

The Black Man's Burden: The Cost of Colonization of French West Africa

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September 1, 2012

Abstract

Was colonization costly for France? Did French taxpayers contribute a lot to colonies' development? This view has been widely accepted among French historians, though little empirical evidence has been provided. Using original data from the colonial budgets of French West Africa and the central budgets of France, this paper provides new insights into colonial public finances in this region. It reveals that the contribution of French taxpayers to public investments in French West Africa was extremely painless: French public aid to French West Africa accounted on average for 0.027 percent of annual total metropolitan expenditures. Military conquest and colonial central administration absorbed most of the expenditures for French West Africa : including these costs, the average annual cost of French West Africa amounted to 0.27 percent of total metropolitan expenses. As a result, colonization was profitable for France as soon as its impact on domestic production exceeded 2,902.6 million 1914 Francs (total) over 1844-1957. From the West African perspective, French taxpayers' contribution was almost negligible: public aid to French West Africa amounted on average to 0.4 percent of its annual public revenue. On the contrary, colonization turned out to be a considerable burden for African taxpayers since French civil servants were charged on local budgets on a basis of French expatriate salaries that absorbed a disproportionate share of AOF's public expenditures.

Key words: colonization, public finances, West Africa

JEL classification: N10, O16, H50

1 Introduction

On February 23th 2005, the French parliament adopted a law imposing the recognition of the positive role of colonization in French history textbooks (law n° 2005-158¹). The proponents of this law argue that French colonization allowed the colonies to benefit from massive investments in education, health, infrastructure, agriculture etc. that boomed their development. This view that

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¹Article 4: "Les programmes scolaires reconnaissent en particulier le rôle positif de la présence française outre-mer, notamment en Afrique du Nord"

French colonization provided such massive investments comes usually with two corollaries: first, colonization brought somewhat a benefit for the colonies, and second, colonization was a burden for metropolitan taxpayers. But opinions on the positive role of colonization diverge dramatically and the law caused a raging public debate that was not resolved by historians: On the one hand, some scholars support the idea that colonies were very expensive for French taxpayers since the metropole funded large public investments in education, health and infrastructure in the colonies (Bloch-Lainé, 1956; Jeanneney, 1963; Marseille, 1984; Lefeuvre, 2005). On the other hand, a number of recent history books denounce the more general extractive strategy of France in the colonies which affected not only the long term economies but also politics by shaping poor-quality governance and institutions (Ferro, 2003; Liauzu, 2004; Le Cour Grandmaison, 2005; Blanchard, Bancel et Lemaire, 2005; Manceron, 2005). After several weeks of an intense debate among both academic historians and the civil society, the controversial article of the law was finally amended.

Whether French taxpayers paid for massive public investments in the colonies or whether colonial institutions have been detrimental to long term development is part of a broader debate on the costs and benefits of colonization. The question is vast, including economic aspects (costs and benefits from private and public investments as well as from colonial trade for both the metropole and the colonies), political aspects (state building, legal system, institutions and their quality) and demographic aspects (importation/exportation of new diseases, colonial contingents during WWI and WWII, among others). On the *economic* costs and benefits of colonization, the first pieces of research in the 1970's brought a rather positive picture of how colonization was beneficial for the metropole: they claimed that the French productive sectors benefited greatly from colonial experience thanks to low cost imports, especially agricultural imports, and to a protectionist commercial policy giving a large advantage to French exports compared to other countries' exports to the colonies (Arghiri, 1969; Vanhaeverbeke, 1970; Amin, 1971; Amin, 1973). The same arguments have been documented on the British side: In absence of the British empire, the colonies could have placed higher tariffs on British exports and caused a deterioration of the British terms of trade and lower exports (Edelstein, 1994). Offer (1993) also writes about the British empire that "investments in defence in empire secured sources of vital raw materials and manufactures during WW1, so that if there was any subsidy to the dominions, it was amply repaid". But Marseille (1984), Davis and Huttenback (1986) and O'Brien (1988) broke the common opinion by claiming that colonization was costly to imperial economy, claiming on three arguments: first, public invest-

ments in the colonies were burdensome for French and British taxpayers²; second the metropolitan private sector suffered from colonization because some private investments fled towards the colonies and the returns to colonial investments were not as high as expected; Finally, colonial trade had negative externalities on the modernization of national productive sectors, because of the perverse effects of lack of competition and colonial protectionism on innovation and competitiveness³. The corollary is that colonies at least benefited from these public and private investments (Marseille, 1996; Lefeuvre, 2005).

Both views are supported by little and incomplete evidence and leave a large share to opinion and interpretation, especially as to the French empire. One reason for the lack of evidence is the nature of the costs and benefits of colonization: some costs and benefits like the quality of institutions, the psychological effects of being colonized / being the colonizer on collective self-esteem and trust towards the institutions, or loss of life during WWI and WWII, would definitively be a stretch for a quantitative assessment. A second reason for the lack of hard evidence is that very question of the costs and benefits of colonization would require an estimation of the *impact* of colonization which can hardly be identified due to the absence of counterfactual: Africa was enterily colonized, except Egypt. Similarly, it might be difficult to find productive sectors in France that were not potentially affected by colonization to serve as a control group. The immediate consequence is that the causal impact of colonization on African and French economies remain unknown: we don't know what would have been African and French performances (e.g. investments in education, level of and returns to private investments, domestic production or more generally the welfare) had colonization not exist.

The question that I want to address in this paper is therefore more modest: I take the levels of public resources in both France and the colonies as given and ask who supported the cost of public expenses in the colonies. This question remains crucial since the usual argument from those scholars and politicians claiming on the "positive role" of colonization is that French taxpayers paid for the public investments made in the colonies. Taking the amount of public resources in the metropole and in the colonies as given (i.e. ignoring the endogeneity of tax revenue in both France and the colonies), the questions addressed in this paper are: what share of French tax

²In Marseille (1984), the content of the public investments is not detailed but the general picture is more investments in health, education and infrastructure. In Davis and Huttenback (1986), the public investments at stake are more precisely collective defense: they argue that tax burden on the British taxpayers could have been reduced by 20 percent in the absence of empire because the United Kingdom bore a disproportionate share of the defence costs of the British empire.

³To my knowledge, this argument is specific to Marseille (1984).

revenue was allocated to the colonies? What share of local public resources was received from the metropole? In the 1970's, a team of French economic historians supervised by Jean Bouvier and Catherine Coquery-Vidrovitch⁴ started the collection of the colonial budget data. François Bobrie and Catherine Coquery-Vidrovitch produced some evidence on the financial transfers between the metropole and the colonies, but unfortunately the analysis remained incomplete⁵ (Bobrie, 1976; Coquery-Vidrovitch, 1973 and 1982). Jacques Marseille has been credited as the one who provided a final answer to the question of the cost of colonization for French taxpayers when he published his dissertation in 1984 (Marseille, 1984), but his analysis is based on indirect evidence on colonial trade deficits and therefore remains unconvincing. New insights into the colonial public finances are therefore needed, and this paper is an attempt to fill the gap.

I use a new dataset on the financial transfers between the metropole and French West Africa to calculate the actual cost of colonization of French West Africa for French taxpayers. French West Africa (Afrique Occidentale Française, thereafter AOF) was a federation of eight colonies: Bénin (called Dahomey during the colonial period), Burkina-Faso (called Haute-Volta during the colonial period), Côte d'Ivoire, Guinée, Mali (called Soudan français during the colonial period), Mauritanie, Niger and Senegal. I collected budgetary data from 1844 to 1957 at the local, federal and central levels so as to get a comprehensive view on financial transfers in both directions –from the metropolitan budget to colonial budgets and from colonial budgets to the metropolitan budget. This study focuses on one specific territory of the former French empire, AOF, which was part of a vast empire⁶ including colonies: Vietnam, Algeria, French Equatorial Africa⁷ and Madagascar; protectorates: Tunisia, Morocco, Cambodia and Laos; and mandates: part of the Cameroon, part of the Togo, Syria and Lebanon. Since there is no reason why AOF can be seen as representative of French colonies, the purpose of this study is to answer the question for one specific territory without claiming on external validity. This study is a building block of a larger study on the whole French empire. Colonization varied significantly from a territory to another within French empire, largely adapting both institutions and the economic strategy to local context. For this reason, it seems crucial to differentiate the analysis by territory to paint an accurate picture of the cost of French colonization. From the former colonies' point of view, whose development paths since independence

⁴Recherche Coopérative sur Programme (RCP), CNRS, « Commerce, investissements et profits dans l'empire colonial français », n°326, 1973-1979.

⁵Part of the collected data was lost while the university moved, especially data on French West Africa

⁶I let aside the territories that remain French today, since colonization is still ongoing there.

⁷Gabon, Congo-Brazzaville, Tchad and Centrafrique.

differed significantly, it is also more informative to learn about each territory separately rather than the average.

Results show that the financial cost of AOF for the metropole was low: from 1844 to 1957, public aid to French West Africa accounted on average for 0.027 percent of annual metropolitan public expenditures. The cost of the military conquest and central administration represented the vast majority of the metropolitan expenditures for this territory: adding these costs to public aid raises the average annual share of metropolitan expenditures devoted to French West Africa from 0.027 to 0.27 percent. This allows us to conclude that colonization of French West Africa was a profitable experience for France as soon as its impact on domestic production exceeded 2,902.6 million 1914 Francs total over 1844-1957.

On the French West African side, metropolitan public aid was not as beneficiary as is often presented: from 1907 to 1957⁸, metropolitan public aid accounted on average for 0.4 percent of French West Africa's public revenue. In addition to public aid, the metropole also offered French West Africa the opportunity to borrow some financial resources abroad. Including public loans and cash advances, which were systematically reimbursed in due time during colonial times as shown by colonial budgets, metropolitan cash assets represented on average 5.7 percent of French West Africa's public revenue. Local taxes thus accounted for the vast majority of French West Africa's revenue, which should yet support the very high cost of French civil servants whose salaries were disproportionately high compared to the limited financial capacity of the local population. French administrators, teachers, doctors, engineers, lawyers, etc. were actually paid on a metropolitan basis and got an additional allowance for being an expatriate. The colonial public finances thus created a system where most public resources were collected on an African basis while spent on a French basis. To illustrate this point, data show that French colony governors and district administrators (about 130 persons) and their respective cabinets altogether accounted for more than 13 percent of total local public expenditures. These findings lead to the conclusion that colonial public finances turned out to be more of a black than a white man's burden.

This paper attempts to clarify the debate on the cost of French colonization in the specific case of French West Africa. With respect to the existing literature, the paper innovates in using original and first-hand budgetary data on the whole colonial period. I also distinguish subsidies (public aid) from loans and cash advances (investments), which was a reason why the budgetary

⁸This period of time is the largest one over which French West Africa's revenue can be observed.

cost of colonization has been misinterpreted in the existing research. Moreover, the paper considers both transfers from the metropole to AOF and transfers from AOF to the metropole which, when ignored, caused another misleading caveat in the existing literature. Finally, the paper does not make any assumptions in the calculation of financial transfer balance from the metropole to AOF but simply uses actual data on colonial public financial transfers, as opposed to the leading part of the existing literature. The paper therefore provides a reliable and comprehensive view on the colonial public finance system and public investments in French West Africa. Yet an important limitation of the paper is the restricted geographical coverage. The results on French West Africa should be considered as specific until a more extended study is performed on the whole French colonial empire. It seems likely that North Africa, especially Algeria, might have experienced a different – more generous – colonial finance system.

This paper is structured as follows: Section 2 formalizes the welfare effects of colonization on taxpayers to clarify what questions are (not) addressed in this paper. Section 3 presents the empirical strategy that is developed to answer these questions. Section 4 presents data sources and gives a description of collected data. Section 5 presents evidence on the main variables of interest, while section 6 presents the main results of the paper, that is the cost of AOF colonization for French taxpayers and the benefits of AOF colonization were for West Africans. Section 7 gives further evidence on public expenditures in AOF. Section 8 concludes.

2 Formalizing the Welfare Effect of Colonization on Taxpayers

In this section, I consider the basic channels through which colonization could have affected the welfare of taxpayers. Taxpayers' welfare W is a strictly increasing function f of disposable income, which depends on domestic production Y , tax rate τ and public expenditures G : $W = f((1 - \tau)Y + G)$. The economy is therefore defined by the triplet (Y, τ, G) .

The counterfactual that I consider here is the absence of colonization between the metropole and the colony, with no other colony for the metropole and no other metropole for the colony⁹. In the absence of colonization (hereafter, tilda refers to this counterfactual), the amount of public expenditures are simply equal to the tax revenue: $\tilde{G} = \tau\tilde{Y}$, and thus the welfare of taxpayers depends only on

⁹Another plausible reading of the late 19th century's history would be to consider the most likely alternative to French colonization to be Portuguese, Spanish or British rule, not independent African rule.

domestic production: $\tilde{W} = f(\tilde{Y})$. In the presence of colonization, the metropole and the colony increase their bilateral trade of goods and capitals, which has an impact on domestic production Y . Transfers of public resources also take place between the metropole and the colony: T_o denotes public transfers going out of the economy (to the other economy) and T_i denotes public transfers going in the economy (from the other economy). So in presence of colonization, public expenditures are defined by: $G = \tau Y + T_o - T_i$ and $W = f((1 - \tau)Y + G) = f(Y + T_i - T_o)$.

Whether colonization increases the welfare of taxpayers is therefore simple to characterize (we assume that f is continuous):

$$\begin{aligned} \tilde{W} \leq W &\Leftrightarrow f(\tilde{Y}) \leq f(Y + T_i - T_o) \\ &\Leftrightarrow \tilde{Y} \leq Y + T_i - T_o \\ &\Leftrightarrow T_o - T_i \leq Y - \tilde{Y} \end{aligned}$$

Meaning that colonization improves the welfare of taxpayers as long as the variation in domestic production due to colonial trade is higher than the net public transfer from the economy to the other. This simple formalization of the problem leads therefore to clear welfare effects on taxpayers:

- For the economy which transfers relatively less public resources (negative net transfer), colonization is beneficiary for taxpayers for any increase in domestic production as well as for small enough decreases in domestic production, such that the loss in domestic production is compensated by the gain from bilateral public transfers.
- For the economy which transfers relatively more public resources (positive net transfer), colonization is beneficiary for taxpayers only for large enough increases in domestic production, such that the increase in domestic production compensates the loss in bilateral public transfers.

The contribution of the paper is to provide T_o and T_i for both the metropole and French West Africa, which gives the lower bound of the variation in domestic production that would make colonization beneficiary for French and West African taxpayers: $T_o - T_i$. Our work also gives τY (tax revenue) in French West Africa, from which we could infer Y using an estimation of the average tax rate¹⁰. Data on Y in metropole is already available from French national statistic records. The remaining parameter, \tilde{Y} , is the counterfactual domestic production in the absence of colonization. A challenge

¹⁰Such an estimation is not an easy task but I think that it would be feasible since the colonial budgets report the tax rate for each tax (or at least the main ones) in the economy.

for future research is to give evidence on \tilde{Y} and compare this evidence with the $T_o - T_i$ bound to conclude on the welfare effects of colonization on taxpayers.

3 Empirical Strategy

3.1 Background on the Colonial Public Finances in AOF

French colonial public finances were based on three levels of budgets: the metropolitan level, the federal level and the local level (Figure 1). This section provides a description of revenues and expenses at each level in the case of French West Africa.

Metropolitan Level At the metropolitan level, the colonial expenses were supported by the budget of the French Ministry of Colonies (before 1894, Ministry of Navy Forces and Colonies). These expenses were three-fold:

1. Military expenses for the colonial conquest and pacification: military personnel salaries, accommodation and transport, and military material
2. Running costs of central administration in the metropole: the Ministry of Colonies, Geographical Unit, Inspection Units and Registration Units, communication costs (mails, telegraphs) and advertisement costs (propaganda material, grants to emigrants to the colonies, grants to the school for colonial officials (ENFOM), the colonial exhibitions
3. Transfers to the colonies: subsidies, cash advances (to be reimbursed in the short run with an interest rate) and loans (to be reimbursed in the long run with an interest rate) to both the public sector (federal government and public companies) and the private sector¹¹.

Federal Level At the federal level, the federal budget received most of its revenue from federal taxes, mostly trade taxes and fiscal taxes. The federal budgets also received subsidies and cash advances from the national budget. The expenses of the federal budget covered the running costs of federal administration (federal personnel salaries, material and furniture), and some equipment expenses related to large-scale infrastructure like trans-colonial railways and seaports. The federal

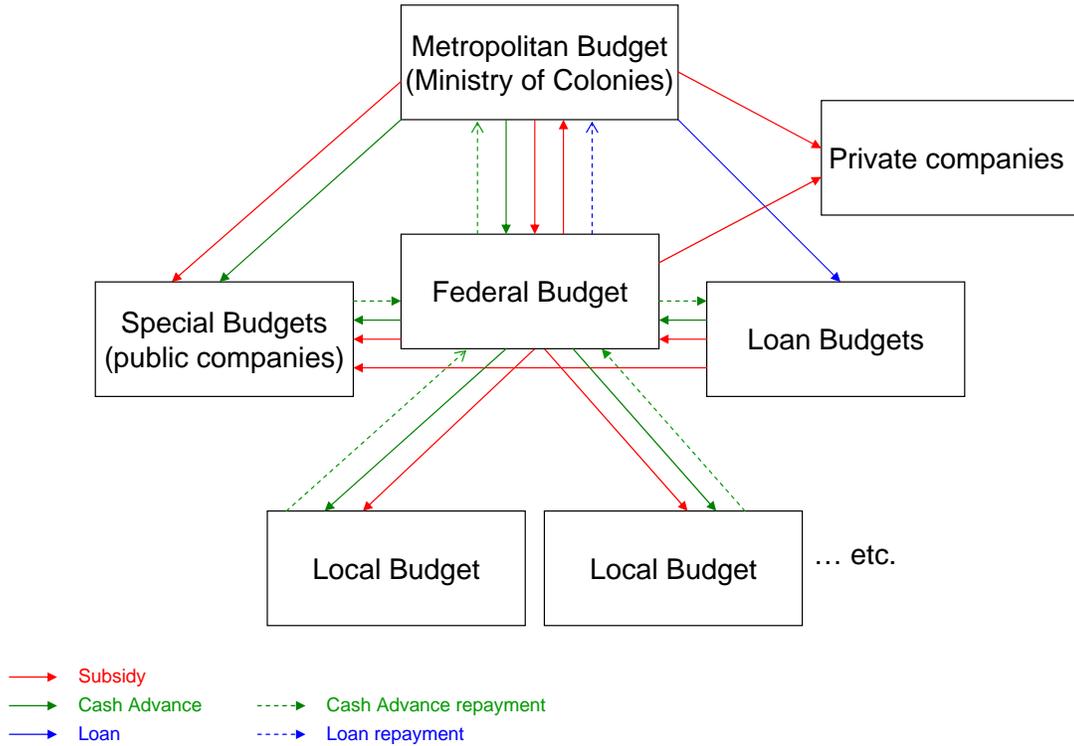
¹¹For instance, the private railway company La Société de Construction des Batignolles received subsidies from the metropole to construct the line Dakar-Saint-Louis from 1882 to 1885. The metropolitan budget continued to transfer resources to the company to fill the gap between running cost and revenue until 1928. The other railway lines (Thiès-Kayes-Koulikoro, Conakry-Kankan, Abidjan-Ouagadougou and Porto-Novo-Cotonou-Parakou) were constructed by public railway companies, i.e. railway companies that were owned by the government.

budget also transferred some funds towards the metropole: public loans repayments, cash advances repayments and subsidies. Finally, the federal budget provided some subsidies to the colonies (which are partly rebates to colonies on the customs revenue taken out of each colony) and to private companies.

Auxiliary budgets existed at the federal level in addition to the federal budget: first, the “loan budget”, whose revenue was based entirely on public loans contracted with the metropole. Funds from loans were allocated to large-scale infrastructure, and marginally to investments in health and education. Second, “special budgets” (“budgets spéciaux”) devoted to the accountability of public companies like railway companies, the port of Abidjan, the port of Dakar and the port of Conakry. The revenue of these auxiliary budgets were four-fold: subsidies and cash advances from the federal budget, subsidies and cash advances from the national budget, cash transfers from the loan budget and finally self-generated resources from companies’ activity. These auxiliary budgets received cash assets from the metropole but the repayment of the corresponding loans or cash advances was charged on the federal budget. The only expenses supported by the “special budgets” were the operation costs of the companies.

Colony Level At the colony level, the local budgets received revenue from local taxes, plus subsidies from the federal budget. Local budgets covered all the running costs related to local colonial administration: the government of the colony and the administration of districts and subdivisions, the costs of judicial processes, security and treasury, the costs of public support to agricultural and industrial activities, and the costs of public investments at the local level: education, health and infrastructure.

Figure 1 – Structure of Colonial Public Finances in AOF



The organization of French colonial public funding reflects largely the fundamental principle adopted by the law of April 13th 1900, entitled “Loi d’autonomie financière des colonies” (law of financial autonomy of the colonies). The running costs and equipment expenses in the colonies were structurally supported by the federal and local budgets, with the metropolitan budget supplementing at the federal level with subsidies, cash advances and loans when necessary. The contribution of the metropolitan budget was thought of as temporary with the objective of reaching financial autonomy of the federation as soon as possible.

3.2 Discussion about Transfers Between AOF and the Metropole

This paper proposes to give evidence on the public financial transfers between AOF and the metropole. More specifically, I propose to measure T_o and T_i for both the metropole (transfers in and out of the metropole) and AOF (transfers in and out of AOF). But the way to measure T_o and T_i is not straightforward because of the various nature of the transfers. This section discusses the nature of the transfers to help figuring out what measures of T_o and T_i should be considered.

3.2.1 The Asymmetry Between Transfers out of the Metropole and Transfers in AOF

A logical approach of the financial transfers between AOF and the metropole would be to consider that they are symmetric because what one economy transferred to the other is what the latter received from the former. Under this view, measuring the (in and out) transfers from one economy's point of view is equivalent, *mutatis mutandis*, to measuring the transfers from the other economy's point of view. This symmetry holds for transfers out of AOF: all expenses supported by the federal, local, loan and auxiliary budgets that are not disbursed for the sake of local development (including state building, infrastructure, institutions, public services etc.) are transfers to the metropole (subsidies, loan repayments and cash advance repayments). But the contrary is false: transfers *in AOF* are not equal to transfers *out of the metropole*: the metropolitan budget supported expenses that were not disbursed for the sake of metropolitan development but did not go into AOF's budgets: type 1 expenses (military costs of conquest and pacification) and type 2 expenses (running cost of the central administration). These two types of expenses can be interpreted as the cost of "being the colonizer": they occurred asymmetrically because colonization itself is asymmetric, one economy dominating the other -politically and institutionally. The domination happened at a cost which is the costs of the military conquest and central administration, that is, the difference between the transfers out of the metropole and the transfers in AOF. This domination cost could be seen as the deadweight loss associated with colonization.

3.2.2 Transfers to the Private Sector

Both the metropole and AOF provided resources to private colonial companies. These transfers aimed at providing support to private agents to help them creating income generating activities in AOF. It is not clear how they should be considered in our framework. One possible counterfact is that the financial support to the private sector was a transfer from French taxpayers (that is, decreasing metropolitan public expenditures G) to AOF taxpayers who would have had to pay for the construction and operating costs of the private companies in the absence of metropolitan support (that is, increasing AOF public expenditures G). Under this view, the financial transfers from the metropole to private colonial companies should be included in transfers out of the metropole / in AOF. Another possible counterfact is that these transfers are not going *out* of the metropole because the beneficiaries are French private entrepreneurs who benefited from public support to operate their business. Under this view, AOF taxpayers would not have provided resources to

these private colonial companies in the absence of metropolitan support and the firms would have incurred the normal market conditions while operating their business abroad. Under this view, the financial transfers from the metropole to private colonial companies should *not* be included in transfers out of the metropole / in AOF.

In AOF, the metropolitan support to the private sector was limited to only one single private company in AOF: a subsidiary society of La Société de Construction des Batignolles, which was selected among other companies to construct and operate the Dakar-Saint-Louis railway line. The metropolitan support started at the time the company started the construction of the line in 1884. The metropole provided a big first subsidy in 1884 and then smaller subsidies until 1914. Then, metropolitan support to Dakar-Saint-Louis railway turned to cash advances, no subsidy anymore. The cash advances ended in 1928.

As railway construction is one classical case of market failure where high fixed costs discourage private investors to enter the market, I consider that the metropolitan support to the Société des Batignolles was a substitute of a local public support rather than support to private agents: in the absence of the metropole, the local taxpayers should have paid to support the construction of the railway because no railway would have been constructed under normal market conditions. As a consequence, this specific metropolitan support to the private sector should be included in the total transfers out of the metropole / in AOF. Note that this cannot be *a priori* generalized to all metropolitan transfers to the private sector so the methodology should adapt to the specific context of the colony under consideration.

3.2.3 Differentiating Financial Investment and Cost

Financial transfers are not of the same nature: some correspond to financial investment while others are just cost. Actually, loans and cash advances that come with an market interest rate are financial investment making both the borrower and the lender better-off if everything with the credit goes well. On the contrary, subsidies are really a cost for the donor. However, loans and cash advances can be contracted at concessional financial terms, i.e. at a preferential interest rate in comparison to what the market would have offered to both the borrower and the lender. In this case, loans and cash advances entail an aid component that represents a form of subsidy from the lender to the borrower. Whenever the interest rate charged for a credit is lower than the discount rate, the present value of the debt is smaller than its face value, with the difference reflecting the (positive)

grant element of the credit. Following the definition of “Official Development Assistance” (ODA) introduced by the OECD in 1969, a minimum grant element of at least 25 per cent is required so that a loan can be considered as public aid.

3.3 Counterfactuals of Interest

To synthesize this discussion, transfers from the metropole to AOF can be decomposed in five components:

$$\begin{array}{rcccccc}
 \text{Transfers from} & = & \text{(1)} & + & \text{(2)} & + & \text{(3)} & + & \text{(4)} & + & \text{(5)} \\
 \text{the Metropole} & & \text{Cost of} & & \text{Cost of} & & \text{Loans and} & & \text{Subsidies to} & & \text{Public Aid} \\
 \text{to AOF} & & \text{Conquest} & & \text{Central} & & \text{Cash} & & \text{Private} & & \text{(ODA)} \\
 & & & & \text{Administration} & & \text{Advances} & & \text{Companies} & & \text{to AOF} \\
 & & & & & & \text{(at normal} & & \text{operating in} & & \\
 & & & & & & \text{market} & & \text{AOF} & & \\
 & & & & & & \text{conditions)} & & & &
 \end{array}$$

and transfers from AOF to the metropole can be decomposed in two components:

$$\begin{array}{rcc}
 \text{Transfers} & = & \text{(6)} \\
 \text{from AOF} & & \text{Repayment of} \\
 \text{to the Metropole} & & \text{Loans and} \\
 & & \text{Cash Advances} \\
 & & \text{(7)} \\
 & & \text{Public Aid} \\
 & & \text{(ODA)} \\
 & & \text{to the Metropole}
 \end{array}$$

Based on this decomposition, three counterfactuals of transfers between the metropole and AOF can be considered:

A=“Public-Aid-to-AOF”=(4)+(5)-(7) This counterfactual focuses on the amount of money that was *given* to African taxpayers by French taxpayers, i.e. public aid to AOF. This counterfactual considers the metropolitan subsidies to federal budget, the metropolitan subsidies to the Dakar-Saint-Louis railway operator and the “aid component” of loans and cash advances. Remind that the subsidies to the private Dakar-Saint Louis railway operator are included because railway is typically something that taxpayers contribute to due to classical market failures in this sector. Other railways were operated by public operators so the metropolitan subsidies to the construction and operation of other railways are included in the subsidies to the general budget.

B=“Total-Cash-Assets-to-AOF”=(3)+(5)-(6)-(7) This counterfact focuses on all the cash assets that AOF received from the metropole, not only subsidies but also loans and cash advances.

C=“Total-Charges-due-to-AOF”=(1)+(2)+(4)+(5)-(7) This counterfact takes into account all expenses related to colonization that were supported by French taxpayers, including the cost of “being the colonizer” (cost of military conquest and pacification, and cost of colonial central administration). This corresponds to the total amount of resources that was taken away from the metropolitan budget for funding AOF colonization¹². It differs from the two other counterfacts in that *all* resources spent on colonial-related activities (not only those resources spent for the sake of AOF development) are included; loans and cash advances - except their aid component- are excluded because the corresponding resources were *invested* in AOF, not taken away from the metropolitan budget.

To our sense, there is no reason why one counterfact should dominate the others since all of them give an interesting information on colonial public finances. Their relative relevance depends on the question at stake. As exposed in introduction, this paper proposes to answer two questions: what share of French tax revenue was allocated to AOF? What share of AOF public resources was received from the metropole?

The first question should be addressed using counterfacts A and C. Under counterfact A, “Public-Aid-to-AOF”, we focus on the contribution of French taxpayers to the development of AOF with the hanging question about the “positive role of colonization”. Under counterfact C, “Total-Charges-due-to-AOF”, we focus on the total cost of colonization for French taxpayers, not only the expenses that benefited directly to AOF development. Using counterfact C gives the minimum increase in domestic income required to make colonization a profitable investment from French taxpayers’ point of view.

To answer to the second question, both counterfacts A and B are interesting: “Total-Cash-Assets-to-AOF” gives the total cash assets provided by the metropole, which would be particularly relevant had colonization have provided access to credit to regions that would not have had access to it in the absence of colonization. “Public-Aid-to-AOF” gives a more restrictive vision of what AOF received from the metropole, which would be particularly relevant had AOF have had access

¹²Just a reminder that this is not equivalent to the amount of resources that would have been available at the metropolitan level had colonization not occurred since colonization itself might have changed the French tax revenue.

to credit anyway.

4 Data

The original datasets used in this paper and related documentation are available online at <http://econ.sciences-po.fr/staff/elise-huillery> (“Public Finance Data”)

4.1 Data Sources

I collected data from all colonial budgets: central (metropolitan), federal, loan, auxiliary and local budgets, over the whole colonial period: 1844-1957¹³. All these budgets can be found at the National Archives of Senegal, Dakar, and also at the Bibliothèque Nationale de France, Paris. In Dakar, access to budgets is easy, whereas in Paris it is more difficult because budgets are not publicly available when their preservation is judged too bad. To my knowledge, few volumes of the federal budgets can also be found at the Centre des Archives Economiques et Financières à Savigny-le-Temple but only for few dispersed years.

The documents are organized by year and by category of budget (metropolitan, federal and local budgets). For each year, two types of budgetary documents exist: first, a budget established before the beginning of the year which reports anticipated revenues and expenses; second, a final account established after the end of the year described realized revenues and expenses. I used mostly final accounts rather than budgets because they reflect what really happened in terms of revenue and expenses, except when final accounts were not available or do not report the variable of interest.

Finally, data on metropolitan total public expenditures come from the *Annuaire Statistique de la France*¹⁴, which reported budgetary data from the Ministry of Finance.

4.2 Data Description

Budget data were collected for the largest possible period of time. The first year of data collection varies from a type of budget to another, following the development of colonial activities: 1844 for the metropolitan budget, 1898 for the special budgets, 1903 for the loan budget and 1907 for the federal and the local budgets. Colonial budgets generally stop in 1957 because 1958 was the date when the 5th Republic was established in France and when the French colonial empire’s status changed from ‘French Union’ to ‘French Community’. As a federation, the French Community gave

¹³See in the next section the detailed periods of data collection for each category of budget

¹⁴*Annuaire Statistique de la France, Résumé rétrospectif*, Paris, INSEE, 1966.

a real autonomy to colonies which notably became ‘States’ governed by African heads of State. Guinea decided to leave the French Community in 1958, as did Mali in 1959, and then all colonies acceded independence in 1960. Budgets after 1958 are absent in the colonial archives since each new State had from then on its independent accounting system. After 1958, financial transfers from France to Africa were considered as public aid rather than colonial funding.

A challenge that I faced during data collection was recurring changes in organization of the budgets (from a year to another and, to a lesser extent, from a colony to another regarding the local budgets). Maximum attention was paid to construct variables that represent the same revenue / expense: I carefully analyzed the structure of each budget to understand the correspondance over time and over the territory (documentation available upon request).

Nominal monetary variables were adjusted to inflation using the price consumption index from INSEE¹⁵. 1914 Francs is the reference unit, which allows to compare the results with the existing literature since most papers on the cost of colonization express monetary values in 1914 Francs.

Metropolitan Budgets The first metropolitan AOF-related expense appears in 1844, at the time when the navy forces started to explore the West African coast. Before this date, no colonial expense was attributed to West Africa. All years between 1844 and 1957 are reported in the database except a handful of missing years: 1858-1860¹⁶, 1888¹⁷, 1893¹⁸ and 1905¹⁹. Military expenses are also missing in 1940-1941 and 1945 due to the difficult administrative supervision during WWII, and 1955²⁰. To estimate the total transfers between AOF and the metropole, I need to estimate the metropolitan AOF-related expenses in these few missing years. I assume linear trends between the two closest observed years: for instance, missing values in 1888 are inferred at the mean between 1887 and 1889 values.

Data come from the final accounts so they represent effective (as opposed to anticipated) expenses. For each year, the database entails the following variables:

- Total military expenses (for the whole French empire), military expenses in AOF and military expenses spent in the colonies but not attributed to a specific territory²¹.

¹⁵The consumer price index (CPI) used here is the official Insee-SGF consumer price index from Piketty (2011).

¹⁶The Ministry of Colonies was removed and merged with another ministry during these three years and I could not find the data.

¹⁷The budget exists but is not available at the BNF, Paris.

¹⁸Idem

¹⁹Idem

²⁰The military section was not available at the BNF, Paris.

²¹Some budgets are more detailed than others regarding the geographical distribution of expenses across the

- Total civil expenses (for the whole French empire), expenses for running the central administration, civil expenses in AOF and civil expenses spent in the colonies but not attributed to a specific territory.

My objective is to compute the metropolitan military and civil expenses devoted to AOF colonization. The difficulty is that the expenses devoted to AOF colonization are not systematically entirely identifiable in the metropolitan budget because some expenses are not related to a specific colony. Most expenses were actually related to a specific colony but some expenses were not specifically allocated to any colonies while spent in the colonies. A share of these *non-allocated* expenses has thus to be attributed to AOF. Furthermore, the cost of running the central administration is by nature associated with all colonies and a share of it should be attributed to AOF too. On average between 1844 and 1957, 22% of total metropolitan colonial expenses are not attributed to a specific colony.

I use the share of AOF regarding the *allocated* expenses to attribute to AOF a share of the *non-allocated* expenses. Each year, I observe an amount of colonial expenses that are specifically allocated to AOF and to the other territories. I thus observe the share of AOF in these allocated expenses. For some years, I can compute the share of AOF in civil and military allocated expenses separately -otherwise I compute the share of AOF among total allocated expenses. Then, I attribute to AOF the same share of total (resp. civil, military) non-allocated expenses as its share of total (resp. civil, military) non-allocated expenses. This way, I assume that the distribution of non-allocated expenses follow the same pattern as the distribution of allocated expenses. If not exact, it is at least the most reasonable assumption that I can make.

Federal Budgets Federal budgets were collected from 1907 to 1957. The AOF government was established in 1904 and a budget was established in 1905. 1905 and 1906 budgets could not be accessed when I collected the data because of their poor conservation status. All years between 1907 and 1957 could be observed without missing data. Data come from final accounts so they represent effective (as opposed to anticipated) expenses. Among the components of federal revenue, the database reports:

- Indirect taxes: trade taxes, tax on consumption, registration fees and transaction fees

colonies. Recent years are generally less detailed than the old ones.

- Receipts from public companies (mail, phone, telegraph, railways and ports, hospitals and printing works)
- Financial income: yields from capital investments, loan and cash advances reimbursements, land revenue
- Financial transfers from the metropole: loans, cash advances and subsidies
- Total indirect taxes
- Total revenue

Among the components of federal expenses, the database reports:

- Financial transfers to the metropole: loans repayments, cash advances repayment and subsidies
- Subsidies to local budgets and private companies
- Investment in infrastructure, education, health, security, justice and support to productive sectors
- Operation costs of public companies (mail, phone, telegraph, hospital, printing works, railways and ports)
- Costs of running the federal administration
- Total expenses

Special budgets were collected from 1898 to 1957 without any missing year. Data come from final accounts. The database reports the revenue of the special budgets by category: receipts from their own activities, cash advances and subsidies from the metropole, and cash advances and subsidies from the federal budget. All the expenses were absorbed by the operation costs of the service (railway, port) so I did not report any specific category of expense in the database.

Loan budgets were collected from 1903 to 1957 without any missing year except 1918 and 1938²². To construct proxy variables for 1918 and 1938, I assume linear trends between the two closest observed years: values in 1918 (resp. 1938) are inferred at the mean between 1917 (resp. 1937) and 1919 (resp. 1939) values. Data come from final accounts. The database reports all

²²These budgets should exist but is not available at the BNF, Paris.

components of the revenue of loan budgets: loan disbursements from the metropole, cash advances and subsidies from the metropole and from the federal budget. As to the expenses, the database reports the following components: investment in infrastructure, education, health and support to productive sectors.

Local Budgets Local budgets were collected from 1907 to 1956 but not for all years. Since there was no direct transfers between the metropole budget and the local budgets, local budgets can be ignored to compute the net amount of money that was spent by the metropole for AOF colonization. However, I use local budgets to assess whether the metropolitan transfers to AOF represented a significant share of AOF public resources. AOF public resources is the sum of federal resources and local resources. So total revenue of local budgets is my main variable of interest. I collected this variable in 25 years: 1907-1920, 1923, 1925, 1928, 1930, 1933, 1936, 1939, 1943, 1946, 1949, 1953 and 1956. I use linear inference to estimate the revenue in missing years (for instance, the local revenue in 1921 and 1922 are estimated at the mean between the local revenue in 1920 and 1923).

Data from local budgets are presented in two categories: revenue and expenses. Among the components of local revenue, I reported all main direct taxes (personal tax, prestations, income tax, land tax, residential tax, tax on trading license, tax on cattle and tax on turnover), total direct taxes and total revenue. Among the components of local expenses, I reported: administrative staff, security staff, education staff, the number of schools and pupils –when available, doctors and nurses, expenses for public works, indemnities to pre-colonial chiefs, number of African chiefs and finally African chief salaries and primes.

5 Financial transfers between the metropole and AOF

This section presents the total transfers between AOF and the metropole under counterfactuals A, B and C. It describes first the transfers from AOF to the metropole (subsidies, loan repayments and cash advance repayments), then it details the gross and net transfers from the metropole to AOF by category: public aid, total cash assets and total charges.

5.1 Transfers from AOF to the Metropole

Public transfers from AOF to the metropole during colonial times were of three types: i) repayment of loans, ii) repayment of cash advances, and iii) subsidies. All these transfers were exclusively charged on the federal budget. Subsidies from AOF to the metropole intended to contribute to metropolitan expenses related to colonization: cost of colonial conquest and of central administration. After 1945, these subsidies were not only meant to cover the cost of colonization in the metropole, but also to help finance expenses for French reconstruction and various metropolitan organizations such as the Ecole Coloniale, ORSTOM, or the Cité Universitaire Internationale in Paris.

Data on the federal budget are available from 1907. But cash advances from the metropole to construct the railway line Kayes-Niger was disbursed in 1898 and the first loan from the metropole to AOF was signed in 1903, so it is likely that AOF started to repay these credits before 1907 (some qualitative information suggest that the repayments started in 1904). Since I have no data before 1907, I make the conservative assumption that there were no financial transfers from AOF to the metropole from 1898 to 1906. As soon as 1907, data shows the existence of subsidies, cash advance repayments and loan repayments from AOF to the metropole.

Total transfers from AOF to the metropole between 1907 and 1957 reached 572 million 1914 Francs. These transfers can be detailed as follows:

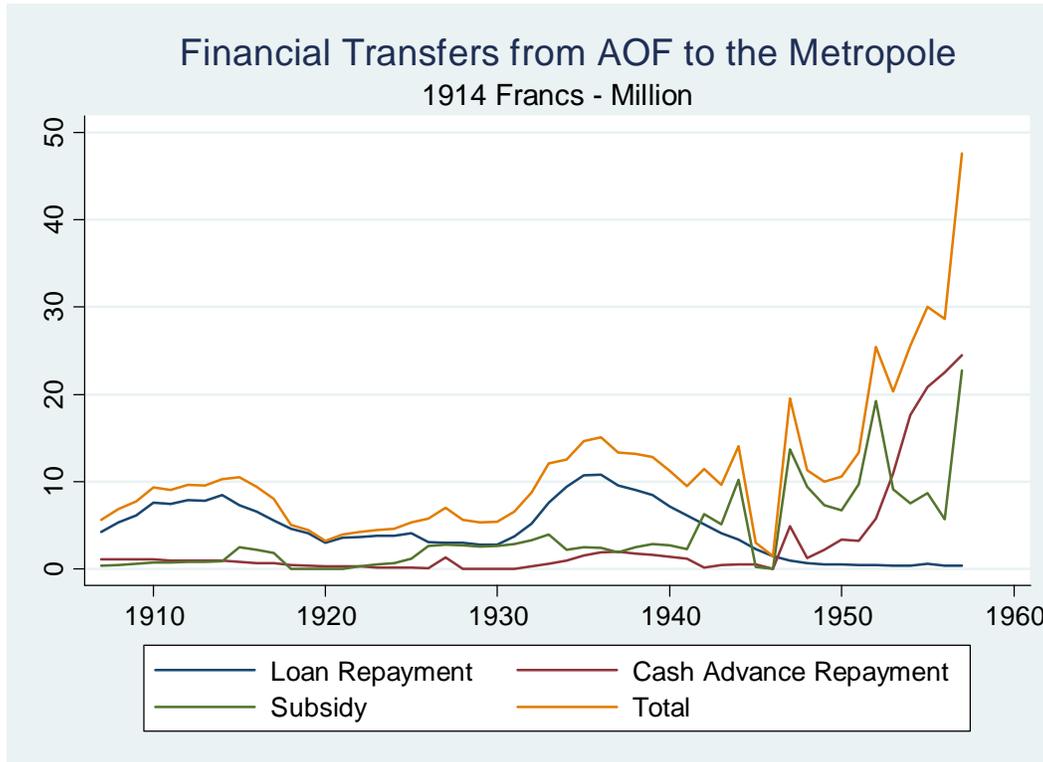
Table 1: Financial Transfers from AOF to the Metropole, total over 1907-1957

	1914 Francs (Million)
Loan Repayment	228.5
Cash Advance Repayment	145.1
Subsidy	198.3
Total	571.9

Repayments of loans represent 40% of total transfers from AOF to the metropole, subsidies 35% and repayment of cash advances 25%. Figure 2 illustrates the evolution of financial transfers from AOF to France. Until the early 1940s, repayments of loans represented the main part of the transfers from AOF to the French State, being replaced after 1945 by subsidies and repayments of

cash advances.

Figure 2 – Financial Transfers from AOF to the Metropole, 1907-1957



5.2 Counterfact A: Public Aid to AOF

This counterfact aims to encompass all forms of public aid: it takes into account all subsidies to the public sector (including indirect subsidies to the public sector via. subsidies to the private sector that would have been most likely paid by local taxpayers in the absence of colonization) plus the aid component of loans and cash advances from the metropole to the AOF public sector. This gives the gross public aid from the metropole to AOF, from which I subtract the subsidies from AOF to the metropole to get the net public aid from the metropole to AOF.

Cash advances conceded by the metropole to AOF in 1898 and after 1946 came with an interest rate of 3 to 4 percent. Being short term loans of only a few years, they do not allow the “aid component” to surpass 10 percent²³. The interest rate for all six loans contracted by AOF from the

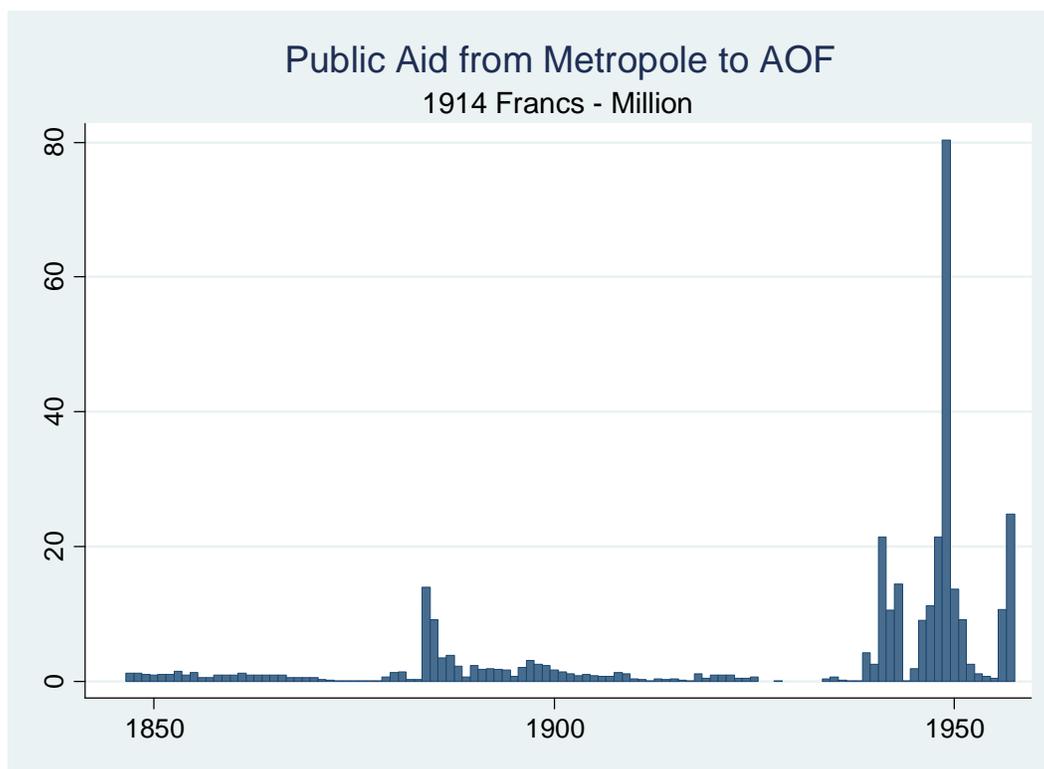
²³To calculate the “aid component” of loans and cash advances, I used the online IMF service: <http://www.imf.org/external/np/pdr/conc/>

metropole varied from 5 to 6.5 percent. Terms varied from 30 to 50 years. None of these loans had an aid component above 25 percent, the highest one being 17 percent for the 1903 loan. According to international definitions adopted in 1969, public aid from the metropole to AOF is then limited to subsidies from the metropole to AOF.

The serie of annual subsidies from the metropole to AOF was constructed by appending data from two different sources: before 1915, I use the data from the metropolitan budget while after 1915, I use the data from the federal budgets (including special and loan budgets). Two reasons for this change in data source: first, before 1915, a large part of the subsidies from the metropole to AOF consisted in subsidies to the Dakar-Saint Louis railway operator (La Société des Batignolles). These subsidies do not appear on federal budgets because they were given to a private company so using the federal budgets would have led to ignore these important subsidies. After 1915, no subsidies were given to the Dakar-Saint-Louis railway operator anymore but cash advances, so there is no problem with considering the federal budgets instead. Second, the federal budgets get more precise than the metropolitan budget when time goes by because more and more expenses were not geographically allocated to a specific territory in the metropolitan budget, especially after 1920. So data from the federal budgets are generally more reliable than data from the metropolitan since data from federal budgets do not require any assumption about the geographical allocation of non-allocated expenses. As soon as I did not miss any subsidy, I therefore chose to switch from the metropolitan budgets to the federal budgets.

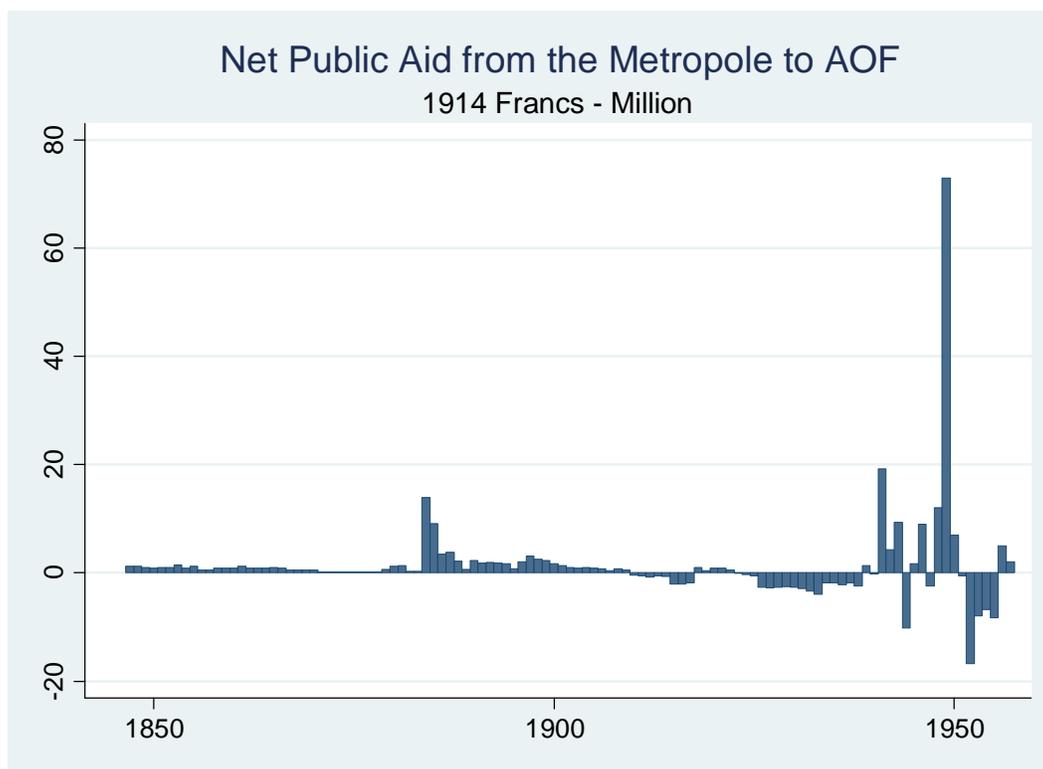
The total amount of public aid going from the metropolitan budget to AOF during the whole colonial period until 1957 is 338.3 million (1914 Francs). Figure 3 shows the distribution of these metropolitan subsidies to AOF over the colonial period. We can observe two periods when public aid to AOF has been important: first in 1884-1885, when the metropole gave important subsidies to La Société de Batignolles to construct the Dakar-Saint Louis railway. Second, after WWII, when the metropole created a fund dedicated to large scale infrastructure and equipment in colonies: the Fond d'Investissement pour le Développement Economique et Social (FIDES). 1949 is the year when AOF benefited from the largest subsidy on account of FIDES.

Figure 3 – Public Aid from Metropole to AOF, 1844-1957



To construct counterfact A, I subtract year by year the subsidies from AOF to the metropole from the subsidies from the metropole to AOF. Figure 4 shows the net public aid from the metropole to AOF during the whole colonial period.

Figure 4 – Net Public Aid from the Metropole to AOF, 1844-1957



Overall, net public aid from the metropole to AOF is positive and amounts to 140 million 1914 Francs. As we can see in Figure 4, public aid given by the metropole to AOF is not always positive during colonial times. It is always positive from 1844 and 1907 because there were no transfers from AOF to the metropole at these times when almost no local taxes were collected. From 1907 to 1941, public aid from AOF to the metropole have often been superior to public aid from the metropole to AOF. The year 1949, with a net subsidy of 73 million 1914 francs from the metropole to AOF, explains by itself half of the positive balance. The principle of financial autonomy of the colonies in AOF was mostly maintained after World War II. The metropole slightly increased the amount of subsidies given to AOF (see Figure 3) but in a “give and take” logic since at the same time, subsidies from AOF to the metropole also increased (see Figure 2).

5.3 Counterfact B: Total Cash Assets to AOF

This counterfact takes into account all the cash assets: loans, cash advances and subsidies, received by AOF from the metropole. Table 1 shows the total cash assets that went from the metropole to AOF between 1844 and 1957. In 114 years of colonization, 1,395.2 million (1914 Francs) were

transferred from the metropole to AOF:

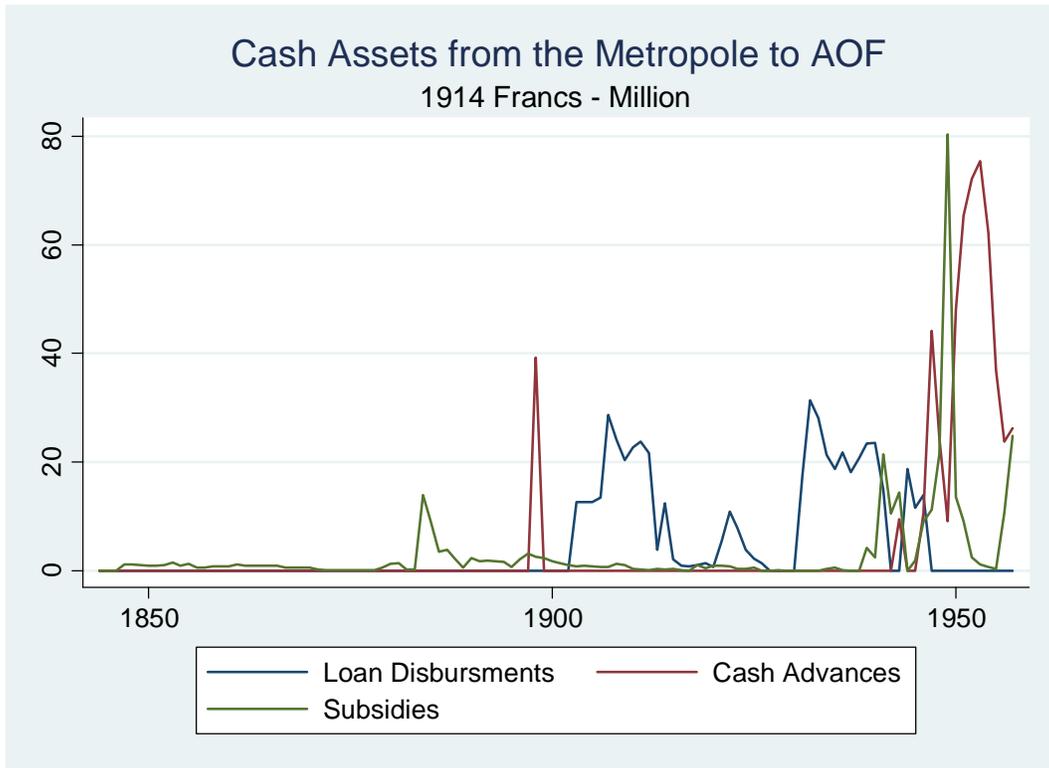
Table 2: Cash Assets Provided by the Metropole to AOF, total over 1844-1957

	1914 Francs (Million)
Loan	509.7
Cash Advance	547.2
Subsidy	338.3
Total	1 395.2

Loans accounted for 37%, cash advances for 39% and subsidies for 24% of total cash assets provided by the metropole to AOF. The part of metropolitan financial assets which were recovered through repayments – loans and cash advances – thus amounted to more than three quarters of total metropolitan financial transfers.

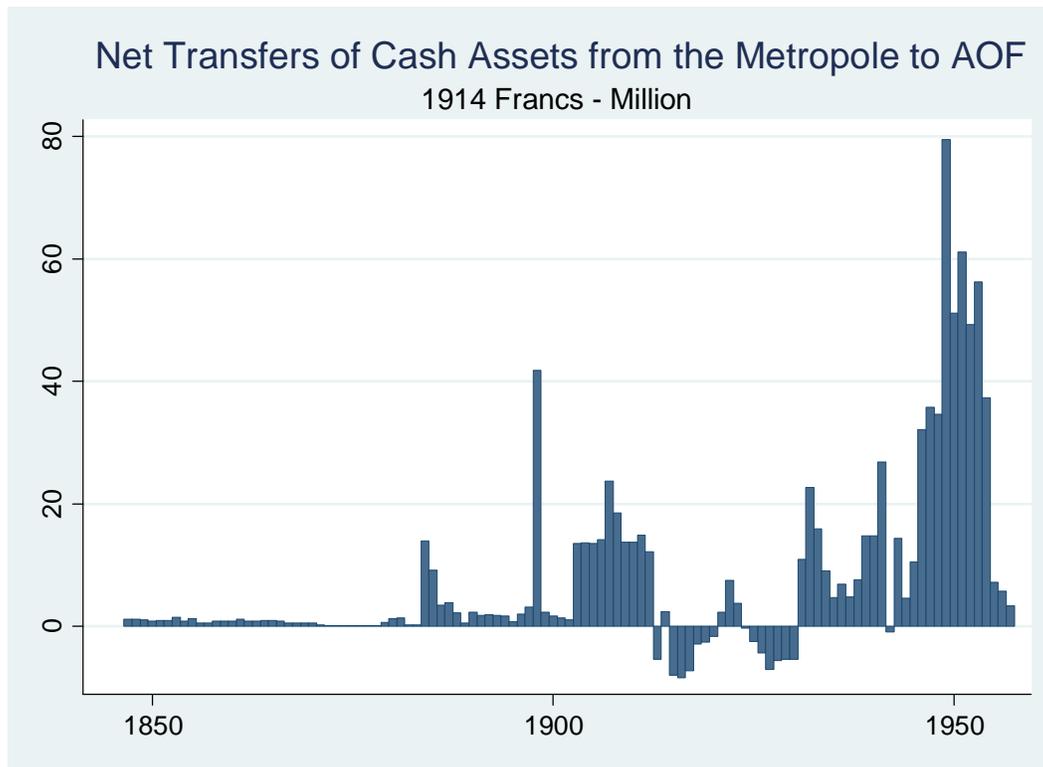
Figure 5 shows the evolution of all three types of metropolitan transfers to AOF from 1844 to 1957. Before 1898, only subsidies were given to AOF: no local budget was set up yet so no reimbursement from AOF to the metropole was possible. Except a big cash advance to the federal budget for the construction of the Kayes-Niger railway in 1898, the next period 1900-1945 was dominated by loans. Six loans were contracted by AOF with the French Treasury in 1903, 1907, 1910, 1913, 1931 and 1932. It is clear that loans were the unique form of transfer until 1940 and remained the main form of transfer between 1940 and 1945. They totally disappeared after 1946 and were replaced by cash advances and subsidies. The increase in advances and subsidies after 1946 is explained by the creation of the FIDES. Subsidies actually remained limited, except in 1949. After 1946, cash advances from the metropole to AOF actually replaced loans: 73% of cash assets transferred by the metropole were cash advances and 27% were subsidies. It is also worthy to note that 50% (697 million) of all cash assets transferred by the metropole to AOF from 1844 to 1957 were transferred after 1946. This underlines how much the last colonial decade, which received much attention by French historians, was far from representative of the whole colonial period.

Figure 5 – Cash Assets Provided by the Metropole to AOF, by Type of Cash Asset, 1844-1957



This allows now to construct counterfact B: year by year, I subtract subsidies, cash advance repayments and loan repayments from AOF to the metropole to the cash assets received by AOF from the metropole. Results are presented in Figure 6.

Figure 6 – Net Cash Assets Provided by the Metropole to AOF, 1844-1957



The metropole transferred more cash to AOF than AOF did to the metropole: the net transfer of cash assets from the metropole to AOF amounts to 845.2 million 1914 Francs. As Figure 6 shows, the metropole is structurally a creditor of AOF during the whole colonial period except between 1913 and 1930. During this Golden Age of French colonization, AOF is a creditor of the metropole, which is rarely, if not ever, the idea one has. This situation is due to the repayments of the loans that were contracted by AOF at the beginning of the twentieth century. The second and last period of loans that took place in 1931 and 1932 reinitiated a period when the metropole was a creditor of AOF. After World War II, the period of subsidies and cash advances from France to AOF sustain the creditor status of the metropole. This post-war period, through the explosion of cash advances from the FIDES, demonstrated a more evident willingness to invest in colonial equipment.

5.4 Counterfact C: Total Charges due to AOF

This counterfact takes into account all the expenses related to the colonization of AOF charged on the metropolitan budget. It is the cost of colonization for French taxpayers in the sense that this counterfact represent the amount of the domestic tax revenue that was allocated to expenses related to AOF colonization: not only the subsidies to the private and public sectors, but also military cost

of conquest and pacification and the cost of the central administration.

Table 3 presents the total amount of the charges related to AOF colonization for French taxpayers as well as the decomposition by category of charges:

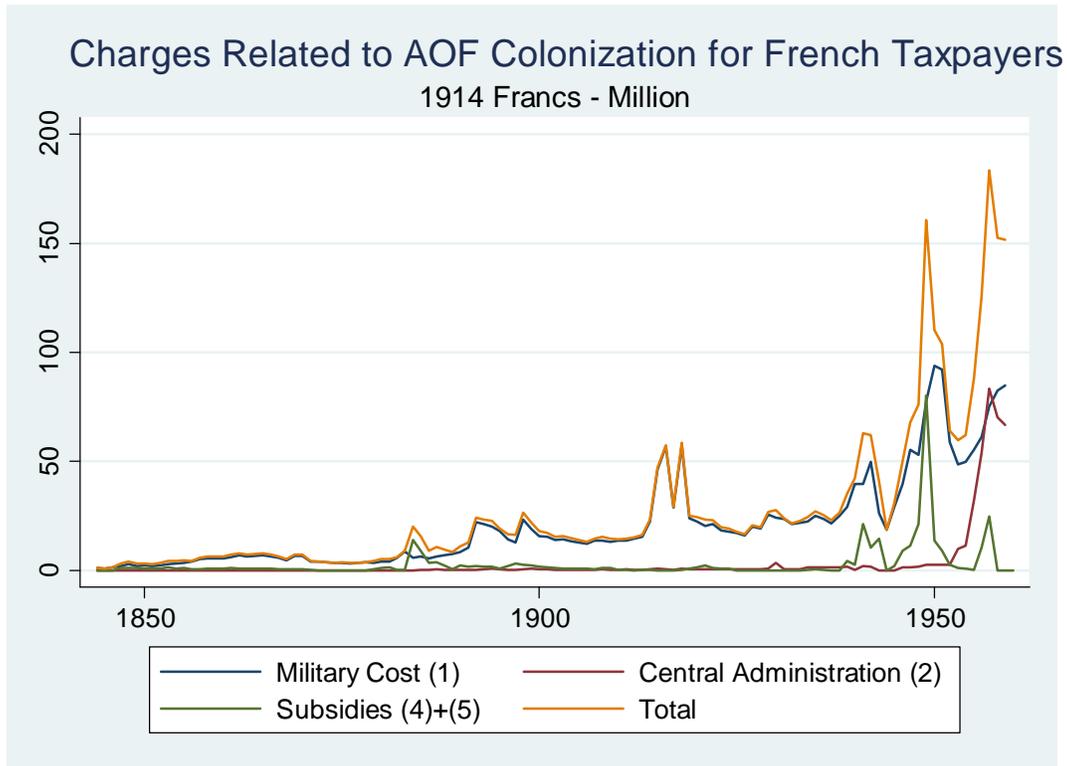
Table 3: Charges Related to AOF Colonization for French Taxpayers, total over 1844-1957

	1914 Francs (Million)
Military Cost of Conquest and Pacification of AOF (1)	2 378.4
AOF's Share of the Cost of Central Administration (2)	384.1
Subsidies to the Private and Public Sectors (4) + (5)	338.3
Total	3 100.8

Military cost of conquest and pacification accounted for 77% of the charges related to AOF colonization, while the cost of the central administration accounted for 12% and the subsidies to the private and the public sectors for 11%. Note that for each Franc spent by the metropole for AOF colonization, only one tenth was received by AOF as public aid. The other nine tenth were absorbed by the cost of the military conquest and of the central colonial administration.

Figure 7 shows the evolution of the charges related to AOF colonization over the colonial period.

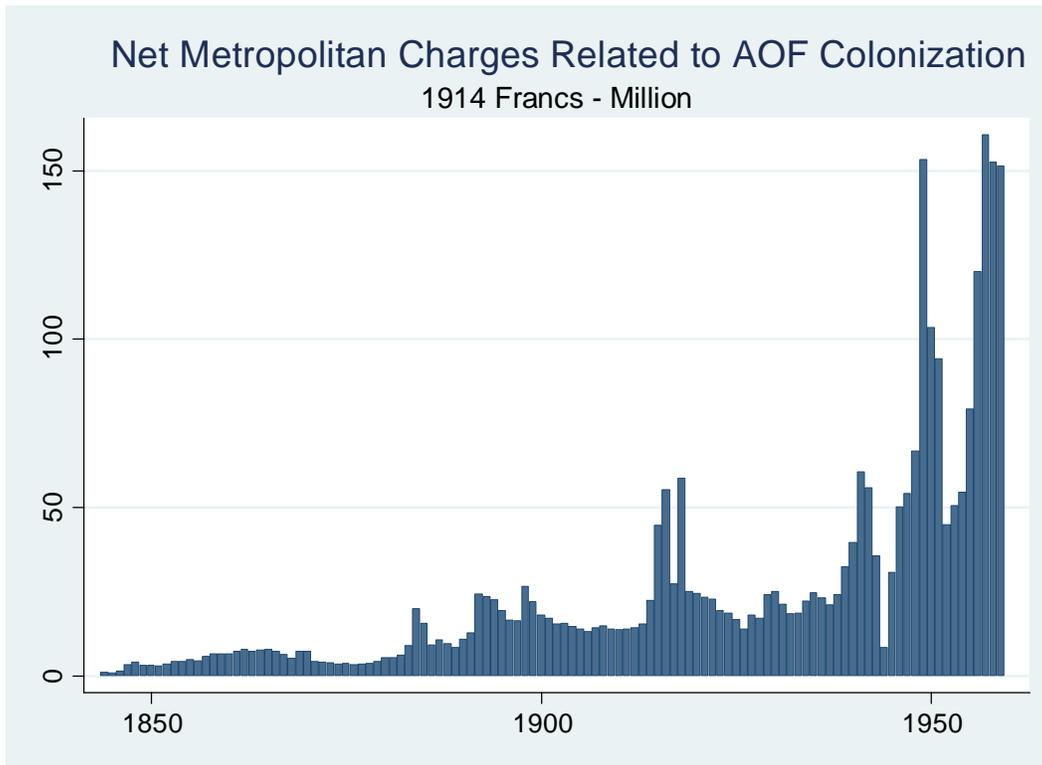
Figure 7 – Charges Related to AOF Colonization for French Taxpayers, 1844-1957



We can observe that the military cost of conquest and pacification accounts is a very large share of cost of AOF colonization until 1945 (88%), with five peaks: first in 1884-1885 due to the subsidies for the construction of the Dakar-Saint-Louis railway, then in 1892-1899 because of the intensification of the military conquest, then in 1915-1918 and 1940-1942 due to WWI and WWII, and finally after 1946 due to the colonial equipment program FIDES and to the increase in military personnel costs. We can also observe that the cost of the central administration exploded at the end of the colonial period. This sharp increase is due the decision to transfer some personal expenses from the local budgets to the metropolitan budget in 1955.

To construct counterfact C, I subtract subsidies from AOF to the metropole to the cost of AOF colonization for French Taxpayers. Results are presented in Figure 8. The total of net charges related to AOF colonization over 1844-1957 amounted to 2,902.6 million (1914 Francs). This corresponds to the total of charges related to AOF colonization reported in Table 3 (3,100.8 million 1914 Francs) minus the total of the subsidies paid by AOF to the metropole reported in Table 1 (198.2 million 1914 Francs).

Figure 8 – Net Charges Related to AOF Colonization for French Taxpayers, 1844-1957



6 Main Results

6.1 How Burdensome was AOF Colonization of French West Africa for French Taxpayers?

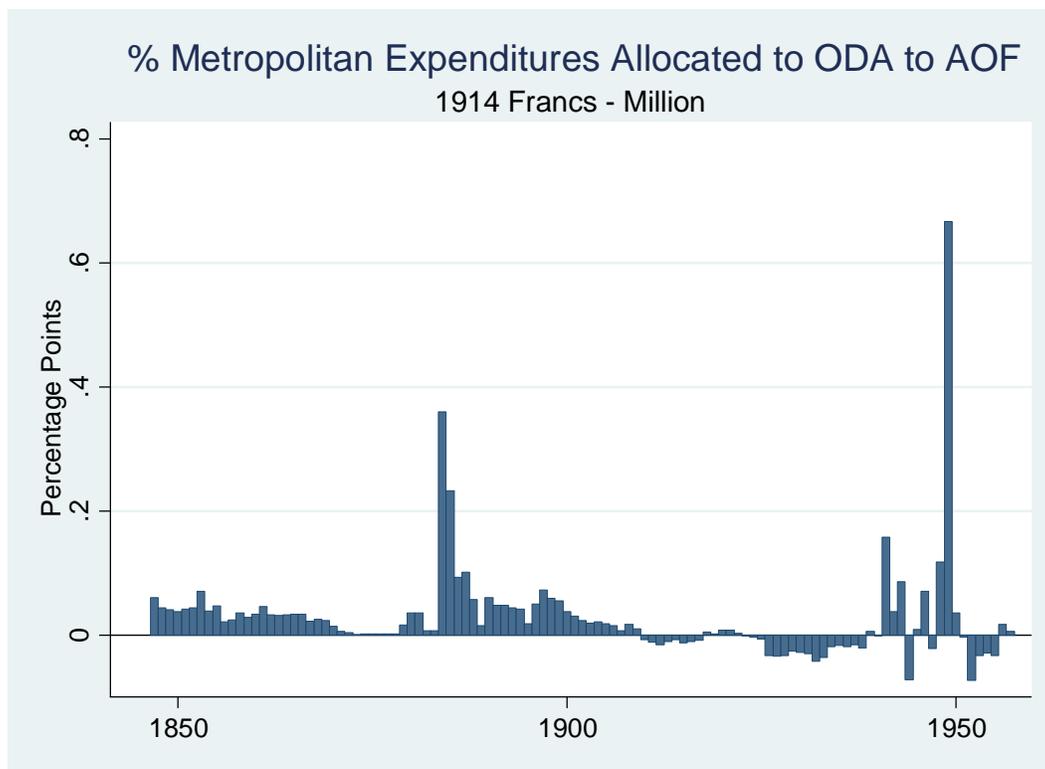
Bobrie (1976) estimates that metropolitan expenses devoted to the colonies from 1850 to 1913 accounted for something between 3% and 7% of total expenses. Note that this estimate includes the costs of operating a central administration dedicated for the colonies in France as well as military expenses. But the paper clearly overestimates the cost of the colonies for French taxpayers since it does not take into account the financial transfers from the colonies to France, especially transfers from Algeria whose fiscal revenue was fully translated into metropolitan revenue.

Marseille (1996) estimates that metropolitan expenditures devoted to the colonies accounted for 8% of total metropolitan expenditures in the twenties, 9% from 1945 to 1962. But this estimation is based on the assumption that all trade deficits of the colonies towards France were compensated by equivalent public financial transfers from France to the colonies. However, it is not clear whether these financial transfers were public or private financial transfers, and whether they were loans and

cash advances (which are investments) or subsidies. Moreover, the assumption needs to be verified because the balance of paiements could also be balanced thanks to public savings in AOF, which have been very large during all the colonial period. Therefore, evidence from actual budgets is needed.

Figure 9 presents the share of the metropolitan public expenditures allocated to public aid to AOF (counterfact A) between 1844 and 1957. The average share of annual metropolitan public expenditures devoted to public aid to AOF is 0.027%. It appears clearly that public aid received by AOF was far from burdensome for French taxpayers. The maximum share of metropolitan public expenditures allocated to ODA in AOF was 0.67% in 1949.

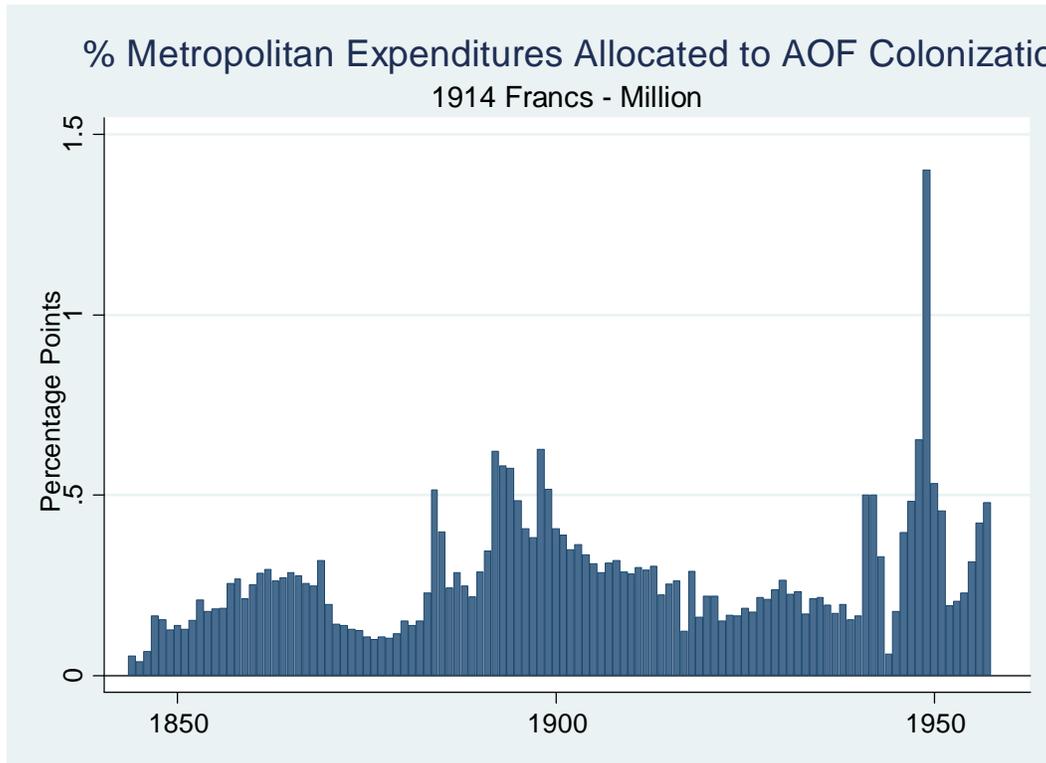
Figure 9 – Share of Metropolitan Public Expenditures Allocated to Public Aid to AOF, 1844-1957



However, the total cost of AOF colonization that includes the cost of “being a colonizer” (military costs and central administration costs) is ten times larger. Figure 10 presents the total cost of AOF colonization (counterfact C) as a share of metropolitan public expenditures. The average share of

metropolitan public expenditures allocated to AOF colonization was 0.27% over the colonial period.

Figure 10 – Share of Metropolitan Public Expenditures Allocated to AOF Colonization, 1844-1957



The results indicate that the share of AOF on metropolitan expenditures was very low compared to what Bobrie (1976) or Marseille (1996) estimate. Obviously, this paper gives the cost of colonization of AOF only, not of the whole French empire. But the gap comes also from the fact that they used partial data. They consider limited periods of time and do not take into account that the colonies gave some money back to the metropole. Further work is now needed to establish the cost of colonization of the other parts of the French empire. The results for AOF suggest that the whole French empire might have been much less costly for French taxpayers than what the existing literature says.

6.2 How Beneficial was Colonization for West Africans Taxpayers?

The question now is whether the transfers from the metropole to AOF represented a significant share of AOF's public resources. There is a large consensus in France regarding the idea that metropolitan

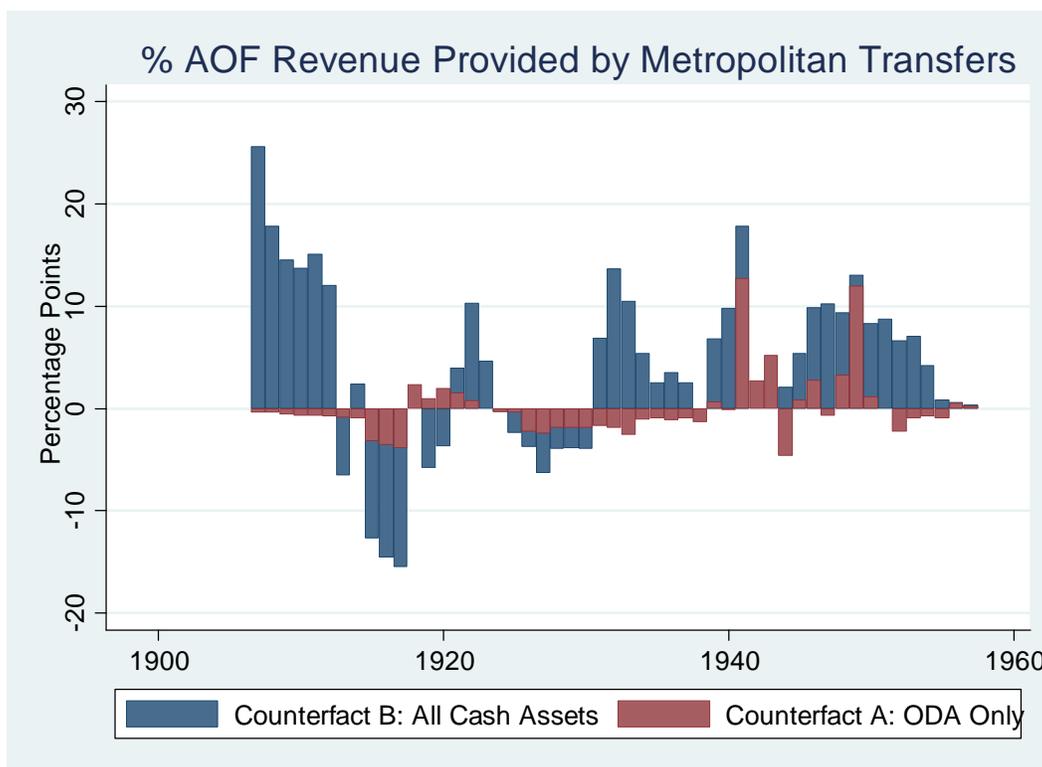
financial transfers to the colonies funded most of public investments there. It is indeed possible that colonial public transfers did not cost much for French taxpayers but still accounted for a large part of local revenue.

To answer this question, I calculate AOF's total annual revenue by adding total revenues of local, federal, loan and auxiliary budgets. AOF's total annual revenue can be observed from 1907 on, when the colonial administration set up a comprehensive public accountability at both federal and local levels²⁴ (Appendix 1 presents descriptive statistics on AOF's total revenue). So the weight of metropolitan transfers in AOF's public revenue can be observed from 1907 to 1957.

Figure 11 presents the share of AOF total revenue provided by the metropolitan transfers, under both counterfact A (in red) and counterfact B (in blue). It shows that the share of AOF total revenue provided by all cash assets (counterfact B) varied a lot across the periods, from 25% in 1907 (which means that AOF received 25% of its revenue from metropolitan cash assets in 1907) to -15% in 1917 (which means that AOF gave 15% of its revenue to metropolitan cash assets in 1917). On average, metropolitan cash assets provided 5.7% of AOF annual total revenue over 1907-1957.

Figure 11 – Share of AOF Revenue Provided by Metropolitan Transfers, 1907-1957

²⁴Remember that data from local budgets are collected for 25 years over 1907-1957 and linear trend assumption is made to infer the value of total local revenue for missing years.



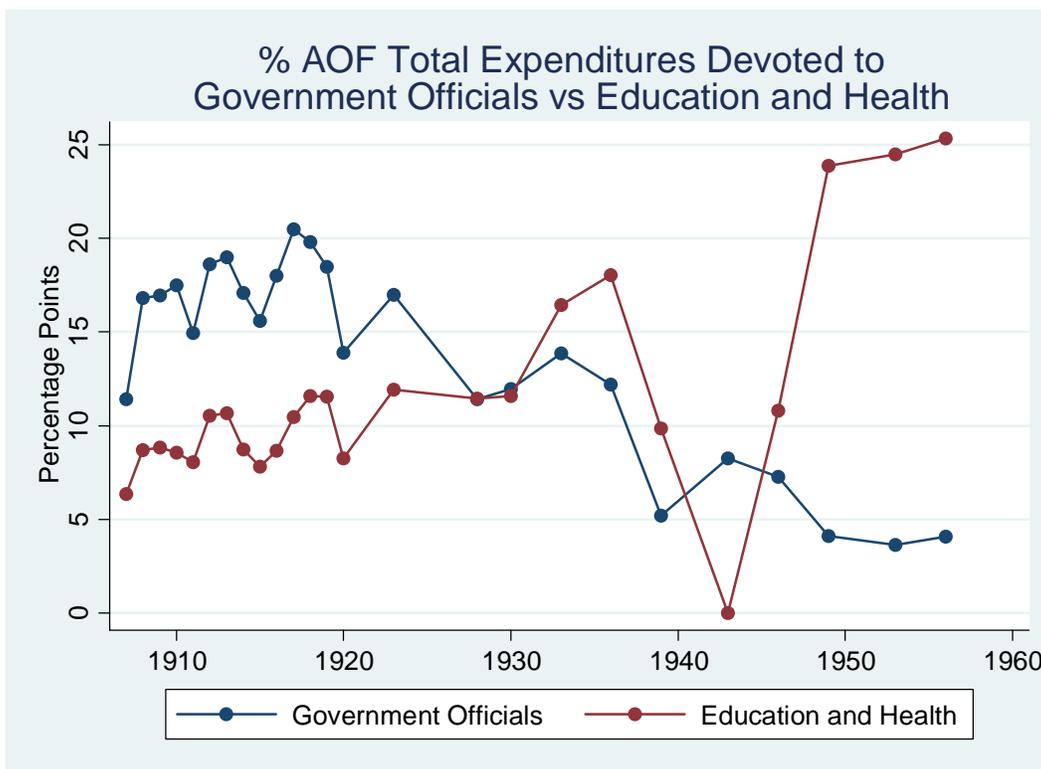
However, metropolitan public aid represents a very small share of this. On average, metropolitan public aid provided 0.4% of AOF annual total revenue over 1907-1957. Public aid from the metropole was therefore almost insignificant to AOF. The metropolitan share in AOF's public revenue remained between +5% and -5% over the whole colonial period except in 1941 and 1949. 1941 was the year when the Fond de Solidarité Coloniale was created, as a precursor of the FIDES (Fonds d'Investissement et de Développement Economique et Social) which was created in 1946 (with the difference that the latter provided mostly cash advances whereas the former provided subsidies). The metropole gave a significant subsidy to this fund when it was created in 1941, as to the FIDES in 1949. Except in these two years, the metropolitan public aid to AOF remained very low as compared to AOF's own public revenue. Local taxes therefore represented the very essential part of AOF public resources.

Yet, local budgets supported the very high personnel costs of the French civil servants involved in AOF. On top of usual high French salary, French civil servants involved in AOF also received a significant expatriation premium: for instance, the salary of a French administrator (1st rank) in 1910 amounts 14,000 Francs a year; expatriation premium amounts 4,000 Francs a year. So the

total cost of a French administrator (1st rank) was 18,000 Francs a year. At this date, Africans paid a poll-tax of 3 Francs per year. 6,000 taxpayers could thus cover the cost of only one French administrator. In the same range of ideas, the basic salary of a French teacher was 6,000 a year while the salary of an African instructor amounts 600 Francs a year. One French teacher costs as much as ten African teachers. The cost of French civil servants was thus out of proportion with the local taxpayers' capacity. In the absence of significant metropolitan subsidies to AOF, the colonial public finance system had this strange feature that AOF's revenue was driven local capacities while its expenditures were driven by French standards. As a consequence, limited space was left to public investments.

To illustrate this, Figure 15 reports the share of local expenditures devoted to government French officials: the personnel and material expenditures of the colony governors and their cabinets (all French *de facto*), and the salaries of *French* administrators at the district level. AOF entailed about 120 districts over eight colonies. The government officials that I consider to compute this statistic therefore represented the French component of less than 130 units of commandment. For comparison purpose, Figure 15 also reports the share of local total expenditures devoted to education and health (total personnel and materials). On average over the 25 observed years between 1907 and 1957, the expenses devoted to government officials represented 13.5 percent of AOF total expenditures, while education and health both represented only 11.7 percent of AOF total expenditures. After 1949, top government officials' salaries turned to be supported by the national budget, which explains the decrease in the share of total expenditures devoted to government French officials. Yet local budgets kept paying for most of the French civil servants in AOF (teachers, doctors, engineers, etc.). The costs of government French officials amounted to 169.4 million 1914 Francs over the 25 observed years between 1907 and 1957, which is more than the total metropolitan public aid to AOF over the whole colonial period (140 million 1914 Francs). The metropolitan public aid did not even cover half of the costs of colony level government French officials.

Figure 15: The Weight of Government Officials in AOF Expenditures, 1907-1957



To conclude, AOF not only received few financial transfers from the metropole, but also supported very high charges due to French administration. This situation sounds more like a black than a white man’s burden. How much detrimental was the charge of French civil servants for local population? This question is definitively a stretch. On the one hand, it is likely that this dampened the capacity to invest more in public services. But on the other hand, one can argue that the difference in productivity of French civil servants compared to local officers was as high as the difference in their salary; and that the high salaries paid to French officers might have benefited to local population through local consumption. Although those two arguments are questionable: whether French teachers were well-adapted and so much more efficient than African teachers is under debate since education in French made it difficult for children -who were not native French-speakers- to adapt; we can also wonder to what extent the salaries of French civil servants were remitted to France rather than consumed locally.

6.3 Summary of the Main Results

Table 4 sums up the main findings of this paper:

- First, AOF relied essentially on local revenue: metropolitan public aid amounted to an average of 0.4% of its annual revenue. Including loans and cash advances provided by the metropole to AOF, the contribution of metropolitan cash assets to AOF amounts on average to 5.7% of AOF annual revenue.
- Second, AOF was far from a blackhole for French taxpayers: public aid to AOF amounted to an average of only 0.027% of metropolitan annual public expenditures. Even with military and central costs for AOF colonization, which represented nine tenth of the total cost of AOF colonization, the average annual cost of AOF is limited to 0.27% of metropolitan annual public expenditures. Colonization was profitable for France as soon as its impact on domestic production exceeded 2,902.6 million 1914 Francs (total) over 1844-1957.
- Third, the cost of administration in AOF was disproportionately large due to the charge of French civil servants paid as expatriates.

Table 4: Summary of the Main Results

	Total Amount over 1844-1957 (Million 1914 Francs),	% AOF Annual Revenue, Average over 1907-1957	% Metropolitan Annual Public Expenditures, Average over 1844-1957
<u>Counterfact A</u> Net Metropolitan Public Aid to AOF: <ul style="list-style-type: none"> • Subsidies to the public sector • Indirect subsidies to the public sector via private railway companies • Aid Component of Loans and Cash Advances 	140	0.4%	0.027%
<u>Counterfact B</u> Net Metropolitan Transfers Received by AOF: <ul style="list-style-type: none"> • Loans to the Public Sector • Cash Advances to the Public Sector • Subsidies to the Public Sector 	732	5.7%	-
<u>Counterfact C</u> Net Metropolitan Charges Related to AOF Colonization: <ul style="list-style-type: none"> • Net Metropolitan Public Aid (Counterfact A) PLUS: • Cost of Conquest and Pacification • Cost of Central Administration 	2,902.6	-	0.27%

7 Conclusion

Using original data from AOF colonial budgets, this paper shows that AOF did not cost much to French taxpayers. A very small share of metropolitan total public expenditures was devoted to public aid to AOF. Nine tenth of the expenses for AOF were absorbed by military conquest and the operation of the central colonial administration. In contrast with what colonies have a reputation for, AOF was far from a black hole. Many Africans believe that they owe French colonizers their schools, hospitals and infrastructure. But the reality is that they financed with their own resources almost the totality of the colonial public investments. Moreover, they supported the high cost of French colonial administration. Colonization therefore reveals to have been more of a black than a white man's burden.

My results are not in line with the existing literature, which emphasizes the colonial financial burden. This divergence can be explained in five ways. First, most of the existing papers do not cover the whole colonial period. Second, all of the existing papers, except Coquery-Vidrovitch (1982), do consider financial transfers from the metropole to colonies but not from colonies to the metropole. Third, all of the existing papers assimilate loans, cash advances and subsidies and therefore consider financial investments as costs. Fourth, some of the existing papers focus on the 1950s and generalize their observations to the whole colonial period. Finally, Jacques Marseille's analysis is based on the assumption that colonies' trade gaps were compensated by metropolitan public financial transfers, which is wrong in the case of AOF. This paper therefore addresses major caveats in the existing literature.

This paper provides a reliable and comprehensive answer to the question of the cost of colonization of AOF. The next step is straightforward: we would like to know what happened with the other French colonies to draw a global answer on the cost of colonization of the whole empire for French taxpayers. Then we would like to go a step further and estimate the impact of colonization on French domestic revenue. This way, we could know whether colonization was an economically profitable experience or not. This paper reinvestigates an important debate on colonial history which has been waiting for analysis with the hope to renew this branch of research.

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Appendix 1: Descriptive Statistics on AOF total tax revenue

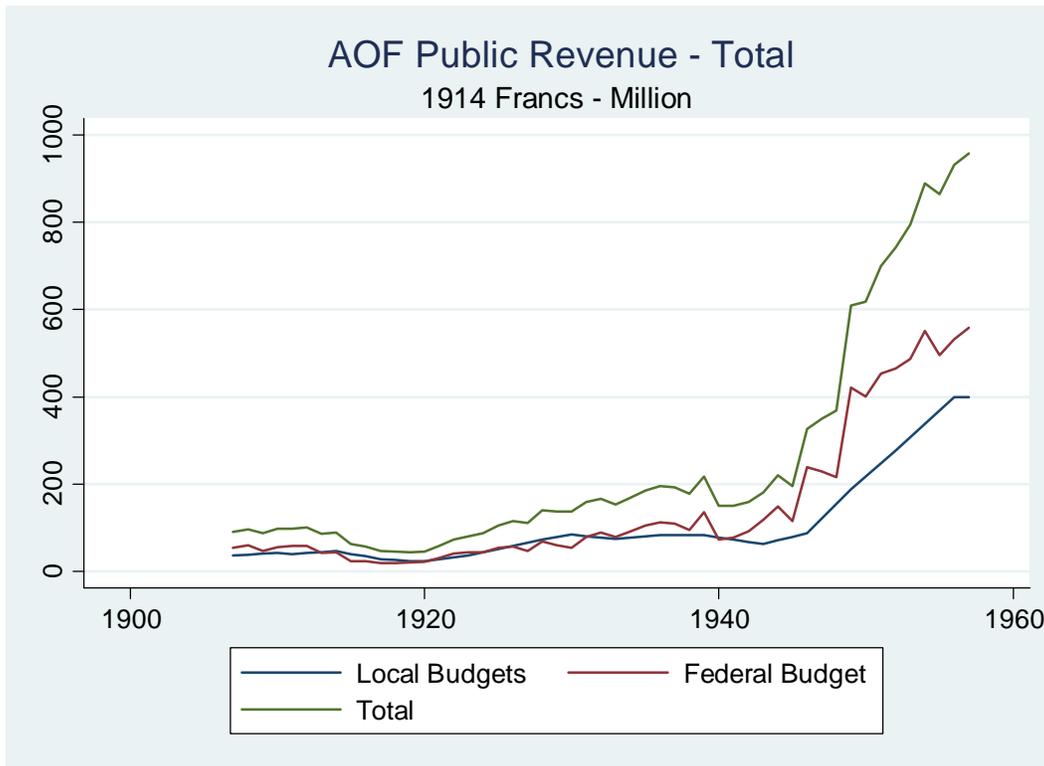
At the federal level, most of the revenue came from trade taxes (68 percent on average over 1907-1957). Nine percent came from own generated income (receipts from public companies and financial yields). Nine percent came from metropolitan cash advances and subsidies. Revenue for the loan budget came from loan disbursements from the metropole (64 percent of total revenue over 1903-1957), while the 36 percent left came from cash advances and subsidies from the metropole and the federal budget. Revenue for auxiliary budgets came mostly from receipts from their own activities (92 percent of total revenue over 1898-1957), while the eight percent left came from cash advances and subsidies from the metropole and the federal budget.

At the local level, most local revenue came from direct taxes (54 percent on average over 1907-1957). The rest of the local revenue came from indirect taxes and subsidies from the federal budget. Most direct taxes were based on individuals, through personal taxes: capitation, “prestations²⁵”, residential tax and income tax. Personal taxes account for 44% of total local revenue over 1907-1957. Finally, among personal taxes, the most important tax was capitation, which was equal for all individuals whatever their income and wealth. Capitation accounts for 39 percent of total local revenue over 1907-1957. Income tax, which was introduced in 1933 in AOF, did not catch up with capitation: in 1956, income tax accounted for 25 percent of personal taxes whereas capitation accounted for 75 percent of personal taxes. The general picture that emerges from budget data is that local people, especially poor people, contributed significantly to public funding during colonial times.

Figure A1 shows the evolution of AOF total public revenue from 1907 to 1957. The overall growth of AOF total revenue was slow from 1907 to 1945, with two significant recession periods corresponding to the two World Wars. The decrease in AOF total revenue during the two World Wars was due to the decrease in trade taxes at the federal level as a consequence of worldwide trade contraction.

Figure A1 – AOF Public Revenue (Federal and Local), 1907-1957

²⁵The « prestations » were simply coerced labor, due by each individual above 8 or 10 –depending on the period. Each taxpayer must do public works during a given number of days in the year, except those who could give money in exchange of labor.



After 1945, the growth of AOF total revenue is spectacular: it was multiplied by five in 13 years. Both federal revenue and local revenue grew fast during this period, federal revenue in a higher speed than local revenue, though.

Appendix 2: Discussion on Jacques Marseille's Hypothesis

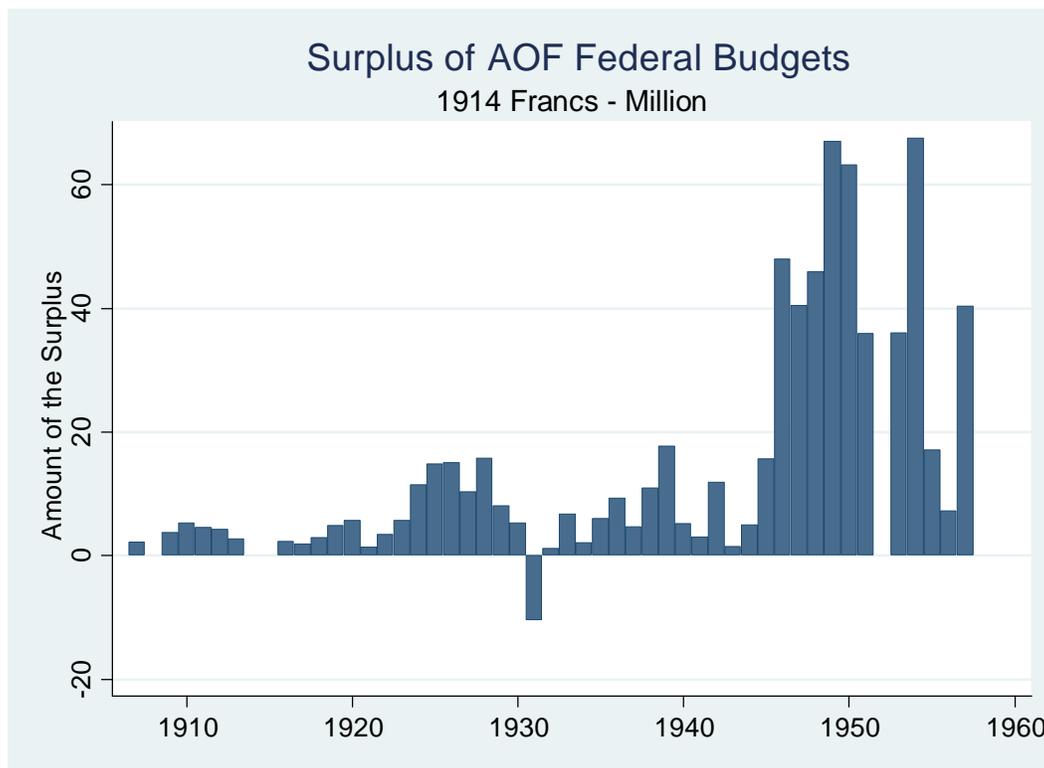
As documented in Marseille (1996), the French colonies in general and AOF in particular experienced structural trade gaps towards the metropole during the colonial period. Marseille argues that some metropolitan public financial transfers to the colonies compensated these trade gaps, which were therefore a big burden for French taxpayers²⁶. This argument is based on the fact that the balance of payments requires financial transfers to be balanced, which is true. But there are ways by which payments between the metropole and the colonies could be balanced other than through metropolitan public financial transfers.

First, the metropolitan financial transfers to the colonies could have been private investments, which do not seem like a cost for French taxpayers but a source of income for French investors. According to the returns on investment reported in Coquery-Vidrovitch (1973) and Marseille (1984), private investments cannot be considered as part of public aid but were on the contrary often very profitable.

Second, imports from the metropole in the colonies could have been paid in cash. In this case, payments are balanced between the metropole and the colonies. An African company could pay in cash in two ways: either the company has the money, or it borrows the money at an African bank. An African company could therefore pay its imports in cash if there were enough local savings. I do not have any evidence on private savings during colonial times in AOF, but I do have evidence on public savings from budget data. At each budget level, public savings can be calculated by subtracting total expenses from total revenue. Figure 10 shows public savings at the federal level by year from 1907 to 1957. The total of public savings in AOF from 1907 to 1957 is 941.6 millions (1914 Francs). The total of trade gaps in AOF from 1907 to 1957 is 2,309.1 millions (1914 Francs). AOF public savings therefore accounts for 41 percent of AOF trade gaps. The possibility that African companies could borrow money from local banks to pay their imports is thus worth considering.

Figure A2 – Surplus of AOF Federal Budgets (Final Accounts), 1907-1957

²⁶Jacques Marseille, *La balance des paiements de l'outre-mer sur un siècle, problèmes méthodologiques*, Actes du colloque « La France et l'outre-mer, un siècle de relations monétaires et financières », Comité pour l'Histoire Economique et Financière de la France, Imprimerie Nationale, 1997, in *Empire colonial et capitalisme français*, op. cit., p. 546.



To conclude, there is not enough evidence on payments between the colonies and the metropole to understand exactly how payments were balanced during colonial time. However, the analysis of the colonial budgets definitely shows that AOF trade gaps towards the metropole were not compensated by public metropolitan financial transfers. Using trade gaps is therefore a misleading way to measure the cost of colonization for French taxpayers.