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Regional Disparities and Public Expenditure in Colonial Tunisia: An Analysis of Historical Influences and Resource Allocations

By

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Abstract:

Academic interest in economic inequalities has investigated the patterns of inequalities perpetuated by colonial rules across Africa over the past two decades. The findings highlight that, at a country level, there are biased investment policies favoring European settlers and encouraging the extraction of resources. Considering the importance of regional inequalities in Tunisia in the modern era, this study aimed to investigate the extent of inequalities between the regions in Tunisia. It didn't tackle the effect of colonialism on local development at the country level as others did. Using available public finance data looked at regionally, it was found that regions with higher concentration of European settlers received more investment in social welfare services and spending in infrastructure.

Key Words: Inequalities, Regional Development, Colonialism

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1 Introduction:

The academic interest for economic inequalities in Africa has gained much interest in the past decades offering new perspective on the possible long run implication of colonization as well as the complex influence of pre-colonial inequalities. Despite the scarcity of data, the recent literature, has equipped us with measurable insights on social and economic disparities in African colonies (Frankema et al., 2023). A cross-country analysis of public expenditure records from the French colony has uncovered a consistent pattern of inequalities across all its colonies. The results indicate a wage premium, biased investments in infrastructure, and substantial military expenditure, while spending on welfare services remains modest and limited (Cogneau et al., 2018, 2021; Huillery, 2009). These findings highlight that the primary beneficiaries of this spending are capital interests and settlers; however, the studies have primarily focused on colony-level pattern of inequalities, offering limited insights into the inequalities perpetuated by the colonial regime within countries, at a local level.

In the case of Tunisia, a former French colony, existing inequality studies have tackled the political and social inequalities perpetuated by the French authorities (Jallab, 1999; Lambert, 2009; Mouilleau, 2000; Saidi, 2014). The economic inequalities analysis mainly focused on access to economic opportunities. Studies on Tunisia did not go below the national level, Cogneau et al's work did cover Tunisia, however as part of a multi-country analysis. Other studies have also explored the national debt level and its usage, their findings are in conformity with the general French colony pattern. According to Bel Hedi, 80% of the French debt in Tunisia was directed to investment in large infrastructural projects. However, a detailed examination of the influence of the French investment pattern at the local level, providing an insight on the development across the different regions in Tunisia have been little explored. One study, nonetheless, addressed this gap from the perspective of registration of property and civil registration during the colonial, linking it to access to public services and concluding that indigenous populations in regions with lower registration rates were disadvantaged compared to European settlers (Koehler-Derrick, 2020). Nonetheless, the spending pattern at a local level has not been explored, offering little perspective to development levels at each region.

2 Aim and scope

Building on findings on inequalities in African colonies, the purpose of this study is to further explore the biased nature of French public policies In Tunisia and how they shaped regional/Local inequalities. Through this research we would like to answer the following question: *to what extent was public expenditure unequally distributed between regions?*

Specifically, we aim to empirically test **if these investments were biased toward regions with higher concentration of European settlers**. By analyzing primary data from regional budgets, we first test the association between public spending and population size. Later, we explore the

patterns of this spending in the different sectors, focusing mainly on social welfare services: health and education, as well as infrastructure such as roads, communication and sanitation networks. The choice was based on the relevance of these sectors to human development as well as increased productivity and economic growth.

This study contributes to the large emerging studies on French colonialism and inequalities. It builds on previous research analyzing district level disparities in French West Africa. While the vast majority of the literature, testing for inequalities primarily used national level accounts, and often conducted cross-country analysis, this thesis relies on novel regional level public finance data, focusing only on Tunisia, between 1924 and 1939. The empirical results in this study revealed a biased expenditure pattern towards the regions with higher European concentration. Further analysis historical and contextual elements of that period provides a deeper understanding of the possible underlying factors influencing our findings, such as political inequalities and the expansion of extractive industries.

Section 2 gives contextual background on Tunisia's colonial history, the governance structures adopted, and the demographic challenges of French colonial rule. Section 3 presents the literature review, outlining the major findings in regard to colonial inequalities in Africa in general and in Tunisia particularly. Section 4 provides a detailed description of: the methodology, the empirical model and data used for the analysis. Section 5 presents the empirical results and discussion relating our findings to the previous literature. Section 6 concludes.

3 Historical Context

The French presence in Tunisia lasted from 1881 to 1956. Before that, the economic context was characterized by heavy public expenditures pattern and heavy debt from European banks. This situation has left the country with considerable financial difficulties, leading to bankruptcy in 1867 (Bel Hadi, 2016, p 29). Capitalizing on Tunisia's financial crisis, coupled with the decline of the Ottoman Empire, France seized the opportunity and took over Tunisia. During the Congress of Berlin in 1878, Germany and Britain permitted France to invade Tunisia (Ibid, p 61). On May 12, 1881, Tunisia officially became a French protectorate. Subsequent conventions, such as La Marsa on June 8, 1883, transferred administrative, judicial, and financial responsibilities from the Bey to the French government (Ben Salah et al., 2022).

3.1 Governance and Representation

The financial situation prior to the French colonization of Tunisia has been dire and characterized by large debt. In fact, the debt taken by Tunisia from European bank has increased by 92% on the span of 10 years only between 1860 and 1870. As explained by Bel Hedi (2016) this increased debt was a symptom of corruption of the ruling monarchy and its ministers.

Despite the mid-19th century reform efforts to modernize governance and increase political participation, these remained largely unimplemented. The 1856 constitution indicated the organization of public finances, but no concrete application was enforced, leading to poor financial management which significantly paved the way for French presence and intervention in

Tunisia. This intervention, however, was distinct from the approach previously adopted in Algeria. Instead of pursuing classic colonization entailing a direct rule and an annexation of the colony, hence its financial burden to the metropole, French Republicans favored a “*protectorate*” regime.

This type of governance model, in theory, favored an indirect intervention where the sovereign of Tunisia maintained a nominal position as the governor of the country, and the French protectorate presence, mainly aimed as a guarantor towards the creditors. In practice, however, the French government, under the supervision of the ministry of foreign affairs and through its resident general, dictated laws and organized society(Saidi, 2014).

Given the nature of the protectorate model, the French governors had no interest to alter the power dynamics and raise public outrage, hence maintaining a particular peace and stability vis à vis the Tunisian rulers. Simultaneously, they needed the French support both from the metropole and in Tunisia, which implies that French interest is well preserved and represented. Therefore and throughout the 75 years of colonial presence in Tunisia, a dualistic governmental regime was established across all levels of governance, from the central authority to the local communal level(ed. Hayder et al., 2018; Mechat, 2009; Saidi, 2014).

At a central Level — several institutions were established to map available resources, and enforce the needed laws to facilitate their exploitation(Jallab, 1999; Bel Hedi Abdel Majid, 2016). In the subsequent years and with the shift of the protectorate agenda into encouraging settlement, the institutional landscape evolved into a larger administrative establishment to providing settlers with living conditions comparable to those in the metropole. Therefore, the governance structure evolved from only a monarchy, with one sovereign into a hybrid system with a political regime that encompassed the traditional monarchy rule and modern representative institutions of French and indigenous population.

Lambert's, (2009) analysis of the evolution of the different representative structures across the colonial periods, highlights the bias of these institutions toward French settlers in general and indigenous populations as well as the disparities between indigenous elites (*bourgeoisie*) and non-elites. The first established representative structures during the 19th century were exclusive to French noble settlers and representatives from major municipalities. These institutions, however, had limited prerogatives, and were mainly consultative, leading to criticism and debate over their existence and purpose, despite their influence.

The early 20th century witnessed a rise of a new Tunisian Bourgeoisie, mainly large farmers and manufacturers (Jallab, 1999). Along with rise of resistance movements, the claims for a Tunisian representation have become a pressing issue for both French government as well as the Bey of Tunis. In response, the authorities established **the Big Council of Tunisia**. This new representative entity was very progressive compared to previous ones as it included an indigenous representation as well as expended the council's prerogative to examine and amend the state budget. Despite this advancement in general, the number of French delegates still outnumbered the Tunisian ones, and interests of its members often clashed.

At a local level — and at early stages of French intervention, the governance aimed to maintaining a regional presence for the protectorate without notably altering the pre-colonial governance structure. This was crucial for political and economic reasons. On one hand, territorial presence helped extend the administration rule in order implement and promote its economic interests and assert control, reducing the risk of revolt. On the other hand, governmental authority was better respected when represented by a local figure rather than an outsider and in that manner the principle of the protectorates seems respected(ed. Hayder et al., 2018; Mérignhac, 1912; Mouilleau, 2000).

Prior to the protectorate, the local governance was organized according to tribal formations and their subdivisions. Under this structure a District Chief, or “Caid”, assisted by lieutenants, “khalifas”, All designated by the prince to govern below them. These entities had general administrative responsibilities, including maintaining order, administering justice, and collecting taxes(Ganiage, 1960). With the establishment of the French protectorate, consecutive reforms were introduced, gradually introduced French influence and minimally altering local power dynamics. The most notable reforms included of a "civil control" agents at the district levels (ed. Hayder et al., 2018), and creating various municipalities across the country. The French representation within these entities mainly served as an agent of influence with indirect power. For instance, Ganiage (1960) argues that civil agents had no governance prerogatives locally, however, served to network and indirectly influence local chiefs. Within the same manner, at the municipal level, while the structures were presided by Tunisians, the two French vises presidents possessed the authority of setting the municipal commissions and their members (Lambert, 2009).

While the early reforms sought no alteration of governance at local level and were rather a continuity to the central governance model, well established before the protectorate, the reforms of the 1920's established regional councils across the 5 main geographical regions, excluding the far southern part of the country, which was maintained under the jurisdiction of the French military (ed. Hayder et al., 2018) . The civil regional councils were connected to the Big council of Tunisia and were provided with their own budgets(Lambert, 2009). This shift marked a more structured approach to local intervention, reflecting the evolving administrative strategies of the French protectorate.

Given the implementation of representative institutions, and the adoption of a decentralized governance model, it is anticipated that the financial planification would also become decentralized, hence establishing local autonomy. However, in practice the governance of public finances remained highly centralized. During the early years of the protectorate the representative institutions in general had no prerogatives to directly intervene in the budget planning, however with the establishment of the Big Council of Tunisia, the prerogatives expended to the examination of the budgets and its amendment it if needed. The regional councils on the other hand, had limited scope for action and were only able to introduce changes after having the approval from the Big council of Tunisia (Lambert, 2009). Since this new level of political representation might alter the protectorate presence in the long run, it is reasonable for colonial authorities to not fully invest in autonomous local power. Therefore, regional

councils can only be sought as an extended structure of representative institution at the central level.

3.2 Balancing European Influence

The challenges for the French protectorate to assert its presence in Tunisia were several. As it had to establish prudent and “indirect” rule in Tunisia and minimize the risk of revolt, it had also to prevent influence from the outside that can possibly undermine its authority. Thus, the Italian citizens predominant presence was a matter of concern for France’s rule in Tunisia as well as its economic investment.

Given the history and proximity between Italy and Tunisia, migration was in fact a normal phenomenon for the two countries. However, by the time of the establishment of the protectorate the number of Italian nationals considerably outnumbered the French settlers. Census from 1900s shows that the French population in Tunisia was approximately 34,000, whereas Italians numbered around 70,000¹. In addition to this disproportionate presence, the majority of the financial assets and resources were also held by English and French Investors (Bousselmi, 2016, p62). This presented a potential threat to French interests, since from “*an Italian perspective, the presence of a large Italian population meant the existence of an Italian colony, independently from the political leadership. In fact, the 1901 Italian census, [.] Tunisia was listed as a “permanent” Italian colony*” (Choate, 2007).

Although France's initial approach in Tunisia did not focus on starting a large-scale settlement, the pressing need to limit other European influence and intervention, led to a shift of policy encouraging French settlement. This policy was reflected in an investment pattern that extends beyond economic extraction, such as the creation of settlement funds and dedicated programs facilitating land acquisition of settlers. In addition to this investment, efforts to further avoid conflicts between Italy and France resulted into the signature of the convention in 1896, under which the Italian nationals in Tunisia, became protected and enjoyed similar advantages to French settlers (Bel Hedi, 2016; p66). in return Italy recognized the French protectorate and its legitimacy.

While, under this treaty the Italians, regardless of their origin, received protections and privileges similar to those of French settlers, the representation remained exclusive to the French first and later the indigenous population, better controlling for foreign influence.

¹ Statistique générale de la Tunisie, 1922, Tunisia, Census of Civil Population for the year 1921, p 2-3

4 Previous research:

4.1 Literature Review:

4.1.1 African Inequalities During Colonialism:

Colonial Africa was marked by significant economic disparities, most notably between the indigenous populations and European settlers. These inequalities were not only a reflection of the social hierarchies imposed by colonial rule but also a result of deliberate economic policies designed to favor European settlers.

By examining and contrasting social tables, income tax records and administrative archives in different African colonies—some colonized by France and others by Britain—revealed considerable income disparities between indigenous population and European settlers. These disparities are explained by export-driven commercialization, which mainly benefited a capitalist minority controlling skills and capital, as well as the introduction of colonial administrations that facilitated the exploitation of cheap labor and laid the groundwork for more colonial investments, leading to further exploitation. As a matter of fact, Alvaredo et al., (2021a) revealed that European expatriates and settlers made up the majority of the top income earners in both the French and British colonies in Africa. However, these disparities were the result of a dual fiscal regime that fostered an economic structure where a traditional, mostly agricultural sector coexisted with high-wage sectors (mostly administrative) predominantly benefiting Europeans and local elites (Cogneau et al., 2021).

While income disparities between indigenous populations and European settlers highlight the economic divide, inequalities in expenditure further illustrate the systemic inequities of colonial rule. An analysis of budgetary data from various African colonies reveals that both the French and British Empires have similar public investments patterns, that were focused on economic exploitation at a cheap cost. For instance, France's overall colonial expenditure of civil subsidies on the span of a century, never exceeded 4% of its metropolitan budget; on the other hand the military expenditure represents one eighth of total spending (Alexopoulou, 2019; Cogneau et al., 2024; Huillery, 2014)

Further analysis of the colonial budgets, better demonstrate the allocation priorities of the metropole. In west Africa, for instance, infrastructure accounted for approximately 30% of expenditure, while production support (subsidies for economic exploitation) represented around 15%, and administrative costs constituted 25% of total expenditure (Cogneau et al., 2018). This pattern in public expenditure was also observed in other African colonies. Gardner's breakdown of the Kenyan budget, for example, shows that early in the colonial rule, the budget allocated to military intervention and police absorb most of the budget and later subsidy to investment in infrastructure and administration. In North African colonies, by 1925, the share in infrastructural spending amounted to 49,8% of total expenditure, followed by administrative spending amounting to 24.7% leaving little for social services (Cogneau et al., 2021).

As a matter of fact, the observed expenditure on infrastructure in colonial Africa was principally allocated to the development of railways. This investment was intended to reduce transportation costs, connect various production sites, enhance productivity, and develop exports, that would eventually move the colonies to financial autonomy (Gardner, 2012). While the development of railways might have had some indirect benefits for the indigenous population, such as improved access and potential for accelerated economic growth, it is argued that the primary gains were biased towards the European interests who mostly monopolized capital or/and labor.

While the overall expenditure within a colony is in fact indicative of the colonial agendas and goals, mainly through emphasizing the primary sectors of interest, it gives little insight on the distribution of resources between European settlers and indigenous population. An analysis of the deconstructed budget per region, on the other hand, can give us more insights on the investment patterns that better capture the inequalities between the different groups. For example, the governance structures in French West Africa (AOF) and French Equatorial Africa (AEF) allow for such detailed analysis. These regions had multiple layers of governance and operates in a hierarchical manner, beginning with the metropolitan level at the top, followed by the federal level, then the district level, and down to the community/local level (Huillery, 2014). The financial governance follows the same hierarchy, yet it stops at the district level. Therefore, budgets were allocated principally at the federal and district levels, with additional funds designated for annexed projects and aid (Cogneau et al., 2018).

The initial pattern observed at the district level budgets was that French colonial spending was redistributive. Specifically, investments in districts did not align proportionally with the revenues generated by each district (Huillery, 2009). For instance, Mauritania transferred no revenue to the federal budget of AOF in 1925, nonetheless, they have received 36% of its budget from federal subsidies (Frankema & Van Waijenburg, 2013). Despite the redistributive nature of the French fiscal policies in their African colonies, it seems again that the primary beneficiaries of these federal transfers are the net contributors that indirectly benefit from the investments in infrastructure (Ibid, 2013).

The second observed pattern in the redistribution of resources, particularly in welfare services like education and health, revealed that (1) these investments were relatively modest, and (2) they were unevenly distributed across districts (Huillery, 2009). This disparity in allocation, raises questions about who benefits from these investments and on which basis they were attributed. Initial analysis of population density in French West Africa showed a negative correlation with public goods investment, suggesting that other factors influence the allocation of resources (Ibid, 2009). When examining the presence of European settlers alone, a significant and positive correlation emerged between the number of European settlers per 1,000 inhabitants in 1925 and colonial investments in education and healthcare (Huillery, 2011).

These findings provide partial insights into the distribution of public resources. The observed link between the size of European settlements in the colonies and investment in public infrastructure suggests that settlement patterns influenced budget allocations. However, this correlation does not fully explain the initial preference for these areas. To gain a more comprehensive understanding, it is important to consider other factors such as geographical

conditions, political dynamics, and power relations, which may also play an important role in shaping these investment patterns. For instance, Frankema & Van Waijenburg, (2013) have highlighted the effect of geographical location. Their findings suggest that the coastal region in British and French west Africa, tended to have higher net revenues compared to the landlocked districts. These regions were also the ones that have witnessed a change in their population size in the early 20th century with the increase presence of settlers, at least in French West Africa (Huillery, 2011), hence an increased investment in social welfare services. This also implies that not only colonial prosperity attracts European settlers, but pre-colonial wealth could've also influenced the choice of settlement areas, perpetuating existing inequalities. As explained by Ricart-Huguet, (2022) early commerce along the Atlantic and Indian Oceans set the stage for initial infrastructure, education, and health investments even before the formal establishment of colonial institutions in sub Saharan Africa, Giving a comparative advantage of coastal areas compared to landlocked ones.

In addition to geography, factors such as power dynamics, and the resistance to settlement in the colonies, seems to have also influenced the settlement choice and consequently the investment pattern in social welfare. Huillery's (2009,2011) analysis suggests the autonomy of French administrators and local chiefs, may have affected the investment policies.

4.1.2 The case of Tunisia

Colonial inequalities in Tunisia have been addressed as part of large recent literature on the French Empire. The studies by Alvaredo et al., (2021) and Cogneau et al., (2021, 2024) has investigated and contrasted the fiscal policy of the French colonies notably North African (Tunisia, Algeria and Morocco). In Tunisia, these studies reveal that by 1925, there was a stark disparity in income between Europeans and the indigenous population. Europeans, who constituted about 9% of the total population, controlled 49.9% of the income share. However, the research also highlights the presence of an indigenous bourgeoisie, which, despite making up 17.4% of the population, held over 20% of the total income. These income inequality results are closely linked to the significant public wage premium observed in the French colonies. Cogneau's research shows that in Tunisia, Europeans occupied approximately 60% of public sector jobs.

Cogneau's research shows that in Tunisia, Europeans occupied approximately 60% of public sector jobs. This distribution of employment within the administrative sector logically explains the pronounced income inequalities, as Europeans enjoyed economic advantages due to their positions in the public sector, which includes high wages and benefits in the format of bonuses.

Cogneau' et al's analysis of the expenditure of the French empire in Tunisia, revealed a pattern not different from what was observed in West Africa. In fact, between 1884 and 1894 the lion's share of expenditure was directed towards large-scale projects and representing 88.5% of total spending (Bel Hadi, 2016, p76). This budget was allocated to invest in ports, railways, and roads and aimed primarily to connect resource extraction sites like mines and plantations to coastal export hubs and facilitate economic activities (Ibid , 2016; Bousselmi, 2020).

Earlier research by Amin & Perl (1970) analyzed the extraction-focused policies of French rule across Tunisia, Algeria, and Morocco, particularly emphasizing the investment in the agricultural and the mining sectors. In Tunisia, for instance, the budgetary records outline various expenditures in the agricultural sector, including investments in infrastructure such as irrigation systems, funds for acquiring land, and subsidies for production aid. Nonetheless, the disparity in agrarian production outcomes between settlers and Tunisian indicates a biased access. Between 1921 and 1925, the cereal production from farms owned by Europeans was almost three times higher than that of Tunisian farmers (8.7/h vs 2.9/h, respectively), despite Tunisian farmers possessing 5.5 times more land than their European counterparts.

While the late 19th century was focused on laying the groundwork for economic expansion, the early 20th century has provided many advantages for French citizens to settle in Tunisia, as the need to balance the European presence in Tunisia and increase the number of French citizens became more pressing, one might have anticipated a shift in public spending towards social welfare services to promote settlement. Despite this anticipated shift, public expenditure records continued to show a consistent allocation pattern, with minimal changes in the share of funds directed towards social welfare. Bouselmi's analysis reveals that between 1902 and 1912, the majority of borrowed funds, 80% of the total, were still allocated to the same expansion projects previously highlighted.

Figures on the share of expenditure allocated to social welfare services in Tunisia, such as health and education shows a higher percentage compared to the average in north African Average. While the average share reported suggest that resources for social welfare accounted for 15.8% of total expenditure, in Tunisia was slightly higher and accounted for 21% of the total national expenditure(Bouselmi, 2016; Cogneau et al., 2021). Nonetheless, social spending remains very minimal compared to other types of expenditures.

The investment in the health sector in Tunisia, saw an increase starting 1900, through the establishment of different health institution aimed at mapping prevalent diseases, preventing epidemics, and providing treatment to both the indigenous and European populations(Gaumer, 2006). As for education, the deconstructed data on the evolution of the number of schools and students indicates an overall development in the sector. In fact, the school's numbers increased by 45% nationally and continues to increase by 25% and 28% for the years 1921, 1931 respectively. The same applies to the number of students where it has gone from 14,272 in 1911 to 67,086 in 1931(Ben Salah et al., 2022).

While the presented literature presents *un état des lieux* on the evolution in social spending based on budgetary data, it tells as little on how these budgets are allocated and on the effective beneficiaries from these services. In the case of schooling for example, the presented figures above suggest a substantial increase in the enrollment rates of students to schools, which might imply an increased access to educational infrastructures. However, the secular nature of the majority of schools and the modest numbers of public institutions indicates limited access to less well-off children. These assumptions is confirmed by the low enrollment rates of indigenous population in the north African colonies, which only represented 4% of the total schooled children (Cogneau et al., 2018). As for the health sector, though we do not dispose of descriptive

figures on the spending, several studies have highlighted the ethnic divide in accessing health institution such as Gaumer, (2006) and Mejda et al., (2007).

On a national level, colonial inequalities show a consistent pattern observed in the different colonies, whether they were French, British or Portuguese. However, the analysis of general expenditure in our case is insufficient to provide an extensive analysis of inequalities and the impact of colonial investment on the development within the country. To the best of our knowledge, only one study has investigated the regional disparities in Tunisia during the colonial rule and its long run impact on post-colonial regional development. By analyzing registration patterns both civil and property, during the colonial period and before it, Koehler-Derrick, (2020) argues that uneven development indeed existed between various regions in Tunisia during colonial times. In fact, his results suggest that *“in regions with concentrated European settlement, private property systems reduced the influence of decentralized precolonial property regimes and provided strong incentives to adhere to colonial registration schemes for people and land before independence. In contrast, areas with limited European presence, especially arid and mountainous rural zones, retained their tribal property systems, resulting in minimal motivation or opportunity to engage with the colonial registration processes”*. The lack of registration in certain regions, therefore, hinders the access of indigenous population to social services if we assume that the investments were indeed made in these regions.

The presented literature highlighted the different types of economic inequalities in the African continent during the colonial rule. There’s a consensus in the literature that colonial regimes in their “developmental” approach were biased toward European settlers and/or extractive investment. While studies beyond economic measurements investigated the broader social and political structures that perpetuate inequalities, the effect of colonialism on perpetuating or not inequalities within colonies remain understudied.

5 Methods and Data

The public investment patterns highlighted in the previous section, emphasized the bias in expenditure to facilitate the extraction of resources in agriculture and mining as well as favoring French capital. While these analysis focuses on the economic and social inequalities between indigenous population and the French settlers, the discussion on its effect on regional development and disparities is little explored.

Within the framework of this study, we aim to explore colonial regional inequalities in Tunisia. Through analyzing regional public expenditure data, we would like to investigate the association between European settlement, public expenditure, and regional disparities in colonial contexts, in Tunisia. It is important, however, to highlight that this research does not attempt to investigate the long run effect of colonialism, nor assess the inequalities pre the colonial era. We focus on a specific period between 1924 and 1939. The studied period coincides with important political reforms moving toward a decentralized governance structure, which was illustrated through the establishment of regional representation structures, as well the reinforcement of national representative structure and the expansion of their prerogatives and power. This period is also

described as the “development” era of the colonial period, during which, European colonialism were questioned nationally and in internationally, resulting in investments in more social services (Bousselmi, 2016).

Relying on public finance data at the regional level in the case of Tunisia, is a novel approach. It is also an accurate approach to assess resource distribution for two key factors. Firstly, regional budgets provide comprehensive financial information that, on the long run, offers insights into the French administration’s priorities and investment strategies in Tunisia. Secondly, their connection to public services that drive development in general, such as infrastructure, education, and healthcare, can be indicative of the development level at each region and the inequalities status.

Based on the previous literature we expect that regions with substantial European settlement received more public investment in infrastructure and primary services (Health and Education), whereas regions with fewer or no European settlement received less public spending and thus are marginalized. To test these assumptions, I am adopting a quantitative research methodology. Using regional public finance data acquired from the archives of the National Library of Tunisia, we focus on identifying trends and patterns in regional public expenditure and its association with the population size. To better capture the relationship between the two, we apply a two step analysis.

The first step involves assessing the association between population size and the allocated regional budgets for the available sample years. The objective is to determine if and to what extent the population influences the allocation of budgets. Therefore, we employed a simple Ordinary Least Squares (OLS) regression model, as follows:

$$\log (Expenditure PerCapita_{i,r}) = \log (\beta_0) + \log (\beta_1 EuroP_{i,r}) + \log(\beta_2 TUNP_{i,r})$$

Where:

- $EuroP_{i,r}$, represents the European population per year and per region.
- $TUNP_{i,r}$, represents the indigenous Tunisian population per year and per region.
- $Expenditure PerCapita_{i,r}$, represents the per capita expenditure per region and per year

The second step of our analysis focuses on examining the trends and patterns in public expenditure across different regions. This analysis includes:

- Analyzing the yearly changes in per capita expenditure for each region.
- Investigating the per capita expenditure trends by region, excluding the highly dense communes in each region.
- Examining the per capita expenditure trends by region, excluding “investment” expenditure to focus on recurrent spending.
- Analyzing the per capita expenditure trends for health, education, and infrastructure across regions.
- Determining how often each region ranks in terms of per capita expenditure.

- Assessing the frequency of regional rankings in per capita expenditure for health, education, and infrastructure

The strength of this approach includes the use of logarithmic transformation to improve the robustness of regression analysis by addressing skewness and non-normality in the data. The detailed trend and pattern analysis provides a nuanced understanding of multiple expenditure types and offers sector-specific insights. Additionally, the analysis of the budget distribution across the regions helps identify consistent patterns and outliers in regional expenditure.

The weakness of this approach lies mainly in data limitations. As a matter of fact, the analysis relies on available data, which may be biased, given the historical context and the minimal length of the covered period. This raises concerns about the small sample size we have on hand. Additionally, some of the steps taken to address issues presented by the data we have, like excluding expenditure on highly dense communes from our pool of data and the investment expenditures, might oversimplify the analysis and overlook important trends and patterns of regional expenditure.

While this study considers the historical context and the potential elements influencing the expenditure pattern, the primary focus on quantitative methodology may overlook more nuanced, qualitative historical aspects of expenditures, potentially missing critical interpretive insights.

5.1 Data:

To construct data on per capita regional disparities, we have gathered data from archived regional budgets and statistical yearbooks. The regional budgets were available at the National Library of Tunisia, while the population data were available online and were acquired from the National Library of France's website.

The data for this study is comprehensive and includes primary source documents collected from national archives covering the period from 1924 to 1939.

5.1.1 Budgetary Data:

From the early years of the protectorate, the French authorities have gradually introduced their budgetary rules and principles in order to establish a viable public finance framework on which they can put in execution their projects. By 1905, the Tunisian budgetary framework was harmonized with the French metropolitan framework and by 1924 a decentralized governance model was adopted.

With the decentralized governance model, the French administration has established regional councils and accorded to each region its own budget. These regions were determined based on territorial distribution that aimed to address economic, security and military concerns and have encompassed the entirety of Tunisian, excluding the southern territory, which was under the control of the military (ed. Hayder et al., 2018). Following this rationale, the regions that were under the supervision of the regional council are the "civil" regions and were in total five regions, between 1924 and 1940, see figure 1. Four out of the five regions included a big city, in

term of population size², which are *Tunis, Bizerte, Sfax, Sousse and Kairouan*. These regions are either in total on the coast or have several districts on the coast. The only region that is landlocked is region number three.

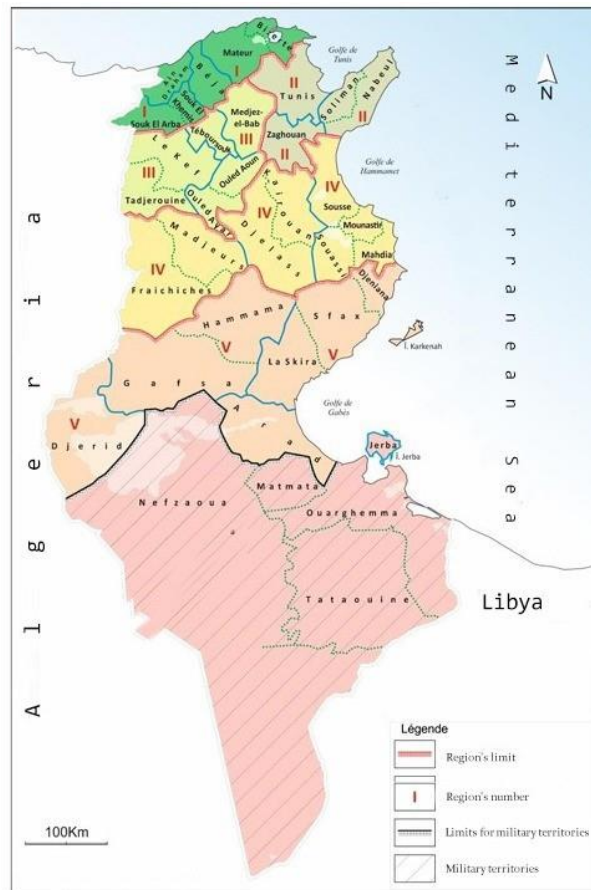


Figure 1 Territorial Division in Tunisia, 1922

Source : Mourad Ben Jalloul,, 2015, p 6

The selected budget lines used within this framework of this thesis were based on their relevance to inequalities and development theories, and for methodological purposes aiming to mitigate the shortcomings in available data. The budgetary data analyzed covered the definitive budget accounts “budget définitifs” allocated to each region from 1924 to 1939. This data includes the funds designated for the health, education, and infrastructure sectors. And encompassed budget allocations for maintenance, operations, construction, expansion, and investments in new projects. Each budget is divided into Two sections, the resources section, and the expenditure section. The expenditure section, which is the focus of our study, covers two main types of expenditure: (1) operational and maintenance expenditure, (2) Investment expenditure. However, this classification didn’t appear in some budgets, especially the ones covering the early years of decentralization. During this period, budget lines were often allocated based on the respective ministries responsible for the expenses. This structural approach highlights that regional

² As presented in the general statistics of Tunisia, published in 1922, 1925, 1931 and 1936

decentralization primarily served as an outsourcing mechanism for centralized institutions and their projects.

Table 1 shows the services in question and the exact type of expenditure that was carried out. Other services were also mentioned in the regional budget, but were not included in our analysis, either because they have no influence on the development of the region or because they were mentioned with no allocation of funds. These services are related to the services of the Directorate of Finance, the Directory of Military affairs, and the Directory of Justice respectively.

Table 1 Type of budget allocations Considered Within the Scope of the Study

Directorate ³ .	Type of Expenditure and Sector of Interest
General Directorate of the Interior	All allocations related to the health sector: <ul style="list-style-type: none"> • equipment purchase, • rent for health facilities, • indemnity for doctors, • expansion of health facilities, construction, and establishment of health facilities • Subsidies for health facilities • Health Campaigns to eradicate diseases. *allocations for establishing Police Bureau in regions ⁴
General Directorate of agriculture, Trade and colonization	Allocations related to: <ul style="list-style-type: none"> • creating and maintaining agrarian roads or forest roads
General Directorate of Public Instruction and Fine Arts	All allocations related to the education and cultural sector: <ul style="list-style-type: none"> • equipment purchase • expansion and improvement of schools • construction, and establishment of new schools • financial support to philanthropic associations • establishment of museums

³ The Directory's name in French: "Direction générale de l'intérieur, Direction générale de l'agriculture, du commerce et de la colonisation, Direction générale de l'instruction publique et des Beaux-Arts, Direction générale des Travaux publics, Direction de l'Office des Postes et des Télégraphes".

⁴ Considering the nature of this expenditure and since our focus is specific sectors it was omitted from our calculation.

	<ul style="list-style-type: none"> • subsidies to cultural institutions (museums, sports clubs, etc.)
General Directorate of Public Works Sector	<p>All allocations related to developing and maintaining infrastructure:</p> <ul style="list-style-type: none"> • Creating and expanding roads • Maintenance of roads • Maintenance of Ports • Extension of the Electricity network • Extension and establishment of sanitation network • Subsidies for public transportation • Hydraulic infrastructure and drinking water supply.
Directorate of the Office of Posts and Telegraphs	<p>All allocations related to:</p> <ul style="list-style-type: none"> • Creating post offices • Establishing and expanding post offices

Aside from the distribution of these budget allocations per affiliated service, for the purpose of this study we have further disaggregated the provisions allocated to infrastructure. This is through extracting and individually calculating the provisions allocated to sanitation (water supply, sewage infrastructure, and the sanitation of water resources), the provisions allocated to building and maintaining roads and supplying regions with electricity. The provisions affiliated with the Directorate of the Office of Posts and Telegraphs are also considered as infrastructure expenditure.

5.1.2 Data Limitation (Budgetary Data):

Regional budgets, within our framework, represent some limitation either related to the way they are structured or to their distribution across the regions. For instance, the provisions outlined in these budgets don't include expenditure related to salaries and project planning, such as the salaries of professors or doctors. These provisions are centralized and appear in national accounts. While the data we have is indicative of the pattern of expenditure in each region, it can be subject to change when introducing sectorial expenditure from the central level.

Still within the scope of the budget's structure, the reports usually have sections that detail the progress of expenditure from the previous year and provide forecast of provisions for following years. In our case as highlighted previously, we use only the fixed provisions set for each fiscal year, labeled as definitive provisions. The examination of expenditure's evolution across the years showed that some definitive provisions allocated for investment are reoccurring. However, this does not suggest that the projects in question are receiving more funds over the years. Instead, it reflects delays in project execution and the s transfer of either the total allocated amount or the remaining funds to the following fiscal years. This might overestimate the expenditure share of certain regions over time. And considering the complexity of addressing each budget line by itself to detect this imbalance, we limited the use of investment credit in our

analysis. For instance, the regression analysis is only based on budget allocations covering maintenance operational and expansion projects. Nonetheless, in the case of pattern analysis, these provisions were referred to, especially when examining and discussing the expenditure per sector.

The last challenge encountered is in regard to computing the per capita expenditure. Since highly dense cities tend to receive more funds than less populated areas, possibly inflating the overall spending per region. For instance, region number four is the host of two of the denser cities in the country. Therefore, by accounting for their respective expenditure, we might either overestimate or underestimate the actually allocated budget per capita. In order to address this, we have excluded allocated funds targeting highly dense cities. However, it is important to highlight that some expenditure might still be accounted for. This is because the expenditure presented in the budget lines is detailed in a way that associates the spending with specific areas within large cities, including those that we may not know about.

5.1.3 Demographic Data:

Demographic data adopted for this study were retrieved from archived general statistics reports⁵, for the period covering 1917 to 1936. These reports provide data on the number of: (1) indigenous population, both Muslim and Jewish, (2) European population, including the French population, per district. They also outline data on the biggest cities in terms of population size, the age groups, the marital status, and the profession of European population. However, this information wasn't uniformly reported on all the statistical year books.

Within the scope of this study, the raw data available was slightly treated to cover all the adjustments introduced in the budgetary data and their geographical coverage. As highlighted above, the furthest southern region of Tunisia, with connecting borders, with both Algeria and Libya was classified as a military territory, with no regional representation nor budget. Therefore, the demographic data used excluded the population residing under the jurisdiction of the military, both European and indigenous. Other omitted variables addressed the density issue. In fact, the statistical book has illustrated the distribution of the population by municipality "commune", indicating which part of the city hosts the largest population. Therefore, we have excluded the number of people residing in those municipalities by their affiliated city. This approach was adopted because excluding the number of people living in all the city would suggest two incorrect assumptions: first, that the entire city is urbanized, and second, that the populations in highly urbanized areas, usually grouped in municipalities, enjoys the same services as the population living in rural areas.

5.1.4 Data Limitation (Demographic Data)

The published demographic data on an annual basis often reflects changes based on birth and death records, compared to a specific census year. This entails inaccurate population size considering the low registration rates of births and deaths, especially among the indigenous population. Since we are working with budgetary data for the years spanning from 1924 to 1939,

⁵ Statistique générale de la Tunisie, (1914 – 1939), Tunisia. Available at <https://gallica.bnf.fr/>

rather than using the reported population sizes for each year respectively, we have used the reference census data reported in the statistical books.

This approach is not without its limitations. In reality, the census only occurs once in 5 years, suggesting a likely difference between the actual population size and the one we used. However, we believe that this data still provides a good proxy for population size and distribution. Within the timeline of the study, the censuses conducted cover the years 1926, 1931 and 1936. Consequently, the attributed population size to each budget was prioritized based on the census date closest to the budget date as illustrated in the table below.

Table 2 Allocated Demographic Data to Budget Year

Demographic data/ census year	Affiliated Budget/Year
1926	1924-25
	1926
	1927
	1928
	1929
1931	1930
	1931-32
	1933
	1934
1936	1935
	1936
	1937
	1938
	1939

The data therefore used for the purpose of this study are the ones for 1926, 1931, and 1936 and they are as follow:

Table 3 Population Distribution

		European Population	Indigenous Population	Total
1926	Region 1	17 874	284 088	301 962
	Region 2	35 603	269 591	305 194
	Region 3	7 594	216 951	224 545
	Region 4	4 042	471 991	476 033
	Region 5	7 402	416 515	423 917
1931	Region 1	19 553	315 722	335 275
	Region 2	44 293	302 861	347 154
	Region 3	7 598	235 014	242 612
	Region 4	3 909	538 020	541 929
	Region 5	6 834	451 327	458 161
1936	Region 1	20 868	342 946	363 814
	Region 2	46 746	329 544	376 290
	Region 3	6 417	245 952	252 369
	Region 4	3 785	575 684	579 469
	Region 5	6 333	494 075	500 408

6 Empirical Analysis

6.1 Results

Regression analysis

The regression output outlined in table 1 indicates a significant relationship between the population size and the attributed budgets in our model. The F-statistic of 0.0000 indicates a

strong overall model fit, with an R-squared value of approximately 44.59%. This implies that 45% of the variation in expenditure per capita at the regional level is explained by the population size in each region.

In terms of specific predictors, the results indicate that the European Population has a positive and statistically significant association on expenditure per capita. where a 1% increase in European population size leads to approximately 0.4399% increase in expenditure, holding other factors constant. These findings highlight the influence of the European population on expenditure patterns, making it a critical variable in our model.

In contrast, the Tunisian Population also exhibits a positive coefficient, suggesting that a 1% increase in Tunisian population is associated with a 0.2325% rise in expenditure per capita. However, this relationship is not statistically significant ($p > 0.05$). This implies that changes in the Tunisian population might not reliably predict changes in expenditure per capita within the context of this model.

The intercept of the model is statistically significant and negative, indicating that if the regions are not populated, then the predicted expenditure is less than zero. This logically aligns with the expectation of no expenditure in the absence of population. In fact, these results confirm the relevance of the intercept and its alignment with economic theory and common-sense regarding public expenditure behavior, especially in our case where the type of expenditure in question is dependent on its beneficiaries.

Table 4 : The Effect of Population Distribution on Public Expenditure Allocation

VARIABLES	COEFFICIENTS	T-VALUE	P-VALUE	[95% CONF. INTERVAL]	
LOG (EUROPEAN POPULATION)	.4399516 (.633178)	6.95	0.000	.3135688	.5663345
LOG (TUNISIAN POPULATION)	.232538 (.1761333)	1.32	0.191	-.1190255	.5841014
CONSTANT	-5.22283 (2.58728)	-2.02	0.048	-10.3871	-.0585709
NUMBER OF OBSERVATIONS	70				
F(2,67)	26.95				
F-STATISTIC	0.0000				
R-SQUARRED	0.446				
ADJUSTED R-SQUARRED	0.429				

Pattern Analysis

The association between population numbers and budget allocation is also visible in a trend analysis. By examining the expenditure patterns across the five regions, the findings reveal that regions with the highest European populations have the most significant investments in health, education, and infrastructure. In contrast, the region with the least spending has the smallest

European population. Specifically, Regions One and Two report the highest per capita expenditures, ranking first nine times and five times, respectively, over 14 budget cycles.

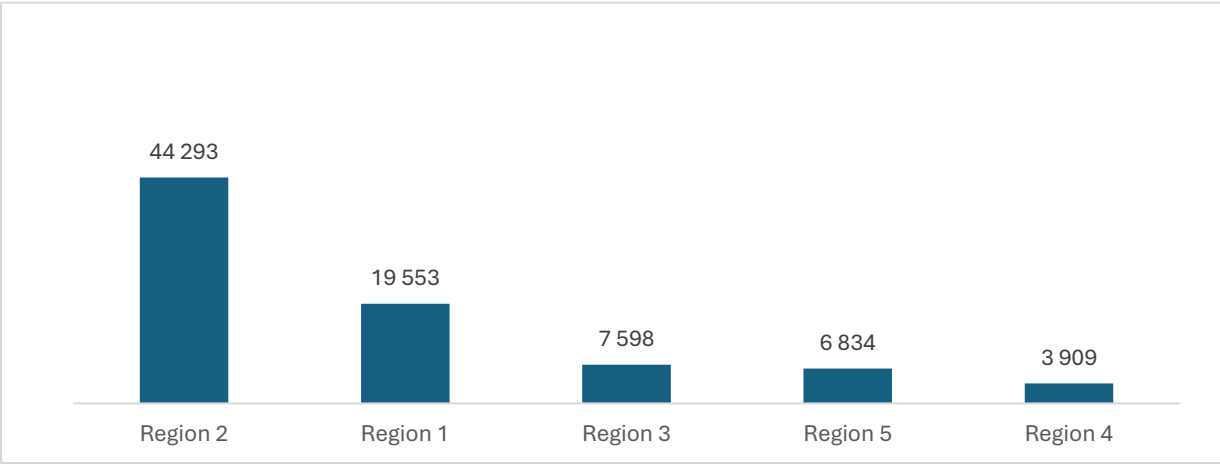


Figure 3 Distribution of European Population, 1931
Source: Calculated from Statistique générale de la Tunisie, 1935, Tunisia, Census of Civil Population for the year 1931, p 22-23

Meanwhile, Regions Four and Five consistently ranked the lowest, each nine times.

The expenditure share of Region Two accounts for 34% of the total spending, compared to only 13% for Region Four. Matching these expenditure data with population distribution, Region Two hosts the largest European population at 44 293, while Region Four has the smallest at 3 909, 1931.

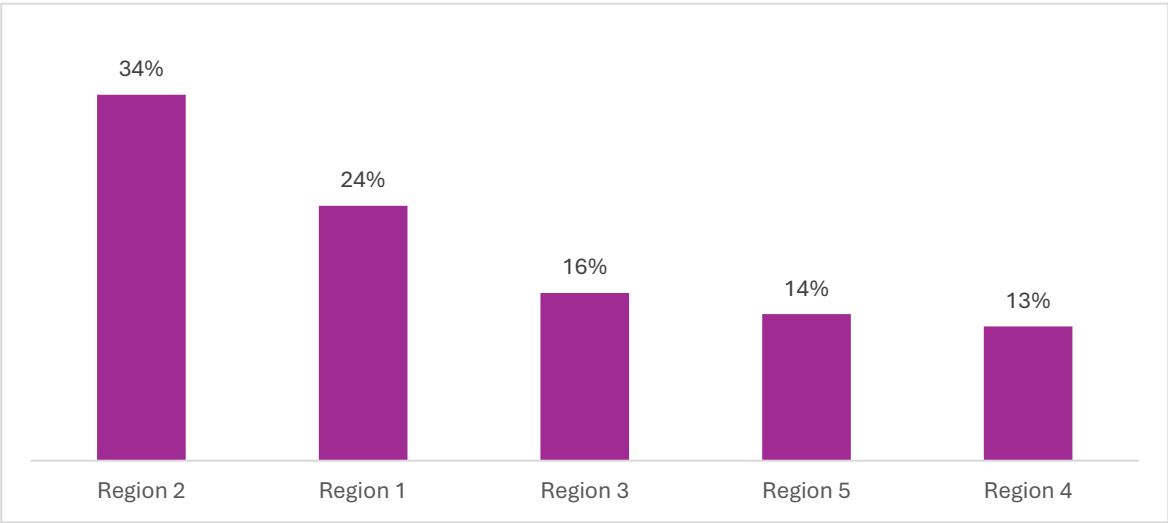


Figure 2 Share of Per Capita Expenditure Per region
Source: Calculated from Statistique générale de la Tunisie, 1935, Tunisia, Census of Civil Population for the year 1931, p 22-23

The Distribution of the Tunisian population across the regions, as presented in figure 3, indicates the opposite from what was observed with the European population alone. For instance, region five and region number four, receives the least share of per capita expenditure despite having a larger number of indigenous populations, while region number one and region number three having respectively the 3rd and 4th position in terms of indigenous population receives more in terms of public expenditure. The only outlier in this case is region number three, which receives 16% of the overall regional spending and is the least populated of them all. These results might suggest a bias against the Tunisian population. However, the results for region number three contradict this hypothesis, further confirming the results of the regression analysis. They hint that other elements may affect the distribution.

For example, region number two has the highest share of per capita expenditure. Knowing that the spending in question covers mainly maintenance and operational provisions and that it excludes the spending in densely populated municipalities, usually urbanized, suggest that several parts of region number two is urbanized compared to other regions. This is very likely, because region number two is home to the capital Tunis, which is a vibrant economic and political hub.

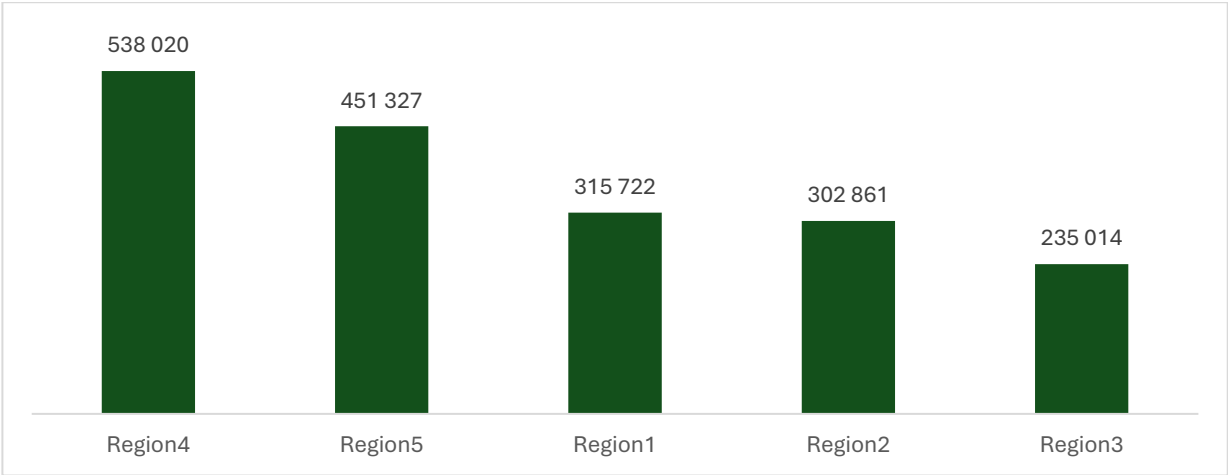


Figure 4 Distribution of Indigenous Population, 1931
 Source : Calculated from *Statistique générale de la Tunisie, 1935, Tunisia, Census of Civil Population for the year 1931, p 22-23*

When examining the distribution of expenditure per sector across all the covered period of this study, figure 5 indicates that the biggest share of expenditure was directed to infrastructure (81%), followed by health and education. In comparison with infrastructure, the expenditure targeting education and health are very modest and amounting to 11% and 8% respectively.

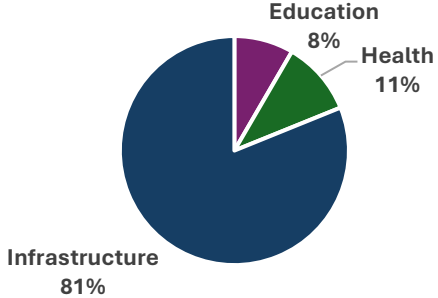


Figure 5 Share of Expenditure Per Sector, 1924-1939
 Source: Authors Calculations based on Budgetary records from 1924 to 1939. Available at National Library of Tunisia (Add file names)

A breakdown of per capita expenditure data per region and per sector shows no specific pattern when comparing the 5 regions. An independent analysis of each sector per region would be more suitable to address the allocation disparity.

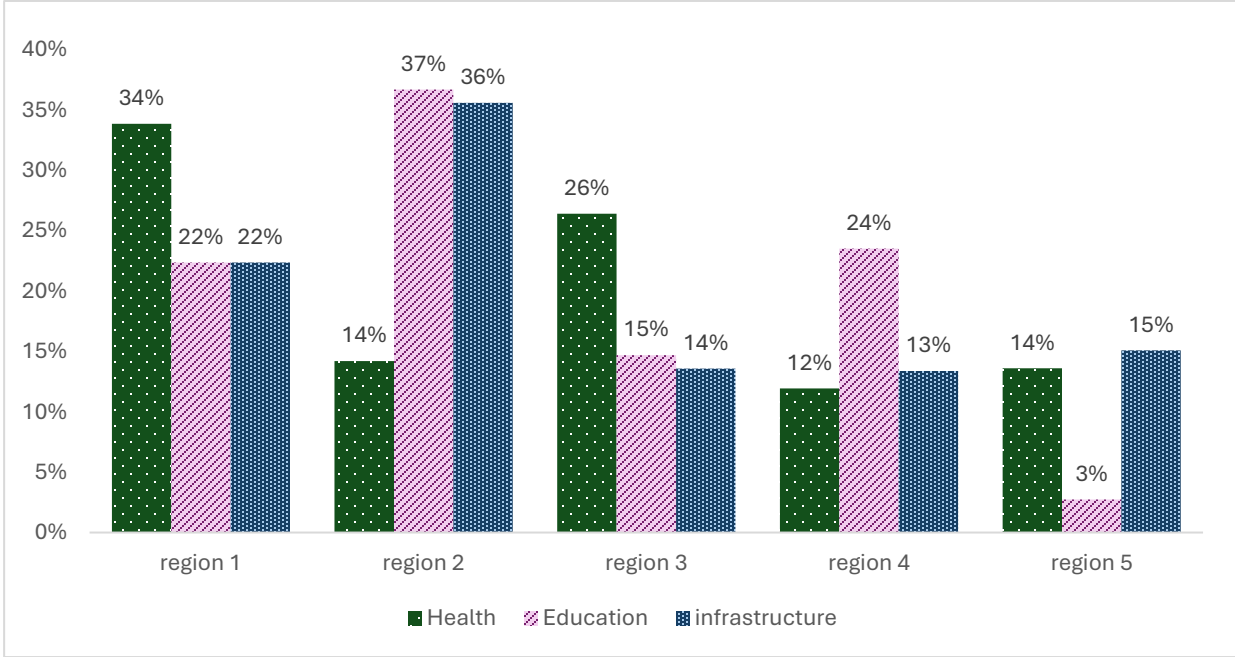


Figure 6 Share of Per Capita Expenditure in All 5 regions Per sector, 1924-1939
 Source: Authors Calculations based on Budgetary records from 1924 to 1939. Available at National Library of Tunisia (Add file names)

Education:

Figure 6 shows that educational expenditure is unevenly distributed across the regions, particularly for region number five. This gap is illustrated between the spending on education between region two and region five. While the first receives 37% of the total regional spending on education, the latter receives only 3%. When contrasting these rates with the population size, it is region five that holds a larger population in general and particularly, the indigenous one, and a lower European population. Simultaneously, region number two is the most populated by Europeans. However, region number four, which has a lower share of Europeans, receives more in education expenditure than region 5.

Regrettably, detailed demographic data on population structure per region are not covered by the scope of this study, hindering a proper analysis on the association between education spending and population distribution. Additionally, the calculation presented above mainly focused on maintenance, operational and expansion provisions only, as well as excluded the provisions directed to large municipalities⁶. These calculations, therefore, don't capture the investment efforts across the studied period.

Despite the potential limitations and errors associated with investment provisions, we conducted a brief analysis accounting for these factors, with the aim of enhancing the overall analysis on education.

Figure 7 and 8 display the expenditure on education, when accounting for investment provisions (building new schools and establishing cultural centers). The results further illustrate the gap between region number two and the rest of the country. Despite the increase of per capita expenditure in region number five going from 2 franc to 27 franc, reflecting an increased investment, the region still receives the lowest budget. In contrast, region number one continues to capture the highest share of per capita spending during the period of our study. These findings demonstrate a policy to expand education, yet they also highlight prioritization among regions. While contrasting these results with the population size in every region, once again the demographic factor does not fully explain the uneven distribution in education expenditure observed between them, as region number four still receives higher funds than region number Five.

⁶ Refer to the Data Limitation section for further details.

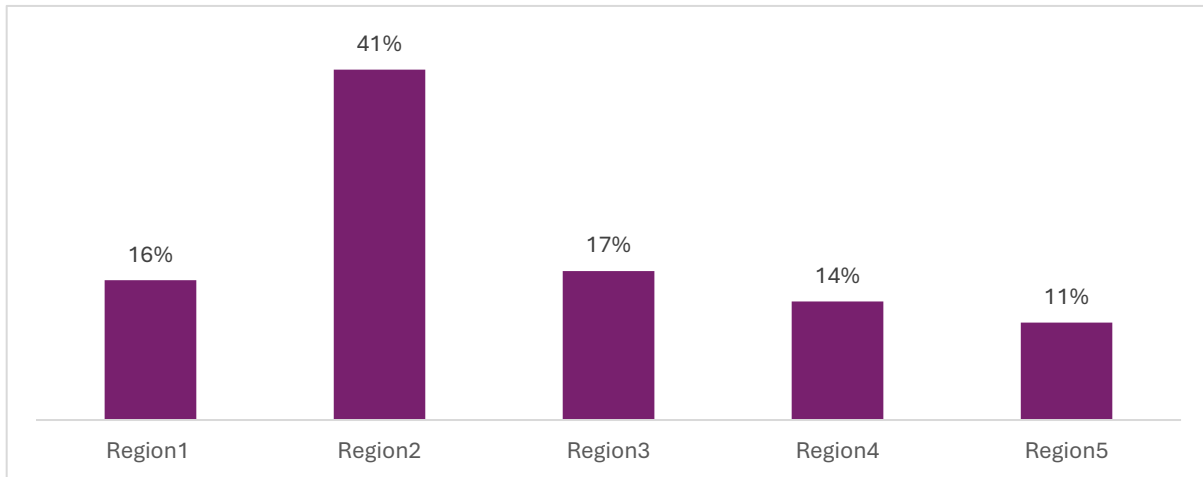


Figure 7 Share of Per Expenditure on Education Accounting for Investment Provisions , 1924-1939
 Source: Authors Calculations based on Budgetary records from 1924 to 1939. Available at National Library of Tunisia (Add file names)

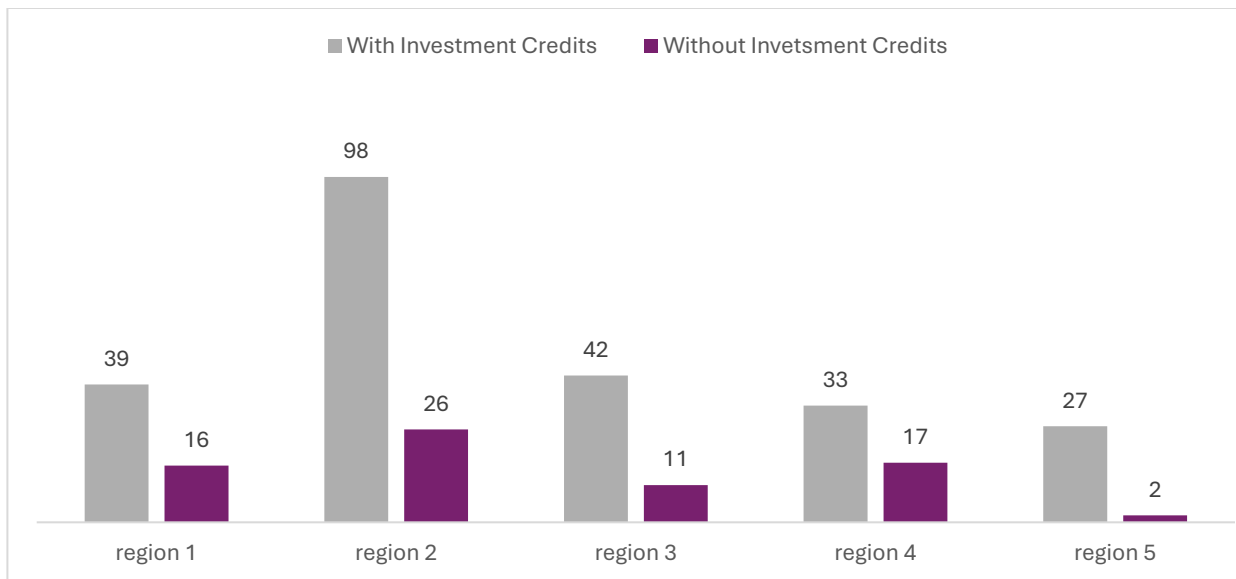


Figure 8 Per Capita Expenditure on Education Per Region, With and without the Investment Provisions
 Source: Authors Calculations based on Budgetary records from 1924 to 1939. Available at National Library of Tunisia (Add file names)

Health

Figure 6 illustrates the distribution of funds in the health sector, revealing a pattern that indicates disparities in both distribution and access to healthcare.

Upon initial examination, this distribution appears to be consistent with the distribution of European settlers in each region. This is especially the case for regions one, three, four and five. However, the share of per capita expenditure in region two, amounting to 14% presents an

outlier, for two main reasons. First, region number two is the host of large hospitals and various health institutions covering different specialties and areas of interventions. Secondly, the region has the largest concentration of European settlers. However, a closer examination of the budget allocations per sector reveals that all five regions contribute to the operational and maintenance costs of several major health facilities in region number two, including the two largest hospitals and the sole mental health facility. These facilities, concentrated in the capital, Tunis, were initially excluded from our calculations, which may explain the difference reported in health spending. Additionally, several health institutions, like “institute Pasteur”, or “La Rabta” Hospital don’t figure in the budget lines of region number two. They are rather covered by the expenditure at the central level.

Another unexpected share of expenditure is also observed for region number one. Despite having a large European presence, the per capita health expenditure is unexpectedly high. Upon examining the credit lines of the region across the 14 years, it appears that this share is associated with the allocated funds for military hospitals, linked to the large presence of the French military in region number one. Nonetheless, since the establishment of a designated civilian ward in 1924, the hospital started serving civilians, hence the regional contribution to the hospital’s funds.

Applying the same analytical approach used for education, we assess whether investments in the health sector alter the regional distribution of funds. The results presented in figure 9, shows that all regions have experienced increased investment in healthcare. Notably, Regions Two and Five show a significant increase, with per capita health expenditure tripling when accounting for these investment costs. Simultaneously, the distribution share across the regions remains the same.

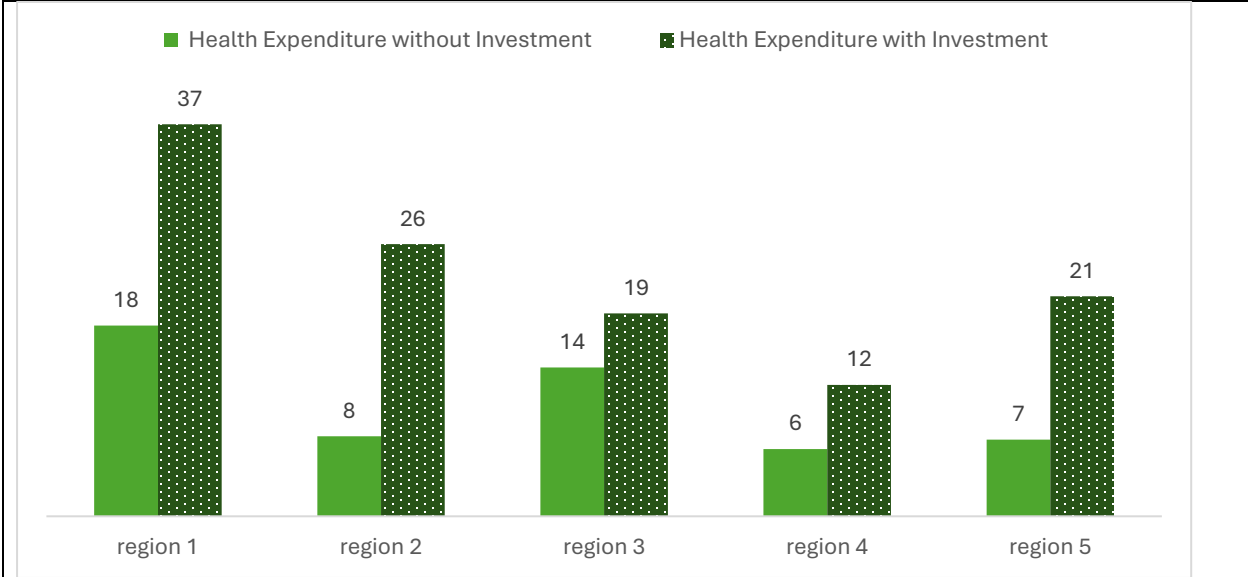


Figure 9 Per Capita Health Expenditure, with and without Investment Provisions, 1924-1939
 Source: Authors Calculations based on Budgetary records from 1924 to 1939. Available at National Library of Tunisia (Add file names)

Infrastructure

As highlighted earlier in figure 5, infrastructure presents the largest share of expenditure in all five regions. Additionally, the pattern of per capita expenditure reflects the distribution of the European population in each region. The budget reveals that the largest share of investment is allocated to maintaining roads and the electricity network, surpassing investments in sanitation and communication (telegraph) networks, as detailed in table 5.

Usually, within the context of colonial investment, public spending in infrastructure is usually believed to be set for extractive purposes of mining products or/and agricultural products. This investment usually involves the development of railways, more than it does with roads. Since the expenditure in infrastructure covered by this study focuses on sanitation, communication, electricity and roads within regions, it is oriented toward urbanization rather than economic activities. The allocated share of per capita expenditure per region is higher in regions with higher European population and the lowest in the regions with the least Europeans. This further confirms our initial assumptions, and suggests that efforts of urbanizing cities on the periphery of large, urbanized cities is higher where European are settled.

Table 5 Share of Per Capita Expenditure on Infrastructure Per Type, 1924-1939

	Per capita Expenditure on Sanitation	Per capita Expenditure on Communication	Per capita Expenditure on Roads and Electricity	Per capita Expenditure on All Infrastructure
Region 1	2%	1%	19%	22%
Region 2	3%	5%	28%	36%
Region 3	1%	1%	12%	14%
Region 4	2%	0%	11%	13%
Region 5	1%	0%	14%	15%

Source: Authors Calculations based on Budgetary records from 1924 to 1939. Available at National Library of Tunisia (Add file names)

6.2 Discussion

The overall pattern presented through the analysis confirms the assumption that regional allocation of expenditure is associated with the distribution of European settlers in Tunisia between 1924 and 1939. The results of the regression analysis and the pattern analysis demonstrate the relationship between Settler's concentration in each region. The distribution of regional expenditure per sector, as highlighted in figure 5, follows the same tendencies of general colonial investment. Showcasing a modest investment in social welfare service and a large investment infrastructure in Africa in general and in French colonies particularly. These results are, in fact, expected given that a significant portion of the central budget is supported by debt financing, which primarily targets large investments in infrastructure (Bousselmi, 2016; Bel Hedi, 2016).

The regression results of our model also shows that changes in the Tunisian population across regions might not reliably predict changes in expenditure per capita within the framework of our

study. The pattern analysis on the other hand suggests a potential negative association, since regions number four and five consistently receive the lowest share of per capita expenditure in general and per sector. Therefore, context specific factors, including political and social context or geographical consideration may be behind these discrepancies.

While our empirical model does not test for such factors, taking them into account in our analysis could provide valuable insights. For instance, the institutions in charge of examining and amending the budget both at the local and central level exhibited unequal representation, possibly influencing the distribution of resources nationally and regionally. The structure in charge at a central level, which holds more prerogatives within the allocation scope, had 44 French members, compared to only 18 Tunisian members. The indigenous representation only covered the most populated cities in each region (Tunis, Sousse, Sfax, le Kef and Kairouan)⁷. Additionally, this structure also had members from the agricultural and commerce chambers, guaranteeing a representation for both French and Tunisian business interests. According to Lambert (2009), the representation model at the central level, has excluded the rural indigenous population, and favored an urban elite further solidifying inequalities within the indigenous population. It has also done little to alter the disparities in representation between French settlers and Tunisians, despite the consecutive reforms that were implemented across the years. At a regional level, the council's composition as outlined by Lambert (2009) also exhibited unequal representation. Nonetheless, considering its dependency on the central council, we can consider its influence to be minimal.

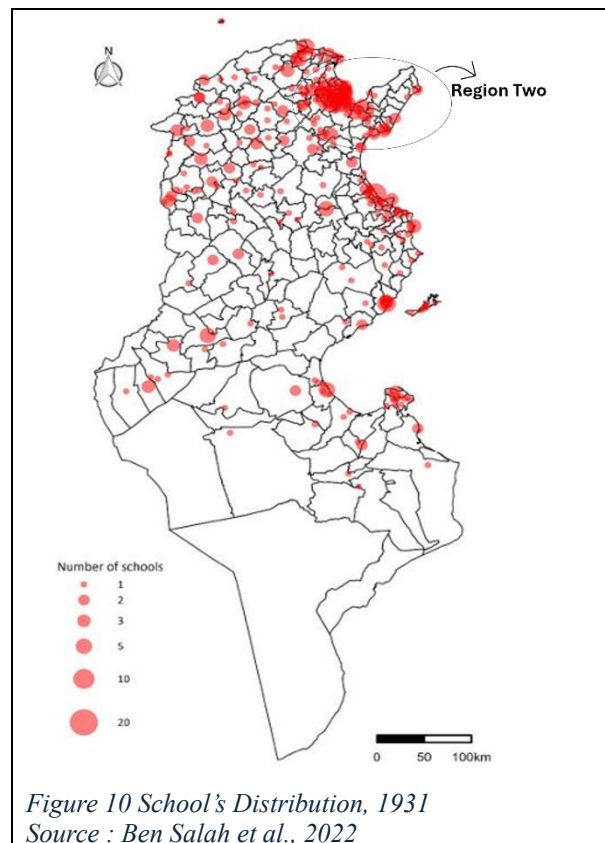
Sectorial analysis has also showed some outliers regarding the association between population and resource allocation. In fact, the distribution of per capita expenditure in education shows a pattern that seems rather arbitrary. When contrasting the allocated provisions with the population size in general and the European population specifically, only region number two was still in the framework of our assumption. Derrick's (2020) work demonstrated the link between civil registration and access to public infrastructure, suggesting that regions with low registration rate would have less investment/access to social services such as education and health. He also highlights that region with the highest concentration of Europeans exhibits more registration rate. In the case of Tunisia, region number two holds the largest European community and was one of the first region in which the civil registration was first implemented in 1909 (Ibid, 2020). This suggests that the high rate of expenditure in education is linked to the possibly high registration rate in region number two.

As this can explain the large expenditure in region number two, it still cannot explain the pattern in investments in other regions, like region number one that hosts the 2nd largest European population. Ben salah et al., (2022) have presented a mapping of the number of schools in Tunisia in 1931 per region. Their finding suggests that region number two had the largest number of schools as showcased in figure 10. Even when excluding the largest city from our calculations, which in our case is Tunis, the map shows that region number two still holds the largest concentration of schools. Considering that our calculation first covered the provisions for

⁷ Calculated from the procès verbeaux of the Big Council of Tunisia, Ordinary session, 1926. National Archives (ANOM, Aix-en-Provence), cote 50433. Available at : <https://odyssee.univ-amu.fr/items/show/10>

operation, maintenance and expansion only, it is reasonable for region number two to hold the largest share of per capita expenditure in education and for region number five to have the lowest share in per capita expenditure. Figure 10 shows that the fifth region has the lowest number of schools compared to its overall population size, this distribution is even lower when large municipalities are excluded.

The expenditure in education thus suggests that there's a biased pattern in education, favoring region number two, which may be related to settlement policies before 1924 (the start of our coverage of expenditure), or pre-colonial prosperity in region number two. Huillery, (2011) suggests that European settlers tend to settle in areas that are prosperous even in the precolonial time. In fact, the advanced development of region number two and the high settlement rate can possibly be explained by pre-colonial disparities in development. While studying the socio-political structure, Chater (1993) highlighted that the majority of the political elite and descendant of the royalties were concentrated in region number two and some coastal areas across the country. Poncet's (1973) description of the complexity of the historical transformations of Tunisia and the periods of extensive urban and regional development, also highlight that the prosperous areas usually concentrated in the coast and represent a political hub, resulting in regional disparities in urbanization, hence development.



Aside from the per capita expenditure in education, the trend for region number five, in general, shows interesting allocations. Upon excluding the large coastal municipality of Sfax from our

calculations, we have anticipated considerably lower expenditure on roads and electricity in Region Five compared to Region Four, given that the other villages in Region Five are primarily mining or shared agriculture communities. It's important to highlight for economic activities railroads have been developed since the early 20th century to support the transportation of extracted minerals from the mining hubs to the coastal areas for export. However, the continued investment in roads, electricity, and sanitation in our case primarily reflects efforts towards urbanization. Upon further examination, Salhi (2017) highlights that during the early 20th century, French authorities invested in setting mining villages, which were predominantly inhabited by European workers, mainly French and Italian. This suggests that the increased expenditure in Region Five is linked to the expansion of mining villages, totaling four in the region.

7 Conclusion

In conclusion, the examination of regional budget allocations across various sectors reveals significant disparities that are associated with the distribution of European population across the country. The results of the regression analysis show a significant association between the two variables. And the pattern analysis demonstrates that regions with a higher concentration of European populations, like regions two and one, tend to have higher per capita expenditures in general, unlike the ones with lower presence of settlers.

The examination of per capita spending per sector showed some variation, compared to the general trend. This is particularly apparent when accounting for investment allocations. These results reflect broader national policies and regional priorities, as well as suggest the existence of underlying factors that influence budgetary allocations. To better understand these variations, we have explored potential explanations rooted in historical and contextual events. For instance, our analysis suggests that the increased spending in infrastructure mainly and in health and education in region number five aligns with the expansion of mining villages there, highlighting how economic activities may influence budgetary priorities. Our findings also suggest that political inequalities and historical influence can determine budget allocations and the regional development.

The aforementioned explaining factors, whether empirical or qualitative, contribute altogether to the understanding of the regional development disparities. There is no one finite set of defining factors that can determine the reasons behind decades of regional development disparities in Tunisia, in and outside of colonial times. Our work opens research paths that would lead to a better understanding of the buildup of complex disparities in a national context. Even though the study takes Tunisia as an example, the findings are notably in coherent with those of similar studies pertaining to French and British colonization. The explored patterns may be applicable to other countries and similar historic contexts, i.e. colonization.

8 Reference

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