of expropriations occurring in the North, under communist control - especially in coal mining (Jeoung 2018, 454) - and by 1953, production had surpassed 1938 levels, reaching 75,000 tons (Aso 2018, 169). Quite on the contrary, the Southern Republic of Vietnam, under president Ngo Dinh Diem, recognized the strategic role rubber would play in both industrial development and military protection (Aso 2018, 170), and sought out collaborations with French planters.

In 1957, rubber represented 60% of exports of the Republic of Vietnam, employing grossly 50,000 out of the 150,000 total industrial and commercial workers in the country³³. Yet since most plantations were already thirty years old, the Southern government struck a deal with rubber growers, to modernize and replant, with 150 million piasters allocated to a "Heveaculture Development Fund" to be distributed through preferential loans. By early 1959, the entire 150 million VN piasters had already been lent out: 5.32 million to Vietnamese plantations and about 144 million to eight French firms³⁴, seven of which had been created prior to 1939. The three largest beneficiaries, (benefitting from 121 millions), were the Plantation des Terres Rouges, the Caoutchoucs d'Extreme-Orient - the new name of the SFFC plantations -, and the SIPH³⁵, a distribution reminiscent of the loans authorized by the French colonial government close to thirty years before. More generally, while most "smallholding" plantations, under 500 hectares, had been transferred over to Vietnamese owners, close to all large plantations remained French, with a continuing concentration of surfaces: while large estates controlled 64% of rubber lands in 1943, this number grew to 82% by 1970 (Aso 2018, 225). Decolonizing rubber was thus essentially happening at the bottom, not the top of the industry, as the period between 1954 and 1963 was still a "relative golden age" for French

plantations. R. Legrand, Report to the the Board of Compagnie du Mékong, Dec. 8, 1946. D11AH290, Archives BNP.

³³ M. Gérard, "Les problèmes économiques que posent la production et la commercialisation du caoutchouc au Vietnam", March 8, 1958, Banque of Indochina, 439AH5807, ACA.

³⁴ Letters to the directors of the Banque de l'Asie, July 25, August 20, September 27, and October 3, 1958; Banque Nationale du Vietnam, Extract from the Bulletin Economique (n.3), February 15, 1959; Speech of Huyng Van Lang, . Banque of Indochina, Loans to planters, 439AH5807, ACA.

³⁵ For an account of SIPH activities between 1955 and 1972, see the autobiography of one of its plantation manager Michel Michon (2001).

firms. Only after 1963 did production start to suffer from the intensifying conflict with U.S. forces - as the growing use of carpet bombings and herbicides such as Agent Orange decimated rubber trees, and the French were gradually forced to leave Vietnam - with production plummeting to just 20,000 tons in 1972³⁶.

Overall, all the joint-stock companies still in activity in 1939 would continue to exist until the end of Vietnam War in 1975³⁷, highlighting the long legacy of private capital invested in rubber, through and beyond decolonization. However, not all of them pursued their activity in Vietnam, and rarely did they stick exclusively with rubber production, as two wars and the end of colonial rule offered much less stability and protection for shareholders (Isnard 1953, Frieden 1994)³⁸. Many firms moved their headquarters elsewhere in the Empire in the 1950s and 1960s, and started diversifying beyond rubber: as two examples among many, after 1975, the Plantation des Terres Rouges produced rubber and palm oil in Malaysia, as well as timber in Cameroon, while the SIPH relocated most of its activity to West Africa, growing cocoa, rubber, timber, palm oil and coffee³⁹. While all rubber plantations were eventually nationalized in Vietnam (and largely compensated for the expropriation ANMT 1096) after the Northern victory in 1975, some of these firms proved enduring: the Plantations des Terres Rouges and Compagnie du Cambodge still famously part of the Bolloré group, while the SIPH was absorbed by Michelin in 2017, and even a smaller firm like Hévéas de Tayninh still operates as a minor portfolio company.

³⁶ As mentioned by a local report for the BIC in 1965, while in the past "generally the military operations had interfered very little with the economic life", it was "now no longer the case", with many planted regions becoming "battlefields" and firms struggling to both "produce and evacuate". At that point, some planters were considering that a nationalization would be welcome, allowing them to ask for compensation from the French government. Letters to the Director of the Banque de l'Asie, May 15, 1964 and June 28, 1965. 439AH5807, ACA; see also Aso 2018 (270-276).

³⁷ The two firms disappearing in 1960 and 1961 are part of a financial reorganization within CEXO, the single merged company of the former SFFC. "Société indochinoise des cultures tropicales", *L'information financière, économique et politique*, July 1, 1959, Gallica, BNF.

³⁸ Michelin's plantations were progressively abandoned during the 1960s, with the firm simultaneously renouncing to its strategy of vertical integration, in favor of purchasing from small suppliers, mostly in Indonesia and Malaysia.

³⁹ Report of the General Assembly, SPTR, June 30, 1977. 65AQJJP, ANMT; SIPH, Cote Desfossés, June 26, 1984, BNF.

6. Conclusion

How profitable was the French Colonial Empire, what drove capital investments and returns, and for which type of investors? By extending the literature on “colonial returns”, (with a recent shift towards South East Asia, Buelens and Frankema 2015, Rönnbäck et al. 2022) to the French case, this article contributes to a revision of the long-standing argument that the colonial possessions were increasingly a “financial burden” for the state, making the “divorce” evitable; following Marseille’s (1984) famous argument. Cogneau et al (2024) have recently challenged part of this narrative, showing the existence of a “colonial drain” in the French case – i.e. colonies experienced a structural deficit with France once military expenditures are removed for monetary flows - similar to that of British India, yet they provide little insights into the actual returns of private investments. By focusing on Indochina, we show that the “pearl of the Empire” became a highly profitable investment for rubber firms late in the period, that is after the mid-1930s; whereas most accounts tend to suggest that the marked the beginning of capital flights away from the Empire, for lack of returns. In doing so, we showed that second iteration of the concession system created sufficient incentives and derisking for equity capital to flow towards rubber plantations, by providing lenient access to land and coerced labor, in exchange for strict equity and cultivation clauses. Beyond our period, despite the lack of consistent data after 1945, all major firms continuing to operate until the end of Vietnam War. Crucially, these profits occurred when demand for Indochinese rubber shifted away from metropolitan France, with most exports shipped to the U.S. at the dawn of the war, and to Germany and Japan afterwards. Profits thus occurred later than in BM and the DEI, because of the late entry of Indochina into the rubber market, better planting and tapping techniques, but also because of a specific form of government support deriving from the concession regime. When firms risked collapsing as plantations reached maturity in the early 1930s, the metropolitan government intervened broadly, both through subsidies financed by local government debt - the burden of which fell on colonial taxpayers - or a direct takeover of certain affairs such as the SIPH, thus favoring the consolidation of the rubber industry. In short, this evidence that lowering returns were not, in the case of Indochinese rubber, a driver of decolonization.

Lastly, this paper hopes to open the door to future research, with many questions begging further empirical investigation. A first set of questions pertains to comparisons within the French colonial Empire, for the post-1918 era. Indochina and its concession regime surely represents a standout to contradict the long-standing narrative described above, yet some evidence suggests that other areas attracted large capital inflows after 1918, such as Morocco, Madagascar or New Caledonia (Boiteau 1958, Bencivengo 2019, Cogneau et al. 2024). In the case of North Africa, Saul (2016) has shown that investments and profits remained high in the afterwar, with investors retracting only reluctantly. Moreover, since capital experienced massive internal movements during decolonization, shifting for instance, from Indochina to West Africa or Madagascar, and later toward metropolitan France, mapping profits and firm behaviors proves key towards understanding the imprint of investment across and beyond the Empire. The second set of questions relates to the distribution of returns among shareholders, not strictly between : on the one hand, not all assets paid equal returns, with founders' share often having a preferential access to dividends, and common stocks sometimes showing no returns (Buelens and Frankema 2015, Rönnbäck and Broberg 2019: 295-301). On the other, little is known about the social-occupational status or wealth of colonial investors in France, in contrast with the literature on "gentleman capitalism" (Cain and Hopkins 1987, Rönnbäck and Broberg 2019, 45-46) in the British Empire. Finally, a third, broader question concerns the literature on "colonial returns": this paper suggests adopting a sectorial approach within a trackable political economy context, as a middle-ground between the macro comparison of average returns among sampled firms, and micro, business case studies. Such a methodology allows to analyze conjointly consistent economic data, with business and political archives, thus allowing for contextualized results about the distribution and drivers of profits.

References

Aso, Michitake. *Rubber and the making of Vietnam: An ecological history, 1897–1975*. UNC Press Books, 2018.

Bairoch, Paul, “Jacques Marseille, Empire colonial et capitalisme français. Histoire d’un divorce. Paris, Albin Michel”, *Annales. Economies, sociétés, civilisations* 1 (1988) : 144-147.

Barlow, Colin and John Drabble, “Government and the emerging rubber industries in Indonesia and Malaysia, 1900-40”, in Booth, Anne, W.J. O’Maley and Anna Weidemann, *Indonesian economic history in the Dutch colonia era*, Yale University Press (1990): 187-209.

Barreyre, Nicolas and Nicolas Delalande 2020. *A world of public debts. A political history*. Palgrave Macmillan, 2020.

Bauer P.T. *The rubber industry: A study in competition and monopoly*. University of London, 1948.

Bencivengo, Yann. *Nickel: La naissance de l’industrie calédonienne*. Presses universitaires François-Rabelais, 2019.

Bittmann, Simon, “Une terre rouge de coolies. Hiérarchies raciales et rationalization du travail dans le caoutchouc indochinois”, *Marronnages*, Special Issue on *Racial Capitalism*, under press (2024a).

Bittmann, Simon. “Sous-traiter la colonisation. Entreprises et entrepreneurs dans le caoutchouc indochinois, 1910-1939”, Working Paper (2024b).

Boiteau, Pierre. *Madagascar. Contribution à l’histoire de la nation malgache*. Editions sociales, 1958.

Booth, Anne. “The plural economy and its legacy in Asia”, in Bogaerts, Els and Remco Raben, *Beyond empire and nation: Decolonizing societies in Africa and Asia, 1930s-1970s* (2013): 71-107.

Boucheret, Marianne. "Les organisations de planteurs de caoutchouc indo-chinois et l’Etat du début du XXe siècle à la veille de la Seconde Guerre mondiale." *Publications de la Société française d’histoire des outre-mers* 6.1 (2008): 715-734.

Brocheux, Pierre. "Crise économique et société en Indochine française." *Outre-Mers. Revue d’histoire* 63.232 (1976): 655-667.

Brocheux, Pierre, and Daniel Hémerly. *Indochina: an ambiguous colonization, 1858-1954*. Vol. 2. Univ of California Press, 2009.

Buelens, Frans, and Ewout Frankema. "Colonial adventures in tropical agriculture: new estimates of returns to investment in the Netherlands Indies, 1919–1938." *Cliometrica* 10 (2016): 197-224.

Cain, P.J. and A.G. Hopkins, “Gentlemanly Capitalism and British Expansion Overseas II: New Imperialism, 1850–1945.” *The Economic History Review* 40.1 (1987): 1–26.

Clarence-Smith, William G. "Rubber cultivation in Indonesia and the Congo from the 1910s to the 1950s: divergent paths." In Frankema, Ewout, and Frans Buelens, *Colonial Exploitation and Economic Development*. Routledge (2013): 193-210.

Cleary, Mark. "Land codes and the state in French Cochinchina c. 1900–1940." *Journal of Historical Geography* 29.3 (2003): 356-375.

Cogneau, Denis. *Un empire bon marché: histoire et économie politique de la colonisation française, XIXe-XXIe siècle*. Seuil, 2023.

Cogneau, Denis, Yannick Dupraz, Elise Huillery and Sandrine Mesplé-Somps, "Colonialism on the Cheap: The French Empire, 1830-1962." Working Paper (2024), halshs-04598604.

Conklin, Alice L. *Mission to civilize: The republican idea of Empire in France and West Africa, 1895-1930*. Stanford University Press, 1997.

Coquery-Vidrovitch, Catherine. "L'impact des intérêts coloniaux: SCOA et CFAO dans l'Ouest Africain, 1910–1965." *The Journal of African History* 16.4 (1975): 595-621.

Coquery-Vidrovitch, Catherine. *Le Congo au temps des grandes compagnies concessionnaires 1898-1930. Tome 1*. Éditions de l'École des hautes études en sciences sociales, 2001, <https://doi.org/10.4000/books.editionsehess.359>.

Debeir, Jean-Claude. "Le problème des exportations de capitaux français de 1919 à 1930: Substitutions et concurrences." *Relations internationales* (1976): 171-182.

De Jong, Abe, Tim Kooijmans, and Peter Koudijs. "Plantation mortgage-backed securities: evidence from Surinam in the eighteenth century." *The Journal of Economic History* 83.3 (2023): 874-911.

Dormois, Jean-Pierre and François Crouzet. "The Significance of the French Colonial Empire for French Economic Development", *Journal of Iberian and Latin American Economic History*, 1, 16 (1998): 22-23.

Drabble, John. "Investment in the Rubber Industry in Malaya c. 1900–1922." *Journal of Southeast Asian Studies* 3.2 (1972): 247-261.

Erikson, Emily. *Chartering capitalism: Organizing Markets, States, and Publics*. Emerald Group Publishing, 2015.

Fabre, Martine. "Le contrat de concession aux colonies. Norme molle et impact environnemental", In de Mari Eric et Dominique Taurisson-Mouret, *L'impact environnemental de la norme en milieu contraint. Exemples de droit colonial et analogies contemporaines*. ediSens (2012): 186-206 .

Figart, David. M. *The plantation rubber industry in the Middle-East*, survey for the Department of Commerce, U.S. Bureau of Foreign and Domestic Commerce, 1924.

Fitzgerald, Edward Peter. "Did France's colonial empire make economic sense? A perspective from the postwar decade, 1946–1956." *The Journal of Economic History* 48.2 (1988): 373-385.

Frankema, Ewout, and Frans Buelens. *Colonial exploitation and economic Development*. Routledge, London, 2013.

Frieden, Jeffrey A. "International investment and colonial control: A new interpretation." *International Organization* 48.4 (1994): 559-593.

Gelderblom, Oscar, Abe De Jong, and Joost Jonker. "The formative years of the modern corporation: The Dutch East India Company VOC, 1602–1623." *The journal of economic history* 73.4 (2013): 1050-1076.

Gonjo, Yasuo. *Banque coloniale ou banque d'affaires*. Institut de la gestion publique et du développement économique, Comité pour l'histoire économique et financière de la France, 1993, <https://doi.org/10.4000/books.igpde.4509>.

Gordon, Alec. "Contract labour in rubber plantations: Impact of smallholders in colonial South-East Asia." *Economic and Political Weekly* (2001): 847-860.

Le Bris, David, and Pierre-Cyrille Hautcoeur. "A challenge to triumphant optimists? A blue chips index for the Paris stock exchange, 1854–2007." *Financial History Review* 17.2 (2010): 141-183.

Hilferding, Rudolf. *Finance capital: A study of the latest phase of capitalist development*. London, Routledge and Kegan Paul, 1981 (1910).

Hotchkiss, H. Stuart. "Operations of an American Rubber Company in Sumatra and the Malay Peninsula." *The Annals of the American Academy of Political and Social Science* 112.1 (1924): 154-162.

Hu , Ly Binh. *Le r gime des concessions domaniales en Indochine*. Paris, Domat-Montchrestien, 1931.

Isnard, Hildebert. "Les investissements   Madagascar de capitaux repli s d'Indochine", *Les cahiers d'outre-mer*, 24 (1953): 408-411.

Jacob, Guy, and Francis Koerner. "Economie de traite et bluff colonial: la Compagnie occidentale de Madagascar (1895-1934)." *Revue historique* 248. Fasc. 2 (504 (1972): 333-366.

Jeoung, Jaehyun. *Exploitation mini re et exploitation humaine : les charbonnages dans le Vietnam colonial, 1874-1945*. PhD, History, Universit  Sorbonne Paris Cit , 2018

Kalikiti, Webby, S. *Plantation Labour : Rubber planters and the colonial state in French Indochina*, PhD, History, University of London, 2000.

Koerner, Francis. "Le contr le de l'industrie fran aise du caoutchouc par l'Allemagne nazie (1940-1944)." *Guerres mondiales et conflits contemporains* 4 (2010): 43-61.

Lefevre, Daniel. *Ch re Alg rie. La France et sa colonie, 1930-1962*. Paris, Flammarion, 2005.
Marseille, Jacques. *Empire colonial et capitalisme fran ais. Histoire d'un divorce*. Paris, Albin Michel, 1984.

Meuleau, Marc. *Des pionniers en Extrême-Orient. Histoire de la Banque de l'Indochine, 1875-1975.* Paris, Fayard, 1990.

Michon, Michel M. *Indochina Memoir, Rubber, Politics, and War in Vietnam and Cambodia 1955–1972.* Tempe, AZ: Program for Southeast Asian Studies, 2001.

Nørlund, Irene. "Rice and the colonial lobby: the economic crisis in french Indochina in the 1920s and 1930s." In Boomgaard, Peter and Ian Brown, *Weathering the storm: the economies of southeast Asia in the 1930's depression.* Cambridge University Press (2000): 198-226.

Persell, Stuart Michael. *The French colonial lobby, 1889-1938.* Hoover Press, 1983.

Phillipps, Andrew and J.C. Sharman. *Outsourcing empire: How company-states made the modern world.* Princeton, Princeton University Press, 2020.

Rabut, Elisabeth. "Le Mythe Parisien de la Mise en Valeur des Colonies Africaines à l'Aube du XXe Siècle: La Commission des Concessions Coloniales 1898–1912." *The Journal of African History* 20.2 (1979): 271-287.

Razafindrakoto, Mireille, François Roubaud and Jean-Michel Wachsberger, *L'énigme et le paradoxe. Économie politique de Madagascar,* AFD - IRD Éditions, Paris-Marseille, 2017

Lagneau-Ymonet, Paul, and Angelo Riva. *Histoire de la Bourse.* La Découverte, 2015.

Robequain, Charles. *L'Indochine française.* Paris, Armand Colin, 1935.

Rönnbäck, Klas, and Oskar Broberg. *Capital and colonialism: the return on British investments in Africa 1869–1969.* Springer, 2019.

Rönnbäck, Klas, Oskar Broberg, and Stefania Galli. "A colonial cash cow: the return on investments in British Malaya, 1889–1969." *Cliometrica* 16.1 (2022): 149-173.

Sasges, Gerard. "Scaling the Commanding Heights: The colonial conglomerates and the changing political economy of French Indochina." *Modern Asian Studies* 49.5 (2015): 1485-1525.

Sasges, Gerard. *Imperial intoxication: Alcohol and the making of colonial Indochina.* University of Hawaii Press, 2017.

Saul, Samir. *Intérêts économiques français et décolonisation de l'Afrique du Nord (1945-1962).* Librairie Droz, 2016.

Soliva, R. *Vues économiques sur la production du caoutchouc.* Singapour, Kelly and Walsh, 1931

Stoler, Ann. L. *Capitalism and confrontation in Sumatra's plantation belt, 1870-1979.* New Haven, Yale University Press, 1985.

Suret-Canale, Jean. *Afrique Noire – L'ère coloniale (1900-1945).* Paris, Editions sociales, 1962.

Tissot Pierre. " La production du caoutchouc, son avenir", *Revue de botanique appliquée et d'agriculture coloniale* 178 (1936): 441-463.

Tran, Xuan Tri. *Les plantations d'hévéas en Cochinchine (1897, 1940)*. PhD, History, Université d'Aix-Marseille, 2018.

Veeser, Cyrus. "A forgotten instrument of global capitalism? International concessions, 1870–1930." *The International History Review* 35.5 (2013): 1136-1155.

Yacob, Shakila. "Model of Welfare Capitalism? The United States Rubber Company in Southeast Asia, 1910–1942." *Enterprise & Society* 8.1 (2007): 136-174.