Resisting the Blood Tax: Coercive Capacity, Railroads and Draft Evasion in Colonial West Africa

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Abstract: What effect did infrastructure expansion have on state coercive capacity? A growing body of literature ties infrastructure—particularly for communication and transportation—to increased state capacity and societal control. Yet, the same infrastructure that extends the reach of the state simultaneously alters local contexts in ways that may unravel social control and enable resistance to state-led coercion. Drawing on novel time-series cross-sectional data on draft evasion in French West Africa—a measure of resistance to coercive policies—this paper demonstrates that railway expansion did not neatly increase the colonial regime's ability to monitor the population and effectively extract conscripts. Railway infrastructure was highly disruptive to many of the economic and social conditions that enable coercion, including legibility and local compliance. Railways drove displacement and urbanization; altered opportunity costs and incentivized everyday resistance, and opened possibilities for exit. Ultimately, by heightening mobility and undermining conditions favoring social control, railroads were associated with higher draft evasion.

Keywords: State capacity, railroads, resistance, military recruitment, colonialism

Speaking of his occupation of the Congo Free State, Belgium's King Leopold II once stated *"Coloniser. C'est transporter."*[1][2] He was glibly underlining the role of railways in extending the reach and control of the state, and in ensuring the coercion of labor and extraction of material goods. For colonial powers, expanding infrastructure is crucial in the transition from despotic to infrastructural power, or the ability to "penetrate civil society, and to implement logistically political decisions throughout the realm" (Mann, 1984)(p. 189). Railways, roads and telegraphs formed the skeleton of the state during the 19th and 20th centuries, both within Europe and in Europe's vast territorial claims in Latin America, Africa and Asia. The working assumption of state officials (colonial and otherwise), and of contemporary scholars, is that infrastructural expansion strengthens the state. Conversely, many scholars view infrastructure's absence as crucial to ordinary people's ability to evade the state's reach. It is only on the distant peripheries of Zomia that James Scott's anarchic communities were able to live freely (2009). In this paper, I examine this assumption, asking: what effect did infrastructural expansion have on the state's coercive capacity?

Drawing on novel data on draft evasion of interwar conscription (1919-1938) into the *tirailleurs sénégalais,* a branch of the French colonial army in West Africa, I demonstrate that railway expansion was, contrary to expectations, not associated with an increased ability to efficiently conscript young men—a basic goal of many states (Thies 2006). Rather, railway expansion correlates with higher draft evasion. The same tracks that improved communication and transportation for colonial agents also contributed to the erosion of social control and increased everyday resistance to state demands.

This likely occurred through three interlocking mechanisms. First, by driving urbanization and migration (Jedwab, Kerby and Moradi 2017), railways lowered legibility (or formal knowledge of society) within displaced, mobile communities. Second, shifting labor markets altered individual incentives and

[1] Any translations are my own. I use the colonial names of geographic locations, unless otherwise noted.
[2] IFAN. Church, R.J. Harrison, "The Evolution of Railways in French and British West Africa." Lecture Prepared for "Congrés International de la Géographie." Lisbonne 1949.

opportunity costs for resistance to military service. Third, transportation infrastructure may plausibly have opened new avenues for exit (Semi-Bi 1976). Thus, even as railways increased mobility and communication for colonial officials, it simultaneously undermined some of the conditions which enabled the French to effectively conscript. Young men found new means for challenging claims on their lives, even within the shadow of the very technology most social scientists view as synonymous with state power.

I examine these trends through analyses of original time-series cross-sectional data on conscription from eight colonies in French West Africa. This includes Benin (Dahomey), Burkina Faso (Haute-Volta), Cote d'Ivoire, Guinea, Mali (Soudan français), Mauritania, Niger, and Senegal. In addition, I examine granular data from cantons (the equivalent of a county) in 1930's Senegal. I compiled both datasets from records in the Senegalese National Archives and Annex in Dakar. In both the cross-national dataset and the Senegalese canton data, I examine rates of draft evasion among registered military aged men. This data is among the only quantitative sources capturing how ordinary people responded to state demands.

Soldiers in the *tirailleurs sénégalais* "paid the blood tax" by fighting in conquests across the globe, from Vietnam to Morocco, and were a backbone of de Gaulle's forces in World War II. Contrary to policies in Anglophone colonies, the French aimed to recruit evenly across the *Afrique Occidentale Francais* (A.O.F.), by conscripting about 2% of the total population from each region, rather than through ethnically based policies (Echenberg 1991). The French pioneered conscription both at home and abroad to ensure military manpower, and as part of the empire's civilizing mission (McLane 1992). They relied on local elites (typically chiefs) to procure the census information necessary for conscription and to ensure compliance (Crowder and Ikime 1970). Conscription fell within a suite of extractive and coercive policies, including taxation and forced labor. Infamously, military reserves were used as forced labor (the *corvée)* on public works projects, including the construction of the Dakar-Niger Railway (Fall 1994; Fall and Roberts 2022).

While conscription into the *tirailleurs* is an example of both extractive and coercive capacity (Lee and Zhang 2017), draft evasion is a clear challenge to coercive capacity (Levi 1997, Warner and Negrusa

2005). Scott (1985) and others (Rath 2005) point to draft evasion as evidence of lower social control and claim it is a form of everyday resistance, or "the prosaic but constant struggle between the peasantry and those who seek to extract… from them" (Scott 1985)(p. 29). This does not necessitate collective defiance, and may not be recognized as such by participants (Johansson and Vinthagen 2019). Instead, everyday resistance includes the myriad ways people undermine state policies through their efforts to survive and defend their own interests, often at great personal risk. In the case of the *tirailleurs*, the French described draft evasion as a challenge to their authority, a sign of rebelliousness, the outcome of poor record keeping, and a result of young men pursuing alternative opportunities.[3] If these men were caught, they risked immediate impressment into military service or forced labor while forfeiting some benefits. Others were fined or jailed.[4]

By examining draft evasion in the *tirailleurs,* this paper speaks to colonial contexts, especially the late colonial period in Africa and Asia. In these cases, state and economic systems were externally imposed, though reliant upon indigenous social structures, which led to disjuncture between social, economic and political dynamics. These regimes were significantly more extractive and predatory than their non-colonial counterparts. However, the themes in this paper provide portable insights that should be examined and tested outside colonial contexts, including in contemporary authoritarian regimes.

This paper contributes to political science in three ways. First, this paper is unique within quantitative scholarship on colonialism, most of which examines the top-down decisions of colonial regimes (Huillery 2009; Pierskalla, De Juan, and Montgomery 2017; Ricart-Huguet 2018). Quantitative data on the actions of colonized subjects focuses on violent resistance (Huillery 2010) or on the actions of chiefs

[3] ANS 4D(81)2 – See folder with French telegrams about how to manage "*bons absents*."
[4] ANS 4D(81)2 – AOF Directive on Recruitment Policy, from Dakar. August 1924. Discusses 15 day in jail and 100 franc fine.

(McAlexander and Ricart-Huguet 2022). However, this paper examines the responses of ordinary people, and provides rare evidence of "everyday forms of peasant resistance" (Scott 1985).

Second, I show how basic infrastructure enabled everyday resistance and evasion, contrary to common expectations (Scott 2009). This suggests technology can be useful not just for coercion and communication by elites, but may also transform labor markets and increased mobility in ways that can undermine the state's ability to control its subjects. These findings suggest researchers should not assume a unidirectional relationship between infrastructure and state capacity, and should consider infrastructure's unintended consequences. Further, the findings suggest infrastructure's influence on state capacity is contingent on how both state and non-state actors utilize and manage it, rather than its mere presence.

Third, this paper expands literature on infrastructure and the state by exploring these themes in understudied contexts. Most relevant scholarship focuses on Europe and the US (Cermenõ, Enflo, and Lindvall 2022; Weber 1976). However, the same infrastructure that enabled state capacity in France or Sweden may not have the same impact within more brutal colonial contexts. This paper calls on scholars to reconsider infrastructure as a site of resistance and state-weakness, as well as a site of state power and control, and to do so across contexts.

What is State Coercive Capacity?

Scholars broadly define state capacity as the state's ability to implement its goals (Cingolani 2013; Hanson and Sigman 2021), and extend the reach of "infrastructural" power across territory (Mann 1984). There are several dimensions to capacity, including coercive capacity, or the "ability to monopolize the administration of coercive power" (Cingolani 2013)(p.28). This includes "the ability to mobilize force and exercise it

effectively" (Soifer 2015)(p.202), and the ability to "check resistance" to extraction (Tilly 1975)(p.3) , which includes draft evasion (Warner and Negrusa 2005).

Conscription is a clear example of coercive capacity (Soifer 2015). Successful conscription policies should be systematic and routine across defined territory (Levi 1997). However, draft evasion leads to more conflictual, ad hoc mobilization of security forces (Foley 2003), and highlights the inability to mobilize, control and coerce the population (Rath 2005). Within the *tirailleurs*, the French either reduced recruitment quotas, or gave greater discretion to local elites in response to high draft evasion.[5]

Engines of State Capacity

The expansion of infrastructure—including railways, road systems and telegraphs—was a major engine of 19th and 20th century economic and political development. Planners were aware of the potential political benefits of infrastructure, hoping for more efficient administration and improved living and travel conditions for civil servants.[6] Modernization scholars have pointed to the ways railroads integrated rural communities and centralized subnational units through increased trade and communication, and growth in civil society and literacy (Mann 1984; Weber 1976). Transport infrastructure also allowed officials to improve oversight, such as in Sweden's management of education policies (Cermenõ, Enflo, and Lindvall 2022). However, as Cermeño et al. point out, assumptions about the relationship between infrastructure and the state have not been rigorously tested, especially outside advanced industrial democracies (2022).

[5] See, for example, decisions not to recruit in sections of Matam, Senegal due to the population's "independent spirit." 4D(81)-2 "Letter to Gov. General of AOF." September 26, 1936. See also, complaints that conscription is too difficult in parts of Mossi plateau because population is "not sedentary." 1935 Annual Report from Soudan Francais.

[6] See R.J. Harrison Church, "The Evolution of Railways in French and British West Africa." Prepared for "Congres International de la Géographie. Lisbonne 1949." In *Comptes Rendus du Congrès International de Géographie*. Tome IV. Travaux des Sections V, VI, et VII. Lisbon 1952**.** *IFAN.*

Though these assumptions are primarily drawn from European cases, economic growth and political transformation due to infrastructure is also described in African contexts (Bates 1983). Wherever railways were built, they transformed the landscape, be it in Birmingham or Bamako. Economic analyses of railways show they reduced regional trade gaps, raised wages, and increased exports (Akyeampong et al. 2014; Donaldson 2018). In Britain's Cape Colony, the railway drastically reduced the costs of accessing the interior, and accounted for ~25% of growth in labor productivity and income (Herranz-Loncan and Fourie 2018). Railways also drove path dependent urbanization and economic growth (Jedwab, Kerby, and Moradi 2017; Berger 2019). New towns built up alongside rail stations, which often required hotels, warehouses, trading posts, and restaurants. Because rail lines traced their way along telegraphs, one government service clumped onto another. These new, busy hubs were centers of state expansion, where travelers were most likely to find European officials (Kirk-Greene 1980).

For political scientists, the expansion of transport and communication technology is crucial for African state formation and the "ability to broadcast power across space" (Herbst 2000). Per Herbst, power developed in concentric rings around capital cities, diminishing along borders and with distance from capitals, largely because communication and transport infrastructure declined outside cities. Officials understood the lack of reliable roads, posts and telegraphs as one of the primary reasons for poor control (Pierskalla, De Juan, and Montgomery 2017). These patterns remain salient for African governments, whose reach supposedly diminishes as roads, outposts and communication technology decrease (De Juan, Krautwald, and Pierskalla 2017).

Infrastructure, Resistance, and the Conditions for Coercive Capacity

Following the scholarship above, the relationship between resistance to state power, coercive capacity and the rise of infrastructure should be clear. In areas with more infrastructure, the capacity to mobilize recruits

should be higher, and the ability for people to evade conscription should be lower. Scott described everyday resistance, such as exit, foot-dragging and evasion, as almost directly opposite to state infrastructure such as roads and railways. Per Scott, people evaded the state by settling in fringe regions with little to no infrastructure (2009). It was only on the edges of empire that people were able to escape taxation. Scott describes the rise of infrastructure, including transportation networks, cadastral projects, and other technologies as a spider's web that trapped ordinary people (1999). To the degree infrastructure is associated with colonial era resistance, it was through either resistance to the construction of infrastructure (Akyeampong et al. 2014; Gonzalez-Ruibal 2022), or through the rise of labor unions and political parties as focal points of anti-colonialism following WWII (Bates 1983; Cooper 1996).

The assumed positive relationship between infrastructure and state capacity hinges on oversight and communication potential, as demonstrated in the cases on Swedish railroads and education policy (Cermenõ, Enflo, and Lindvall 2022). For railroads to positively influence coercive capacity and limit draft evasion in colonial contexts, they would need to strengthen the conditions that enabled conscription. First, railroads would need to improve knowledge of the population—or "legibility"—which enables states to track, monitor, and observe the population of interest (Scott 1999; Lee and Zhang 2017; Sánchez-Talanquer 2020). This would occur if faster communication improved record keeping and census enumeration. Second, railroads would need to incentivize compliance among young men, either through improved tracking, monitoring or punishment, or by leading men to view military service as more palatable (Levi 1997; Wagner and Negrusa 2005). Third, railroads would need to incentivize compliance among local elites, who were essential intermediaries between the colonial state and subjects (Crowder and Ikime 1970; Summers and Johnson 1978). In French West Africa, canton and village chiefs oversaw conscription related tasks, and helped determine where extractive and coercive activities were successful. This would occur if chiefs knew their activities were monitored closely, or if they feared punishment for shirking.

Colonial Railways and the Erosion of Control

Railroad infrastructure is synonymous with state power, as it lined European pockets, made interior regions more accessible, and symbolized empire. However, railways were also associated with social and economic upheaval, including economic devastation wrought on rural communities newly tied into volatile global markets in the 1920s and 1930s (Ochonu 2009; Cooper 1996). Through this upheaval, this same infrastructure that symbolized state power also undermined the conditions of social control that enabled extraction and coercion. This occurred through three overlapping mechanisms. First, rapid urbanization around the railway—and associated mobility—undermined legibility. Second, their expansion increased incentives for resistance by sharpening the threat of forced labor, while simultaneously opening alternative economic options. Third, transportation infrastructure, to the degree it was accessible to both state officials and society, may have increased mobility and opened opportunities for exit.

First, because railway infrastructure drove migration and urbanization, it may have lessened legibility, and eroded conditions of social control that allowed the colonial state to coerce men into military service (Keita 1972). Extractive and coercive policies require high legibility (Brambor et al. 2020; Sánchez-Talanquer 2020). This includes standardization of information about the population into usable formats (Lee and Zhang 2017; Scott 1999). In practice, taxation, conscription and forced labor hinged on local elites, who processed information for state officials, often in exchange for their own position (Garfias and Sellars 2021). Legibility is higher in homogenous districts, and where stationary communities were rooted to land (Magiya 2021; Suryanarayan and White 2021).

However, where railways tied rural communities into global cash crop markets, these communities were vulnerable to economic shocks and volatility in commodity prices (Byfield 2015; Lindsay 2003; Ochonu 2009). In the mid-20th century, economic shocks forced migrants to look for work in expanding

towns and markets (Akyeampong 2014), and drove population collapse in many rural areas (Surete-Canale 1971, Gorer 1983). These migration pathways typically flowed along rail lines (Wilfahrt 2021).

Much to the discomfort of colonial officials, urbanizing communities were less homogenous (Ash 2019). More importantly, urban migration severed young men from the agricultural and social hierarchies that were crucial to monitoring and oversight (Garfias and Sellars 2021). Chiefs served as the *observateurs d'etat,* and while there are instances where chiefs maintained oversight over migrants (Pelissier 1966), their power was self-evidently strongest in rural communities. For these reasons, the French were troubled by the idea that African men might leave villages to live or work in cities, believing this made them less governable and more difficult to monitor (Cooper 1996).

Second, railways undermined the state's ability to mobilize military labor by altering incentives for everyday resistance. This occurred in two ways. Railways made the state's brutality salient and visible. Conscription was tied directly to forced labor on railway projects and other public works through the use of reserves troops (Fall 1993), so resistance to conscription was not just resistance to military service. It was both an effort to evade dangerous, poorly renumerated work within the *tirailleurs*, and in the ranks of what were called *tirailleurs à la pelle*— or "shoveling soldiers," who faced unspeakable conditions on public works projects (Fall and Roberts 2019). For example, casualties on the Congo-Ocean line were higher than casualties during Stalin's construction of the White Sea-Baltic Canal (Daughton 2021). Colonial subjects understood how dangerous, unhealthy, and underpaid the work would be (Sissoko 1962). In his history of the *tirailleurs*, Echenberg argues military service was so unpopular, and forced labor conditions so poor, that recruitment became a major driver of migration both within and outside of the A.O.F. (1991).

At the same time, the rise of towns heightened incentives for resistance by altering the costs and benefits of military service relative to other work. Many migrants were drawn to transport hubs by the possibility of higher wages in emerging towns and markets, driven by relative decline in agricultural

communities (Lindsay 2003). While military service came with a pension, a jaunty red hat, some prestige, and the opportunity to gain credibility with European officials, it remained unpopular and it was viewed as a forum of social mobility for lower classes (Mann 2002; Echenberg 1991). Many men sought out more lucrative opportunities (Sissoko 1962). The interests of competing state agencies, officials and businesses were at odds with the military, as they drew from overlapping labor pools. For some men, seeking out new opportunities within one segment of the economy or administration involved evading other aspects of the colonial enterprise. These maneuvers were often overlooked by European or African officials (Kirk-Green 1980; Echenberg 1991).

Third, transportation infrastructure was utilized by both colonial officials and colonial subjects. Officials had a difficult time tracking and monitoring these more mobile populations. Railroads and roads were built primarily for the movement of raw goods, but freight costs were kept artificially low, and subsidized by African passengers (Pheffer 1975). The bulk of passengers were African subjects, most of whom migrated for seasonal work, market access, or pilgrimage (Labasse 1954). As an Ivoirienne historian explains, new railroad and road networks directly enabled movement not just of colonial officials, but mass migration of previously sedentary and isolated communities, despite "administrative hassles" (Semi-Bi 1976)(p. 151). There were, of course, efforts to regulate movement. However, many people accessed transport without permission, likely because agents had limited incentives to manage travel and commerce (Ash 2019, Jones 2007). Across contexts, many African agents and employees—including those who managed railway operations—used their positions to pursue their own interests, operating under colonial authority in ways European officials could not control or understand (Ochonu 2014). Thus, even when there was oversight, it was often incomplete, and contingent on agents with limited incentive to turn over other men. For example, the arrival of seasonal migrants (*navetanes)* in Senegal were regulated at a checkpoint in Tambacounda, but "their return was up to the individual" (Labasse 1952)(p.186).

Thus, railways—which were viewed as a symbolic, economic and military achievement, and were themselves built by forced labor—eroded conditions that enabled extraction and coercion, and shaped how ordinary people fought to survive within oppressive situations (Asiwaju 1976). These trailing lines of state power lowered legibility, increased incentives for resistance, and opened opportunities for exit.

Historical Background: Infrastructure and Conscription in the A.O.F.

Between 1885-1954, the French constructed 5 railway lines with various economic, political, military and symbolic goals in mind (McLane 1992; Pheffer 1975). Beyond the selection of port cities and rail terminuses, which were generally consistent over centuries (Ricart-Huguet 2022), the rationales for placement, design and construction of the railway were not coherent across time and across rail segments (Moitt 2001; Pheffer 1977). As with any major public works, stakeholders held competing motivations throughout phases of design, finance, promotion, and construction. The original 1800s plans for the rail system were based on political and military goals of regional integration, effective occupation, and military conquest. These were not significantly altered despite obvious flaws, including their placement around imaginary mountains (Bassett and Porter 1991). The overriding rationale was economic, as the French wanted to open the interior to trade and to ensure Dakar's dominance. Following the catastrophic loss of life in World War I, military officials and the National Assembly were also motivated by talk of efficient transport of conscripts to ports.

Draft Evasion and French Colonial Conscription

In the century before independence, the French colonial office and military establishment saw West Africa as a "reservoir" of labor, from which they could exploit bodies for forced labor and industrial

projects, but also as soldiers.[7] In the late 1800s, the French began recruiting young men into the *tirailleurs sénégalais,* primarily through conscription. Labor exploitation was so extreme the A.O.F. experienced widespread depopulation (Suret-Canale 1971). Per one travel writer, "to paraphrase Tacitus, they are making a desert and they call it a colony" (Gorer 1983, p.80). Throughout the 19th century, recruitment hinged on the purchase of enslaved persons who were freed after up to fourteen years (Klein 1998). This formal practice was banned, although men from low socioeconomic backgrounds were more likely to enlist (Mann 2002).[8] After WWI, the French initiated universal conscription, which required a census. In the interwar period, the French used conscription as a loophole for drawing forced labor for public works without violating international law. Most laborers extracted through military conscription were from contemporary Mali, but they were usually forced to work elsewhere.

Each year, a commission of several officials, a medical doctor, and several African gendarmes would travel to designated recruitment centers (Echenberg 1991). Village and canton chiefs helped organize men in their jurisdiction (Johnson and Summers 1978). Through at least the mid-1920s, chiefs provided lists of names, which helped institutionalize records on age and eligibility. With a rudimentary census, the recruitment commission was able to ascertain who was meant to respond to the call to arms, and who had failed to turn up.[9] When the commission arrived, typically outside harvest season, they conducted a draft lottery among the registered young men in attendance. Young men who were registered, but who did not attend the draft were classed as *bons absents*. Afterwards, the French attempted to track down and punish these absentees. If found, they were examined for physical fitness, and automatically enlisted into the next year's cohort.

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[7] See Charles Mangin, La Force Noire, 1910. Bibliothèque National de France.
[8] Echenberg (1991, p. 46) estimates that around 75% of recruits who fought in WWI were former slaves.
[9] ANS 4D2(81) – "Recrutement – Cote d'Ivoire." Nov. 7, 1927. General de Brigade Cluzeau explains that in the census, people who have left their cercle of origin for more than one year are treated as residents of the new cercle. If they have been gone less than one year, they are treated as residents of their cercle of origin.

Many *bons absents* were openly evading the draft, while some were busy with other tasks and activities. There was also some error in measurement and understanding. Across circumstances, higher numbers of *bons absents,* or higher rates of draft evasion, reflected everyday resistance and routine challenges posed to the state's ability to conscript. Higher resistance and greater challenges to military mobilization goals, in turn, reflects lower coercive capacity. In the following section, I discuss the process of collecting data on *bons absents* and on conscription, as well as data on infrastructure in the A.O.F.

Data and Research Design

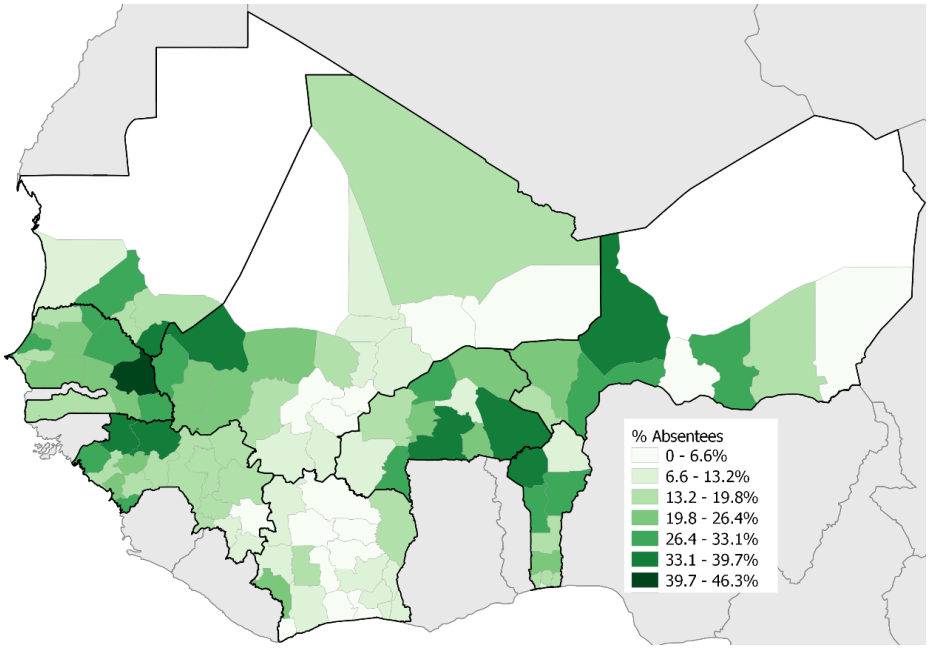
I utilize an original dataset on colonial recruitment outcomes in eight countries in Francophone West Africa: contemporary Benin (Dahomey), Burkina Faso (Haute-Volta), Cote d'Ivoire, Guinea, Mali (Soudan français), Mauritania, Niger, and Senegal. I transcribed the number of recruits, volunteers, absentees and other variables using annual "Reports on Indigenous Recruitment for (--) in the Year (--)." I verified and filled in deteriorating records through telegrams, medical assessments, and follow up reports.[10] A complete list of utilized records is in Appendix A. These reports were originally collated by Lieutenant Governor's office in each colony, and are now housed in the Senegalese National Archives (ANS) in Series D on military personnel. As the paper was thin and aged, I hand coded the dataset at the cercle level (the equivalent of a U.S. state) for each recruited cohort. In the full dataset, the n is 2128 cercles-years, though this includes some areas that were systematically excluded from the draft.[11] Additionally, comprehensive data on draft evasion was not available until about 1923-5, due to the slow compilation of records after WWI, leading to some missing data. Figure 1 shows average rates of draft evasion for each cercle between 1920-1938. Draft

[10] A breakdown of missing data is in Appendix B.

[11] Images of original records are included in Appendix A. The raw archival data was typically available as a table with total numbers collated at the cercle for each colony. I constructed measures of rates of draft evasion as "bons absents" / "total young men to examine."

evasion was highest along borders, in line with Scott (2009) and Herbst (2000). To construct the dataset, I collated records at the 1925 cercle boundaries, to align with Huillery (2009, 2010).

Figure 1: Average Rates of Draft Evasion Among Eligible Male Population



Note: I drew borders from the map series "Carte des Colonies de l'AOF" charted by the Service Géographique de l'Armée between 1924 and 1927. They are available in print in the ANS Annex, or online at Université Bordeaux-Montaigne.

Beyond statistics on recruitment, these documents note demographic data, education and job skills of recruits and reserves, and detailed descriptions of French perceptions of local political contexts. Much of the reported data on population were based on educated guesswork rather than reliable head counts. Nevertheless, records on military recruitment are among the most complete archival sources related to local politics in interwar West Africa, and one of the only quantitative sources of data on how colonial subjects reacted to the demands of the occupying regime.

In addition to the full dataset, I compiled data on conscription at the canton (equivalent of a U.S. county) level in Senegal in the 1930's. These records were hand-written addendums to typed reports

written in the commandant de cercle's office and sent to the lieutenant governor for collation into the final reports. What remains of these records are found in Series N in the ANS Annex.[12]

Dependent Variable: Draft Evasion as a Challenge to State Capacity

Draft evasion is a direct measure of challenge and resistance to coercive capacity. It quantifies the state's ability to force people to adhere to orders for military mobilization, following Soifer (2015) and Tilly (1975). Further, the French understood draft evasion as synonymous with rebelliousness, often referring to absentees as "*insoumis*."[13] I derive the variable for draft evasion as the percentage of registered young men who did not report to the draft commission each year, over the number of registered young men in that cercle. The average rate was 19%, though the variable ranges from 0-94%. Extremely high and low rates occurred systematically in the early 1920s. When each cercle first conducted a draft with rigorous census records, rather than some type of partial draft or local selection process run by chiefs, there was a staggering jump in the number of absentees. This early spike in draft evasion was both a mark of uncertainty, and a reaction from communities scarred by memories of WWI. Following the initial spike, absentees gradually dissipated over the interwar period. Figure 2 shows two examples of the time series.

Figure 3 gives a cursory glimpse of the relationship between railway expansion and draft evasion in the cercles Bobo-Dioulasso and Dedougou in western Haute-Volta. The first station was opened in Bobo Dioulasso in 1932, while there was never a railway in Dedougou. Dedougou sees a steady decline in draft evasion after 1926. In Bobo-Dioulasso, among an average of 3113 eligible men, draft evasion leapt from about 2-7% between 1925-1931 to 10-30% from 1932-1938.

[12] I used records from ANS 1N317 and 1N361.
[13] 4D(81)2- Letter from Lt. Governor on Recruitment in Cote d'Ivoire. Nov. 7, 1927. Discusses challenges with "bons absents."

Figure 2: Example of Time Series (No Rail)

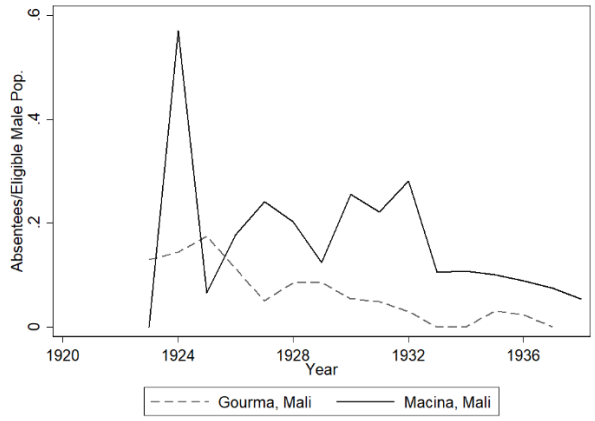
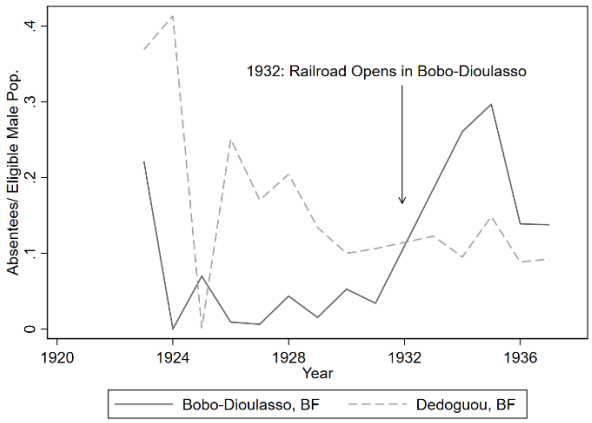


Figure 3: First Rail v. No Rail



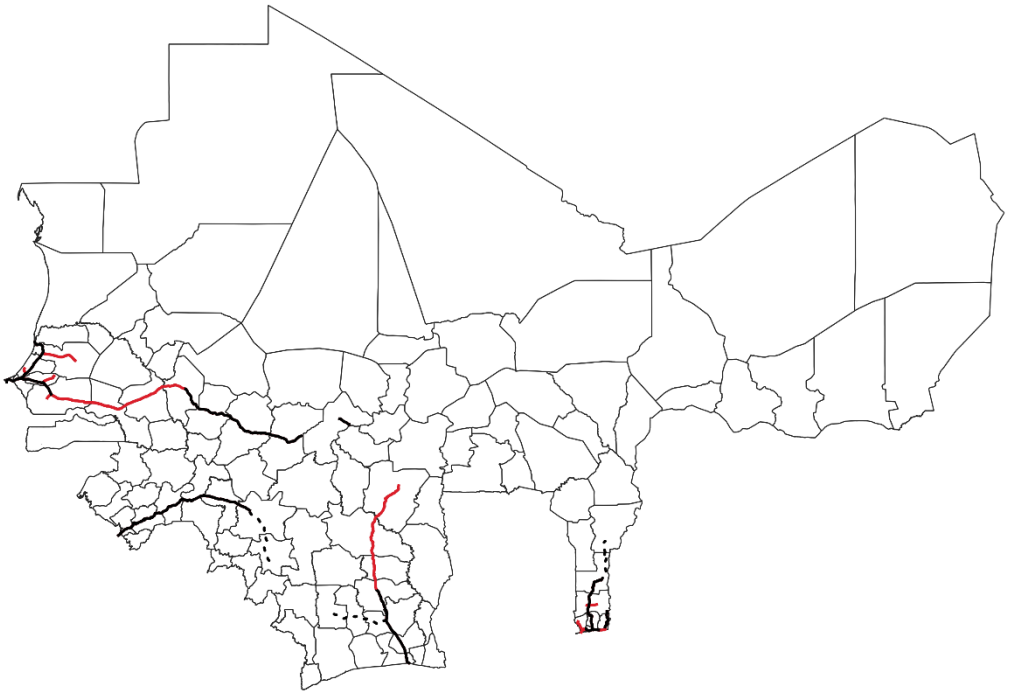
Independent Variable: Railway Infrastructure

To understand the role of infrastructure in shaping state capacity in colonial Africa, I focus on railways, which were understood to be a fundamentally important aspect of colonial infrastructural power. In addition, I consider other infrastructure: telegraph lines and post offices measured at 1925 (Appendix C).[14] Unfortunately, there are not usable records on road density.

I charted interwar railway development within the A.O.F., and confirmed their dates of operation within archived traffic reports. I primarily use rail density within each cercle, allowing for shifts within a given cercle, but I use binary measures in Appendix D. Out of 112 cercles, 16 experienced railroad expansion in the interwar period—7 where railways were built for the first time. These expansions are staggered between 1923 and 1936, mostly within inland districts. Some of the towns along these railways were long-standing trade posts, while others were not. In Figure 5, railway lines that were added during this period are marked in black. Planned lines that were still under consideration in the 1920s, but were not constructed, are marked with dotted black lines and treated as a placebo (Donaldson 2018).[15]

[14] Each cercle had a post office in its administrative seat, and these boundaries did not change much after WWI.
[15] Placebo railways were either projected on a series of maps drawn from 1924-1929, or were built in the post-WWII era.

Figure 5: Map of Railways in AOF



Note: Placebo railroads marked in dashes, and are marked as planned on maps made in the 1920s.

Research Design

Examining the impact of railways and related infrastructure on state capacity and resistance poses challenges to inference, which I address by using two complimentary empirical analyses. Neither constitutes a silver bullet, but both examine the relationship between draft evasion and the railway from a different angle. Infrastructure is based on long-term path dependent processes, and due to their economic and political importance, it is not always feasible to disassociate railways from contentious politics and boundary-making. Recognizing these challenges, in addition to the two main analyses, I include an array of robustness checks and alternative specifications in Appendices C and D.

First, I include descriptive regression results, based on model choice in Cermeño et al (2021)'s paper on railways, and I follow Donaldson (2018), in comparing areas where a railway was planned but was never completed to areas where the rail was built. Second, because the effects of railroads are highly localized (Berger 2019), I employ matching estimation with data from cantons in Senegal in the 1930's. I match cantons that were proximate to railway stations with those that were not, while also considering proximity to borders, population density, land characteristics, and year.

Considering Covariates and Endogeneity

In the main estimation, I consider commonly used geographic, political and social covariates that may influence the relationship between infrastructure, state capacity, and conscription. These controls are primarily time-invariant, which means that standard fixed-effects estimations are inappropriate. Political covariates include logged distance from colonial capitals, and the number of colonial administrators, which are common proxies for pre-existing state capacity (Huillery 2009; 2010). Geographic covariates include the size of the cercle (logged), precipitation, and elevation (a proxy for rugged terrain), which could shape the state's oversight potential. Social—and economic—covariates include a binary variable for violent resistance to recruitment in WWI, logged distance to a precolonial center (Müller-Crepon 2020), and the presence of a precolonial trading post (Huillery 2009). These social factors could influence both the role and strength of local elites in managing the draft; and local economic conditions, which influence individual propensity for compliance. I also consider the percentage of the cercle boundary which fell along a colony border, which influences mobility; and population as of 1918 (in quantiles, for readability).[16]

[16] The most consistent cross-colony measure of population is from WWI (Michel 1982).

To account for time-variant changes, including policy shifts related to recruitment, I include a binary variable for years when the French limited the number of volunteers (during the Great Depression more people were interested in military service), the railway construction period, and a binary for recruitment into the *corvée*, which used the *deuxième portion* (military reserves) for forced labor on public works projects. This military use of forced labor was primarily used in contemporary Mali and Burkina Faso, and I have found records of its use beginning in 1927. Evading the draft overlapped directly with attempts to avoid other forms of forced labor.

These controls address the primary sources of endogeneity, which would occur if railways were built in areas where people were a) more rebellious or resistant, b) more mobile, or c) cercles with greater economic potential. By assessing balance across several covariates, it is evident railways were not placed in areas that were more or less rebellious. [17] While a railway terminus had greater economic potential, these lines passed through areas where economic potential was low. Further, railways were built in areas where communities were *less* mobile, and ,therefore, *less* able to evade the draft.

Time-Series Cross Sectional Analysis with OLS

In Table 1, I present pooled OLS regressions, each with colony and year fixed effects. These are based on Cermenõ, Enflo, and Lindvall (2022), who utilized pre-treatment control variables on economic, political and social conditions prior to measurement of the dependent variable (oversight of Swedish education policy). For this analysis, I measure railway density as kilometers of railway per 50km^2.

[17] See Appendix B. I checked balance on controls including 1. Rebelliousness: resistance in WWI, and duration of conquest. 2. Mobility: length of border, acephalous communities. 3. Economic potential: rainfall, pre-colonial trade outposts.

Table 1: Pooled OLS – DV: Draft Evasion (Absentees / Eligible Registered Population)

	(1)	(2)	(3)	(4)	(5)
Railway Density	0.02***	0.04***	0.04***	0.04***	0.04***
	(0.00)	(0.01)	(0.01)	(0.01)	(0.01)
Placebo Rails			0.01	0.00	0.00
			(0.02)	(0.02)	(0.02)
R. Construction				-0.12***	-0.12***
				(0.03)	(0.03)
Corvee				-0.01	-0.01
				(0.02)	(0.02)
No. Admin				0.00	0.00
				(0.00)	(0.00)
Depression				0.03	0.03
				(0.07)	(0.07)
Pop. 1918 (0-3)		-0.02***	-0.02***	-0.02***	-0.02***
		(0.01)	(0.00)	(0.01)	(0.01)
Resist. 14-18		-0.00	-0.00	-0.00	-0.00
		(0.00)	(0.00)	(0.00)	(0.00)
Pre Conquest Trade		-0.04	-0.04	-0.05*	-0.05*
		(0.02)	(0.02)	(0.02)	(0.02)
Elevation		-0.00	-0.00	-0.00	0.00
		(0.00)	(0.00)	(0.00)	(0.00)
Precol. Cap (log)		0.00	0.00	0.00	0.00
		(0.00)	(0.00)	(0.00)	(0.00)
Capital (log)		-0.02***	-0.02***	-0.02***	-0.02**
		(0.01)	(0.01)	(0.01)	(0.01)
Col. Border %		0.11***	0.11***	0.11***	0.10***
		(0.02)	(0.02)	(0.02)	(0.03)
Area Km^2 (log)		0.02**	0.02**	0.02**	0.02*
		(0.00)	(0.01)	(0.01)	(0.01)
Constant	0.07	-0.16	-0.16	-0.07	-0.08
	(0.07)	(0.14)	(0.14)	(0.14)	(0.15)
Colony FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
Added Controls	No	No	No	No	Yes
Sample	1311	1311	1311	1311	1311
R^2	0.15	0.18	0.18	0.19	0.20

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. Standard errors in parentheses. All models are specified using pooled OLS regressions with colony and year fixed effects. Each unit is a year-cercle. Additional controls in model 5 include average annual precipitation in mm and the presence of a navigable river (Huillery 2009), the total number of colonial outposts (customs, telegraph, postal service), and total number of recruits requested that year. The decrease in sample size relative to the overall dataset is due to the exclusion of cercles where the draft was not routine—mostly in the Sahara—and cercle-years where recruitment was based on local custom (the chiefs prerogative) rather than a draft—mostly before 1923.

Model 1 shows the bivariate relationship. Model 2 includes time-invariant covariates, while model 3 includes a placebo railway. In model 4, I include time-variant policy shifts. Model 5, includes additional control variables, including a yearly recruitment quota, precipitation, the total number of colonial outposts (e.g. telegraph), and the presence of a navigable river.

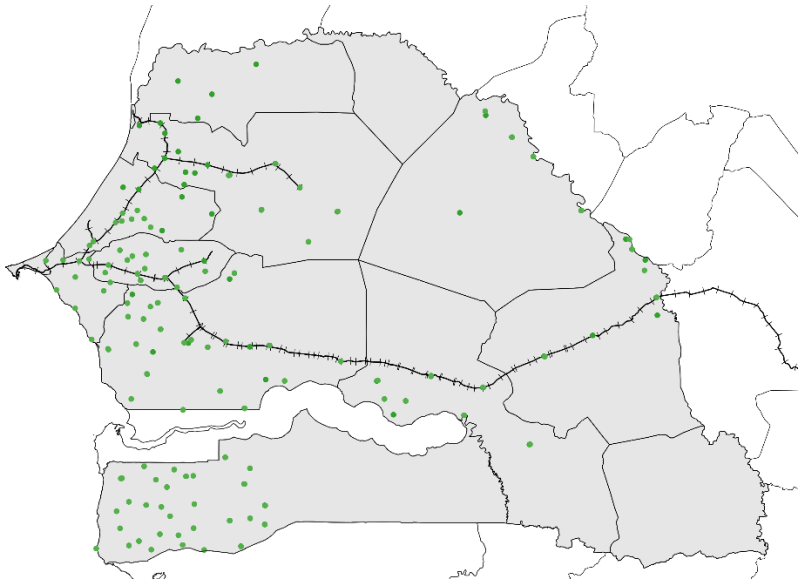
These results show the presence of railways, measured by railway density within each district, is associated with a 2-4% increase in draft evasion. For the average district, a unit increase in railway density accounts for around 40-70 additional absentees. This relationship is robust across models, and opposite to standard assumptions on infrastructure and state capacity. Interestingly, draft evasion was significantly and substantively lower during the years when railways were being constructed. This is related to shifting labor practices and opportunities in and around the development versus the operation of rail lines. There is no relation between placebo railways and draft evasion. Additionally, the results from models 2-5 suggest cercles with higher populations and those farther from capitals saw less draft evasion, controlling for border region. The influence of other measures of state capacity (admin. staff, # of outposts) is null (See Appendix C.) Border regions saw an impressive 11% increase in draft evasion.[18]

In Appendix C, I re-estimate the above models in multiple ways, including with a one-year lag to account for autocorrelation, with random effects, without year or colony fixed effects, and with cluster robust standard errors (at the cercle level). The results do not change. After including time-invariant controls (as in models 4 and 5), there is not a discernable difference between random and fixed effects, suggesting the time-invariant control variables successfully capture many unit-level characteristics.

[18] To compare this finding with the canton level data in the next section, I run a Mann-Whitney test to compare border cantons with their neighboring (non-border) cantons (at 20 km. v. 40 km to the border, or 1 v. 2 days travel to the border). There is a strong, significant difference between these regions, verifying that borders allowed for more absenteeism, including borders within the AOF. The average rate of draft evasion in border cantons is 30%, but only 16% in those 20-40 km away from border. See Appendix F.

In Appendix D, I estimate staggered difference-in-difference models designed for multiple, staggered treatment periods (Callaway and Pedro 2021). It is difficult to establish parallel trends in the pre-treatment period due to shocks in the data in the early 1920s, and due to the construction of railroads preceding their opening. However, these models, two-way fixed-effects, as well as event studies on specific treatment groups further support the main results. Alongside the regression analyses, these models provide suggestive a consistent, robust, and significant relationship between railroads and higher draft evasion.

Figure 6: Available Data on Cantons in Senegal



Accounting for Proximity to Railroad: Matching Canton Level Data

As a final strategy for estimating the relationship between railways and draft evasion, I draw on canton level data from Senegal in the 1930s. With an *n* of 272, I draw the canton level data from 5 years and 9 out of 13 cercles. Figure 6 shows the locations of each canton in the data.[19] Cantons were a smaller

[19] Maps of the distribution by each year are in Appendix E.

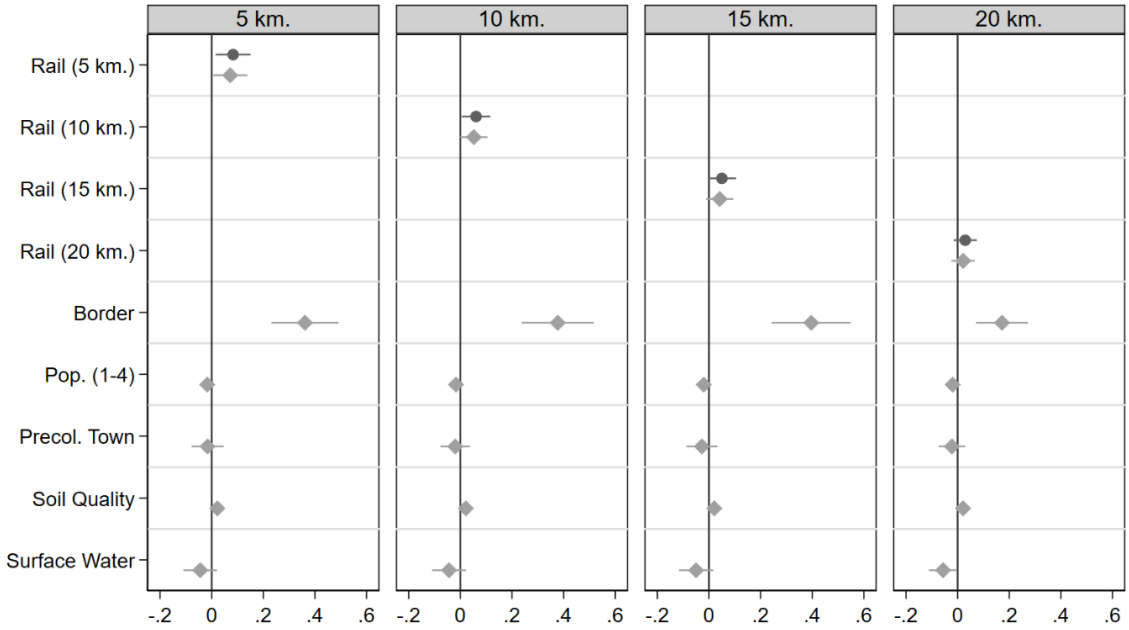
geographic unit organized under a formalized chief (*chef de canton*) and are equivalent to a district at the third administrative level. Many day-to-day tasks were managed at the canton level, so this data offers a more detailed glimpse of local dynamics. Notably, canton reports was not preserved to the same degree as higher administrative reports, so this sample is based on what was available by happenstance.[20] These cantons are broadly representative of Senegal as a whole.[21]

Within these 272 cases, I construct matched pairs based on whether a railway station was found within 5/10/15/20 kilometers of the canton's administrative seat. I use coarsened exact matching (Iacus, King et al, 2017), with exact matches on border proximity, year and coarsened quartiles of population as of 1904.[22] Both characteristics are crucial to determining the type of canton under consideration. There is balance across all covariates, except for borders, and matching does not lead to a substantial loss in sample size. I proxy for agricultural and economic context by including controls for surface water[23] and soil suitability for agriculture (Jedwab and Moradi 2016), and whether or not the canton seat was important within a precolonial kingdom (Wilfahrt 2018). The results from the matching procedure are robust to propensity score matching, included in Appendix E.

The results are presented in Figure 7. Among otherwise similar cantons, proximity to a railroad is associated with a 8-11% increase in the rate of draft evasion, within 95% confidence intervals. The strength of these effects decreases with distance from the railroad. In cantons 20 kilometers or more from a railroad, the significance of the relationship disappears. This aligns with findings in Sweden showing the effects of railways are highest within 5km of a station (Berger 2019). Draft evasion is greater along borders, and in cantons with higher soil quality. Precolonial characteristics do not help explain evasion.

[20] Records from ANS Annex 1N317, 1N330,
[21] See Appendix E for comparison. Podor, Haute-gambie (Kedougou), Dakar and Saint-louis are not included.
[22] Les Premiers Recensements Au Senegal et l'Evolution Demographique 1983. IFAN.
[23] Leonardi, U. 2008. Senegal Land Cover Mapping. Food and Agriculture Organization of the United Nations.

Figure 7: Canton Level Results with Coarsened Exact Matching



Note: Robust standard errors. Exact (or coarsened) matching on border proximity, population, and year. The first estimation is bivariate, the second estimation includes covariates, though they are largely balanced.

Several pairings from 1933 clarify these relationships. First, examine the matched pair of Kaolack and Fatick, both of which were important commercial centers within Sine-Saloum. Kaolack was connected to the Dakar-Niger railway to help ensure the export of groundnuts; though Fatick actually saw higher exports due to proximity to regional ports (Villalon 2006). In Kaolack, draft evasion was measured at just over 15%, while it was 4% in Fatick. Looking back to the three mechanisms, this pair may highlight how increased mobility and decreased legibility in rapidly urbanizing contexts around Kaolack, which were greater than in Fatick, could yield higher draft evasion.

Second, when comparing two key border towns on Senegal's eastern border, the patterns remain clear. Bakel, the seat of the cercle, hosted a French fort along the river, and had been an important regional trading post due to its location on the river. Neighboring Kidira, which included the final station on the

Dakar-Niger railway in Senegal, also included important trading, commercial and customs posts.[24] Population and geographic factors in both cantons were comparable. In Kidira, draft evasion was estimated at 78%, while it was only 58% in Bakel. Kidira would have seen a rise in economic opportunities around the railroad, which was meant to replace trade via the Senegal river and Bakel. Of note, draft evasion in Kidira was higher than in all other border towns in Senegal (except one), by between 15 – 45 percentage points, which highlights the importance of mobility along the rails, in line with discussions of 20th migration patterns (Wilfhart 2021). Removing Kidira from the sample reduces the size of the coefficient, but not the significance or direction of the results.

Discussion of Mechanisms

The above models provide consistent results, and demonstrate a clear, positive relationship between draft evasion and railway expansion. In sharp contrast to the common wisdom that infrastructure strengthened the state, these analyses show the conditions that enabled coercive capacity and social control were undermined in important ways by the expansion of railroads. This does not imply all policies were undermined or that the state became weaker overall, but that the commonly assumed relationship between infrastructure and coercive capacity is not unidirectional. Young men found avenues for escaping the state in the shadow of the very technology most social scientists view as foundational to state power. The preceding analyses demonstrate the direction of this relationship. However, they do not elaborate the mechanisms through which railway infrastructure undermined aspects of coercive capacity.

I theorized three potential mechanisms through which the chaotic process of urbanization and displacement eroded aspects of the state's ability to monitor, control and coerce. First, rapid urbanization

[24] ANS 4D9(81)-« Recrutement au Sénégal. 1930. » Service de Santé. Describe the canton as an "Important landmark for the '*dislocation*' of migratory groups."

undermined legibility. Second, the railway heightened incentives for resisting conscription by pairing the state's brutality with a wider range of alternative economic options. Third, it is plausible railways enabled migration and exit because they were accessible to both state officials and colonial subjects. Here, I discuss how the above statistical models and additional evidence in the dataset, in concordance with secondary literature and archival records, support these mechanisms.

First, urbanization along railway lines should be associated with a rise in population, heterogeneity, and higher mobility, which is associated with decreased legibility. This is suggested in several ways. One, population density was higher along railway lines, due to both where rails were placed and to migration. On average, cercles with railways had .38 eligible recruits per $1000km^2$, while there were only .11 per $1000km^2$ in districts without railways. Basic statistical tests suggest railroad expansion correlates with a substantial increase in population density of eligible recruits (Appendix F). Two, while notes on ethnicity in the military are *rare*, one existing breakdown shows ethnic fractionalization among recruits was marginally higher in Senegal's railway districts than in non-railway districts.[25] Three, within data on the correction of errors in the census, there is no evidence colonial officials conducted greater oversight within the construction of the census in areas with higher railways or with greater population density (Appendix F).

Additionally, there are multiple discussions in archival documents highlighting French concerns with how greater mobility within the population led to challenges with population monitoring and conscription. In one report, an official lamented the number of "young men who left their home villages to settle temporarily in [large centers in Southern Cote d'Ivoire]," and explained that they were "not able to follow the young men's movements in the colony," leading to a rise in absentees. This was not just a logistical problem, he explained, as these men were "not very desirous to join a regiment, since they fled

[25] ANS 4D7(81) – « Recrutement au Sénégal 1925. » See Appendix F.

their villages to escape military service."[26] While the French attempted to register young men, there are many examples of people moving to towns to evade draft registration, often adopting new names and identities (Mann 2002). This challenged record keeping in urbanizing centers. For example, in 1936, some officials claimed the "most defective and incomplete" records in Western Senegal were in Tivaouane and Thies—both railway hubs.[27]

Second, there were more economic opportunities along railways, which incentivized people to resist conscription and seek out alternative options. Data on the known characteristics of conscripted men and military reserves, shows striking variation in the skill sets of men in railway and non-railway districts. In all A.O.F. colonies except Cote d'Ivoire, at least twice as many young men had either spoken or oral French, or were deemed to have "useful" job training, when compared to young men in non-rail districts.[28] People also had a wider range of job skills, which included driving, wood and iron work, mechanics, and so on. In contemporary Mali, recruits in railway cercles boasted 4-6 types of job skills, while recruits in non-rail districts held two at most.[29] Assuming reserves and conscripts are similar to their peers, this suggests both that people learned skills in urbanizing districts, and that many people with marketable skills migrated to these hubs. Though people in railway districts were more likely to access a wider range of job opportunities, including in the private sector, these alternative forms of employment did not mean they were exempt from the draft. Formal channels for avoiding the draft, such as exemptions, were tied either to family relationships and accessed through chiefs, or were wrangled by European employers who wanted to protect their employees (Echenberg 1991). Exemptions were most common in rural districts,

[26] ANS 4D(81)-2. Letter from Gov. of Cote d'Ivoire to Gov. Gen. of AOF." October 25, 1927.
[27] ANS Annex 1N330 – Annual Report on Indigenous Recruitment – Senegal. May 22, 1936.
[28] See Appendix F for figure of known skills among reserves and conscripts.
[29] ANS 4D9(81)- « Recrutement 1930. Tableau 3. » From SF.

demonstrating that employment in the civil service and similar roles only allowed a small minority to formally avoid the draft (Appendix F).

Third, due to European discomfort with African laborers moving from villages to cities (Cooper 1996), there is little archival evidence speaking to the goals, identities, or experiences of passengers on rail lines. For these reasons, it is not possible to offer direct support for this mechanism. However, secondary sources and archival records demonstrate there was extensive travel by third class (African) passengers along railways, and travel was higher during the same months when conscription was conducted. In Senegal and Soudan français, respectively, 82% and 93% of cercle-years completed conscription during the window from January-March. During these same months in 1937 and 1938, there were well over 300,000 monthly passengers on the Dakar-Niger railway (Labasse 1954)(p.187). This was approximately 100,000 more passengers than in other months. The French claimed most travel, as well as high absenteeism, was due to agricultural cycles, but the key harvest season for groundnuts occurred after conscription was completed. As Echenberg states, "administrators [tried] to explain away damaging evidence of their misrule." (1990)(p. 72). African subjects utilized the railways, and many of these individuals were likely within the eligible age range for military service.

Conclusion

Building infrastructure can bolster some aspects of state capacity. For example, it allows officials and armies to travel more easily. However, the relationship between infrastructure and coercive state capacity is multidimensional and complex, and yields unintended effects and externalities. In this paper, I showed that the expansion of railroads, which were viewed as central to state strength and power, eroded some of the conditions that enabled coercion.

Railways scarred the communities through which they passed, altering the social and economic conditions in which people lived. These disruptions eroded state capacity in three interlocking ways. First, railways spurred urbanization and displacement (Jedwab, Kerby, and Moradi 2017). More mobile communities are less legible to state officials, and therefore more difficult to conscript. Second, many young men wished to avoid forced labor—both on public works projects and in the military. At the same time, the rise of towns and expansion of trade proffered new economic prospects colonial agents were not fully able or willing to monitor (Jones 2007, Ochonu 2014). Some young men were more likely to evade conscription and seek out alternatives. Third, travel infrastructure that was not limited to the sole use of colonial officials may have also opened avenues for exit and mobility, despite efforts to regulate them. Due to silences in archives, it is difficult to assess how and why people used certain technologies, though most passengers on rail lines were clearly African (Labasse 1954). Ultimately, in the chaos wrought by devastated rural labor markets and heightened urban migration, ordinary people found the means to survive not only in the farthest corners of the state's claimed territory, but in the shadow of the state.

The scope of this argument is pertinent to late colonial contexts, which were more extractive than non-colonial states, and states where there was a disconnect between emerging state institutions, markets, and society. Thus, the most likely analogues to these arguments are in Anglophone Africa, Asia and the Middle East. For example, in Nyasaland (Malawi), alterations in the labor market and subsequent migration challenged British efforts at ethnic balancing in the King's African Rifles, leading to heavier recruitment among southerners who were less able to migrate (Parsons 1991). The challenges posed by unintended consequences of infrastructure expansion and economic upheaval were not limited to military recruitment. During the construction of the Uganda Railway, resistance to coercive labor was so high, the British had to import workers from India (Ruchman 2017).

While this paper addresses the late colonial period, it provides portable insights that may be explored across contexts, including in other authoritarian and extractive states. For example, the Russian men most likely to escape impressment into military service in Ukraine in 2023 are likely based in cities, have more economic options, and live in more mobile communities.[30] Young men in agricultural regions or small towns may be unable to avoid the eyes of officials so readily. Beyond conscription, there are myriad examples of how proximity to infrastructure may enable or shape resistance. In liminal spaces of Paris's busy *Gare du Nord,* West African migrants have developed new communities and economic opportunities, even as they face deportation and state-led police violence (Kleinman 2019). Alternatively, in the West Bank, checkpoints shape how and where people contest state power (Gade 2020).

In contemporary totalitarian states, however, the relationship between infrastructure and state capacity may be more straightforward, and directly enable repression with fewer unintended consequences. For example, China's digital surveillance infrastructure has been used to repress protesters and ensure compliance (Chen and Lin 2022). Even in these cases, the relationship may not be absolute, as digital infrastructure can reshape state-society linkages in unexpected ways (Gao 2020), while protesters can draw on communication technology for their own purposes (Liu 2013).

It may be fruitful for scholars to examine different conditions under which infrastructural expansion affected different dimensions of state capacity (Hanson and Sigman 2022). For example, infrastructure may support administrative capacity more effectively than it does coercive capacity. Many forms of contemporary infrastructure—roads, border checkpoints, telecommunications—are used as proxies for state strength, with limited empirical interest in how these features of the landscape upend state-society relations. Considering how society interacts with and uses infrastructure will strengthen existing work on state capacity, governance, rebel resistance and political violence. Ultimately, there is much work to be

[30] Elya Navopashennaya. "Escape from Conscription: Russian Draft Evaders in Germany." *DW.* December 27, 2022.

done unravelling the role of different types of infrastructure within the lived experiences of ordinary people as they seek to survive coercion.

References

Akyeampong, Emmanuel, Robert Bates, Nathan Nunn, and James Robinson. 2014. *Africa's Development in Historical Perspective*. Cambridge University Press.

Arias, Luz Marina. 2013. "Building Fiscal Capacity in Colonial Mexico: From Fragmentation to Centralization." *The Journal of Economic History* 73(3): 662–93.

Ash, Catherine. 2019. "Free to Coerce." In *Africa and World War II*, eds. Judith Byfield, Carolyn Brown, Timothy Parsons, and Ahmad Sikainga. Cambridge University Press, 109–26.

Asiwaju, A. 1976. "Migrations as Revolt: The Example of the Ivory Coast and the Upper Volta before 1945." *The Journal of African History* 17(4): 577–94.

Bassett, Thomas, and Philip Porter. 1991. "`From the Best Authorities': The Mountains of Kong in the Cartography of West Africa." *Journal of African History* 32(3): 367–413.

Bates, Robert. 1983. *Essays on the Political Economy of Rural Africa*. Cambridge University Press.

Berger, Thor. 2019. "Railroads and Rural Industrialization: Evidence from a Historical Policy Experiment." *Explorations in Economic History* 74: 101277.

Brambor, Thomas, Agustín Goenaga, Johannes Lindvall, and Jan Teorell. 2020. "The Lay of the Land: Information Capacity and the Modern State." *Comparative Political Studies* 53(2): 175–213.

Byfield, Judith A. 2015. "Producing for the War." In *Africa and World War II*, eds. Judith A. Byfield, Carolyn Brown, Timothy Parsons, and Ahmad Alawad Sikainga. Cambridge University Press, 24–42.

Callaway, Brantly, and Sant'Anna Pedro. 2021. "Difference-in-Differences with Multiple Time Periods." *Journal of Econometrics* 224(2): 200–230.

Cermenõ, Alexandra L., Kerstin Enflo, and Johannes Lindvall. 2022. "Railroads and Reform: How Trains Strengthened the Nation State." *British Journal of Political Science* 52(2): 715–35.

Chin, Josh and Liza Lin. 2022. *Surveillance State: Inside China's Quest to Launch a New Era of Social Control.* St. Martins's Press.

Cingolani, Luciana. 2013. Working Paper Series on Institutions and Economic Growth *The State of State Capacity: A Review of Concepts, Evidence and Measures*.

Cooper, Frederick. 1996. *Decolonization and African Society: The Labor Question in French and British Africa*. Cambridge University Press.

Crowder, Michael and Obaro Ikime. 1970. *West African Chiefs: Their Changing Status Under Colonial Rule and Independence.* University of Ife Press.

Daughton, J.P. 2021. *In the Forest of No Joy: The Congo-Océan Railroad and the Tragedy of French Colonialism*. W.W. Norton.

Donaldson, Dave. 2018. "Railroads of the Raj: Estimating the Impact of Transportation Infrastructure." *American Economic Review* 108(4–5): 899–934.

Echenberg, Myron. 1991. *Colonial Conscripts: The Tirailleurs Sénégalais in French West Africa, 1857-1960*. Heinemann.

Fall, Babacar. 1993. *Le Travail Forcé En Afrique-Occidentale Française, 1900-1946*. Karthala.

Fall, Babacar, and Richard Roberts. 2019. "Forced Labour." In *General Labour History of Africa*, eds. Stefano Bellucci and Andreas Eckert. Cambridge University Press.

Foley, Michael. 2003. *Confronting the War Machine: Draft Resistance During the Vietnam War*. University of North Carolina Press.

Gade, Emily. 2020. "Social Isolation and Repertoirs of Resistance." *American Political Science Review* 114(2): 309-325.

Gao, Xiang. 2020. "State-Society Linkages in China's State-Led Digitalization." *China Review* 20(3): 1-12.

Garfias, Francisco, and Emily Sellars. 2021. "When State Building Backfires: Elite Coordination and Popular Grievance in Rebellion." *American Journal of Political Science* 0(0): 1–16.

Gorer, Geoffrey. 1983. *African Dances*. Penguin.

Hanson, Jonathan, and Rachel Sigman. 2021. "Leviathan's Latent Dimensions: Measuring State Capacity for Comparative Political Research." *Journal of Politics* 83(4): 1495–1510.

Herbst, Jeffrey. 2000. *States and Power in Africa: Comparative Lessons in Authority and Control*. Princeton University Press.

Herranz-Loncan, Alfonso, and Johan Fourie. 2018. "`For the Public Benefit'? Railways in the British Cape Colony." *European Review of Economic History* 22(1): 73–100.

Huillery, Elise. 2009. "History Matters: The Long-Term Impact of Colonial Public Investments in French West Africa." *American Economic Journal: Applied Economics* 1(2): 176–215.

———. 2010. "The Impact of European Settlement within French West Africa: Did Precolonial Prosperous Areas Fall Behind ?" *Journal of African Economies* 20(2): 1–49.

Iacus, Stefano, Gary King, and Giuseppe Porro. 2012. "Causal Inference without Balance Checking: Coarsened Exact Matching." *Political Analysis* 20(1): 1-24.

Jedwab, Remi, Edward Kerby, and Alexander Moradi. 2017. "History, Path Dependence and Development: Evidence from Colonial Railways, Settlers and Cities in Kenya." *The Economic Journal* 127(603): 1467–94.

Johansson, Anna, and Stellan Vinthagen. 2019. *Conceptualizing "Everyday Resistance": A Transdisciplinary Approach*. Routledge.

Johnson, R.W., and Anne Summers. 1978. "World War I Conscription and Social Change in Guinea." *The Journal of African History* 19(1): 25–38.

Jones, James. 2007. "Whose Baggage Is This? Cultivating Commercial and Political Ties Along the Railroad from Bamako to Dakar." *Mande Studies* 9: 103–16.

De Juan, Alexander, Fabian Krautwald, and Jan Pierskalla. 2017. "Constructing the State: Macro Strategies, Micro Incentives, and the Creation of Police Forces in Colonial Namibia." *Politics & Society* 45(2): 269–99.

Keita, Rokiatou N'Diaye. 1972. *Kayes et le Haute Senegal.* Bamako: Editions Populaire.

Kirk-Greene, Anthony. 1980. "The Thin White Line: The Size of the British Colonial Service in Africa." *African Affairs* 79(314): 24–33.

Klein, Martin. 1998. *Slavery and Colonial Rule in French West Africa*. Cambridge University Press.

Kleinman, Julie. 2019. *Adventure Capital: Migration and the Making of an African Hub in Paris*. University of California Press.

Labasse, Jean. 1954. "Le "Dakar-Niger " et Sa Zone d'Action." *Revue de Géographie de Lyon* 29(3): 183–204.

Lee, Melissa M., and Nan Zhang. 2017. "Legibility and the Informational Foundations of State Capacity." *Journal of Politics* 79(1): 118–32.

Levi, Margaret. 1997. *Consent, Dissent, and Patriotism*. Cambridge University Press.

Lindsay, Lisa. 2003. "Working with Gender: Wage Labor and Social Change in Southwestern Nigeria." : 241.

Liu, Jun. 2013. "Mobile Communication, Popular Protests, and Citizenship in China." *Modern Asian Studies* 47(3): 995-1018.

Magiya, Yusuf. 2021. *The Paradox of Imperial Taxation: How Diversity Constrains Development and Dominant Groups Shoulder the Tax Burdens*.

Mann, Gregory. 2002. "What's in an Alias? Family Names, Individual Histories, and Historical Method in the Western Sudan." *History in Africa* 29: 309–20.

Mann, Michael. 1984. "The Autonomous Power of the State: Its Origins, Mechanisms and Results." *European Journal of Sociology* 25(2): 185–213.

McAlexander, Richard, and Joan Ricart-Huguet. 2022. "State Disengagement: Evidence from French West Africa." *International Studies Quarterly* 66(1).

McLane, Margaret. 1992. "Railways or Waterways: The Dakar Railway Network and the Senegal River in the" Mise En Valeur" of French West Africa." *Proceedings of the Meeting of the French Colonial Historical Society* 16: 97–114.

Michel, Marc. 1982. *L'appel À l'Afrique : Contributions et Réactions À l'effort de Guerre En A.O.F. (1914-1919)*. Publications de la Sorbonne.

Moitt, B. 2001. "From Pack Animals to Railways: Transport and the Expansion of Peanut Production and Trade in Senegal, 1840-1940." *Outre-Mers. Revue d'histoire* 88(330): 241–67.

Müller-Crepon, Carl. 2020. "Continuity or Change? (In)Direct Rule in British and French Colonial Africa." *International Organization* 74(4): 707–41.

Ochonu, Moses. 2009. *Colonial Meltdown: Northern Nigeria in the Great Depression*. Ohio University Press.

———. 2014. *Colonialism by Proxy: Hausa Imperial Agents and Middle Belt Consciousness in Nigeria.* Indiana University Press.

Pelissier, Paul. 1966. *Les Paysans du Senegal.* Imprimerie Fabregue.

Pheffer, Paul. 1975. "Railroads and Aspects of Social Change in Senegal, 1878-1933."

———. 1977. "Political and Economic Strategies for French Colonial Railroads in West Africa--Senegal-Sudan Rail Axis." *Proceedings of the Meeting of the French Colonial Historical Society* 2: 60–71.

Pierskalla, Jan, Alexander De Juan, and Max Montgomery. 2019. “The Territorial Expansion of the Colonial State: Evidence from German East Africa 1890–1909.” *British Journal of Political Science* 49(2): 711–37.

Rath, Thomas. 2005. "'Que el Cielo un Soldado en cado hija te dio…': Conscription, Recalcitrance and Resistance in Mexico in the 1940s." *Journal of Latin American Studies* (37)3: 507-531.

Ricart-Huguet, Joan. 2018. “Who Governs? Colonial Education and Regional Political Inequality.”

———. 2022. “The Origins of Colonial Investments in Former British and French Africa.” *British Journal of Political Science* 52(2): 736–37.

Ruchman, Samuel. 2017. "Colonial Construction: Labor Practices and Precedents Along the Uganda Railway, 1893-1903." *The International Journal of African Historical Studies 50(2): 251-273.*

Sánchez-Talanquer, Mariano. 2020. “One-Eyed State: The Politics of Legibility and Property Taxation.” *Latin American Politics and Society* 62(3): 65–93.

Scott, James. 1985. *Weapons of the Weak: Everyday Forms of Peasant Resistance*. Yale University Press.

———. 1999. *Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed*. Yale University Press.

———. 2009. *The Art of Not Being Governed: An Anarchist History of Upland Southeast Asia*. Yale University Press.

Semi-Bi, Zan. 1976. "L'infrastructure routiere et ferroviaire colonial, source de mutations sociales et psychologiques: le cas de la Cote d'Ivoire, 1900-1940." *Cahiers d'Etudes Africaines* 16(61).

Sissoko, Fily-Dabo. 1962. *La Savane Rouge*. Les Presses Universelles.

Soifer, Hillel David. 2015. *State Building in Latin America*. Cambridge University Press.

Suret-Canale, Jean. 1971. *French Colonialism in Tropical Africa, 1900-1945*. Pica Press.

Suryanarayan, Pavithra, and Steven White. 2021. “Slavery, Reconstruction, and Bureaucratic Capacity in the American South.” *American Political Science Review* 115(2): 568–84.

Thies, Cameron. 2006. “Public Violence and State Building in Central America.” *Comparative Political Studies* 39(10): 1263–82.

Tilly, Charles. 1975. *The Formation of National States in Western Europe*. Princeton University Press.

Villalon, Leonardo A. 2006. *Islamic Society and State in Senegal: Disciples and Citizens in Fatick*. Cambridge University Press.

Warner, John and Negrusa, Sebastian. 2005. "Evasion Costs and the Theory of Conscription." *Defense and Peace Economics* 16(2): 83-100.

Weber, Eugen. 1976. *Peasants into Frenchmen: The Modernization of Rural France, 1870-1914*. Stanford University Press.

Wilfahrt, Martha. 2018. “Precolonial Legacies and Institutional Congruence in Public Goods Delivery.” *World Politics* 70(02): 239–74.

———. 2021. *Precolonial Legacies in Postcolonial Politics: Representation and Redistribution in Decentralized West Africa.* Cambridge University Press.