Appendix

A Additional tables and figures

Table A.1: Infrastructure expenditures (1910-1939 average) in East and West African districts (in 1910 FRA)

	Districts (N)	Mean	Std Dev	Min	Median	Max
British colonies						
Infrastructure expenditures	200	44,086	153,461	0	2,834	1,551,032
Infrastructure exp. per 100,000 people	200	31,633	110,059	0	3,108	1,134,658
French colonies						
Infrastructure expenditures	112	51,240	130,562	0	12,112	1,150,341
Infrastructure exp. per 100,000 people	112	96,397	276,465	0	14,451	1,940,058

Note: Average expenditure per district was not very different across empires. However, per capita expenditures were higher in French colonies. British colonies spanned East and West Africa, while the French did not have colonies in East Africa.

Table A.2: Infrastructure expenditures (1910-1939 average) in West African districts (in 1910 FRA)

	Districts (N)	Mean	Std Dev	Min	Median	Max
British colonies						
Infrastructure expenditures	66	107,974	249,909	0	20,117	1,551,032
Infrastructure exp. per 100,000 people	66	70,282	180,251	0	9,706	1,134,658
French colonies						
Infrastructure expenditures	112	51,240	130,562	0	12,112	1,150,341
Infrastructure exp. per 100,000 people	112	96,397	276,465	0	14,451	1,940,058

Note: Subsetting the data to West Africa shows that British expenditures were higher in the aggregate but still lower on a per capita basis.

Infrastructure investments per capita in Ghana are similar to those in Guinea but much higher than in the other British colonies. Except for Ghana, per capita investments were lower in British than in French colonies. Since colonies received little aid from the metropole before 1945, differences in budgets are largely due to differences in how much of the trade tariffs and locally revenue raised is reinvested in the colony (Hopkins, 1973, p. 190).

Investments are a bit more evenly spread in French West Africa. French per capita expenditures (96,000FRA) are three times higher than British expenditures (31,000FRA), but much of the difference is driven by low investments in British East African colonies

Table A.3: Infrastructure expenditures by category (1910-1939 average) in East and West African districts (in 1910 FRA)

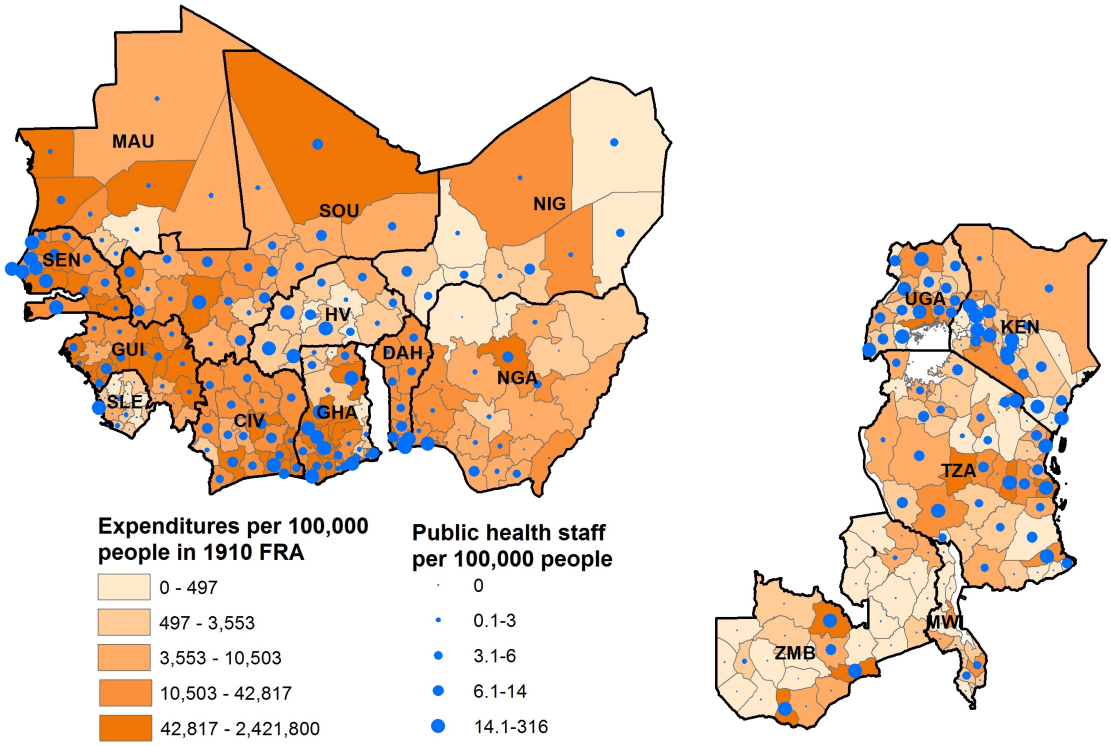
	Districts (N)	Mean	Std Dev	Min	Median	Max
British colonies						
Buildings	200	18,364	79,394	0	1,175	974,900
Transportation	200	10,159	25,484	0	219	168,122
Sewage/water	200	8,784	45,625	0	0	487,848
Electricity/lighting	200	6,779	41,014	0	0	451,596
French colonies						
Buildings	112	22,688	87,264	0	5,854	907,381
Transportation	112	20,535	49,458	0	3,423	276,964
Sewage/water	112	7,238	30,153	0	409	220,133
Electricity/lighting	112	780	3,735	0	0	32,367

Note: Unpacking infrastructure expenditures shows that sewage/water and electricity/lighting was nonexistent in the median district. Investments were centered on buildings, presumably to affirm colonial presence, and transportation, presumably for revenue collection and extraction purposes.

(France had no colonies in East Africa). Within West Africa, expenditures per capita are 40% higher in French colonies (Table A.2).

Investments were higher in West Africa for internal and external reasons. The region was richer than East Africa already in the pre-colonial period and its conquest started earlier, two factors which may have resulted in a more developed tax and tariff system during colonialism. Colonial records show that most expenditures were devoted to buildings and premises of various sorts, such as residences of district officers in both core and remote areas, port authorities, and various transportation expenditures such as railroads, roads, bridges, and harbors (Table A.3). The average British and French district received close to no investments in sewage and water sanitation or in electricity and lighting, infrastructure systems that were too costly for meager colonial budgets.

Figure A.1: Public infrastructure investments and public health staff by district (1910-1939 average)



Note: This map plots colonial infrastructure expenditures and public health staff per capita by district in all colonies under study. The map shows that investments in some peripheral districts, such as Timbuktu in Northern Mali (formerly French Soudan), were relatively high on a per capita basis even if they were lower in the aggregate (all models use levels of investments, not per capita, and control for area and population among other variables). Public health provision was minimal in some late colonies such as Zambia (all models use colony fixed effects to account for these between-colony differences)

Table A.4: Covariate balance between coastal districts with natural harbor or capes (Yes) and those without (No)

	(1) No	(2) Yes	(3) p-value
Number of ethnic groups in the district	4.257	3.095	0.167
Ethnic Fractionalization Index	0.426	0.335	0.200
Gathering	0.104	0.218	0.180
Hunting	0.869	0.690	0.234
Fishing	1.106	1.585	0.022
Intensity of agriculture (none to irrigation)	2.936	3.279	0.143
Settlement patterns (nomadic to complex)	6.248	6.626	0.400
Political centralization (acephalous to kingdoms)	2.343	2.372	0.909
Slavery (absence to prevalent)	2.268	2.262	0.972
Prevalence of Islam (1910)	0.543	0.667	0.592
Malaria prevalence index (1900)	3.104	2.927	0.419
Tsetse fly prevalence index (1970)	1.822	1.603	0.420

N=56. 21 districts have a natural harbor or cape; 35 do not.

The table shows balance along a set of pre-colonial covariates except in fishing, measured as percentage of the population of the ethnic group engaged in fishing as defined in Murdock (1959). Districts with a natural harbor (name of the natural harbor or cape in parentheses if it differs from that of the colonial district): Baie du Levrier (Ras Nouadhibou), Calabar, Casamance (Karabane), Conakry, Dar es Salaam, Freetown, Lagos, Lamu, Mikindani, Mombasa, Owerri (Port Harcourt), Saint Louis, Sherbro, Sine Saloum, Tanga, Warri (Forcados). List of districts with a cape: Ahanta (Cape Three Points), Baie du Levrier (Ras Nouadhibou), Cape Coast, Dakar (Cap-Vert), Freetown (Cape Sierra Leone), Keta (Cape Saint Paul).

Table A.5: Covariate balance between coastal districts with pre-colonial trading posts (Yes) and those without (No)

	(1) No	(2) Yes	(3) p-value
Natural harbor or cape indicator	0.219	0.583	0.005
Number of ethnic groups in the district	4.531	2.875	0.042
Ethnic Fractionalization Index	0.443	0.324	0.084
Gathering	0.191	0.088	0.216
Hunting	0.719	0.912	0.191
Fishing	1.276	1.299	0.912
Intensity of agriculture (none to irrigation)	3.130	2.978	0.511
Settlement patterns (nomadic to complex)	6.265	6.555	0.509
Political centralization (acephalous to kingdoms)	2.323	2.395	0.776
Slavery (absence to prevalent)	2.172	2.390	0.195
Prevalence of Islam (1910)	0.656	0.500	0.489
Malaria prevalence index (1900)	2.909	3.208	0.160
Tsetse fly prevalence index (1970)	1.635	1.879	0.359

N=56. 22 districts had a pre-colonial trading posts; 34 did not.

The table shows balance along a set of pre-colonial covariates except in the instrument, as expected, and marginally ($p < 0.1$) in the number of ethnic groups and in the importance of gathering as an economic activity as defined in Murdock (1959). Districts with a pre-colonial trading post: Accra, Ahanta (Axim), Assinie, Bagamoyo, Bassam, Calabar, Cape Coast (Cape Coast Castle), Casamance (Port of Karabane), Conakry, Cotonou, Dakar, Freetown, Keta, Kilifi, Kilwa, Lagos, Mombasa, Ouidah, Owerri, Porto Novo, Saint Louis, Saltpond (Anomabo), and Tanga.

A.1 Robustness checks

I assess how likely it is that unobserved confounding variables account for the effect of pre-colonial trade. Oster's (2019) test computes the share of variation that unobservables would need to explain, relative to the observables included in the model, in order to reduce the coefficient of interest to zero. This share is denoted by δ. For instance, $\delta = 2$ indicates that unobservables would need to be twice as important as observables for the coefficient to be zero (Oster, 2019, p. 195).

The implementation of the Oster (2019) test requires specifying a value of R^2_{max}, which denotes the R^2 from a hypothetical regression that included both observed and unobserved controls. For example, $R^2_{max} = 1.2R^2$ means that including unobservables would increase the observed R^2 by 20%. Table A.6 shows the results using the main OLS specification (Table 2), where $R^2 = 0.43$ for the case of infrastructure. We see that $\delta > 1$ even for $R^2_{max} = 2 * R^2$.

I also calculate the bounds on the trade effect (β) on infrastructure assuming $\delta = 1$ and find that the range excludes 0 for all values of R^2_{max} less than or equal to $2.25R^2$, where $R^2 = 0.97$ because $2.25 * R^2 = 2.25 * 0.43 = 0.97$. 0.97 is an unrealistically high R^2, so all realistic ranges of R^2 yield a positive β.

The two results convey the same idea: unobservables would need to be about 2.3 times as important as observables for the effect of trade on infrastructure to become zero. (The results are analogous for education and health, the other two investments explained by pre-colonial trade, where unobservables would have to be twice as important as observables for the effect to become zero.[33]) This is unrealistic because of the long list of observables and especially because the effect only goes to 0 if $R^2 \in (0.97, 1]$.

[33] I omit the results for railroads because the result is insignificant in the main OLS models.

Table A.6: Assessing possible bias from unobservables

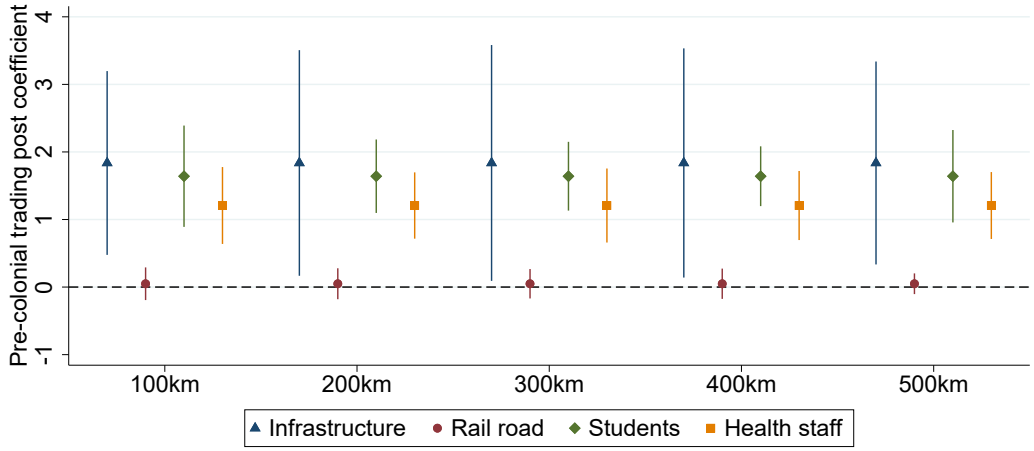
Infrastructure	$R^2_{max} = 1.5R^2$ $= 0.65$	$R^2_{max} = 1.75R^2$ $= 0.75$	$R^2_{max} = 2R^2$ $= 0.86$
δ (unobservables/observables)	2.37	1.63	1.25
Bounds on β (for $\delta = 1$)	(1.84, 1.49)	(1.84, 1.20)	(1.84, 0.77)

Education	$R^2_{max} = 1.5R^2$ $= 0.74$	$R^2_{max} = 1.75R^2$ $= 0.86$	$R^2_{max} = 2R^2$ $= 0.98$
δ (unobservables/observables)	1.51	1.04	0.80
Bounds on β (for $\delta = 1$)	(1.64, 0.78)	(1.64, 0.11)	(1.64, -0.80)

Health	$R^2_{max} = 1.5R^2$ $= 0.56$	$R^2_{max} = 1.75R^2$ $= 0.65$	$R^2_{max} = 2R^2$ $= 0.74$
δ (unobservables/observables)	1.47	1.06	0.84
Bounds on β (for $\delta = 1$)	(1.21, 0.66)	(1.21, 0.16)	(1.21, -0.61)

Notes: The bounds are (β, β'), where β is the effect estimated from the main regression model and β' is the effect with $\delta = 1$ and the R^2_{max} specified in the column. Bounds are calculated using Stata's `psacalc` (Oster, 2019).

Figure A.2: Main OLS models using Conley standard errors to account for spatial clustering



Note: These coefficients result from models analogous to the OLS models in Table 2, but now calculating Conley standard errors that account for spatial clustering following `ols_spatial_HAC` (Hsiang, 2010). The confidence intervals, at the 95% level, vary little based on the distance cutoff for spatial dependence.

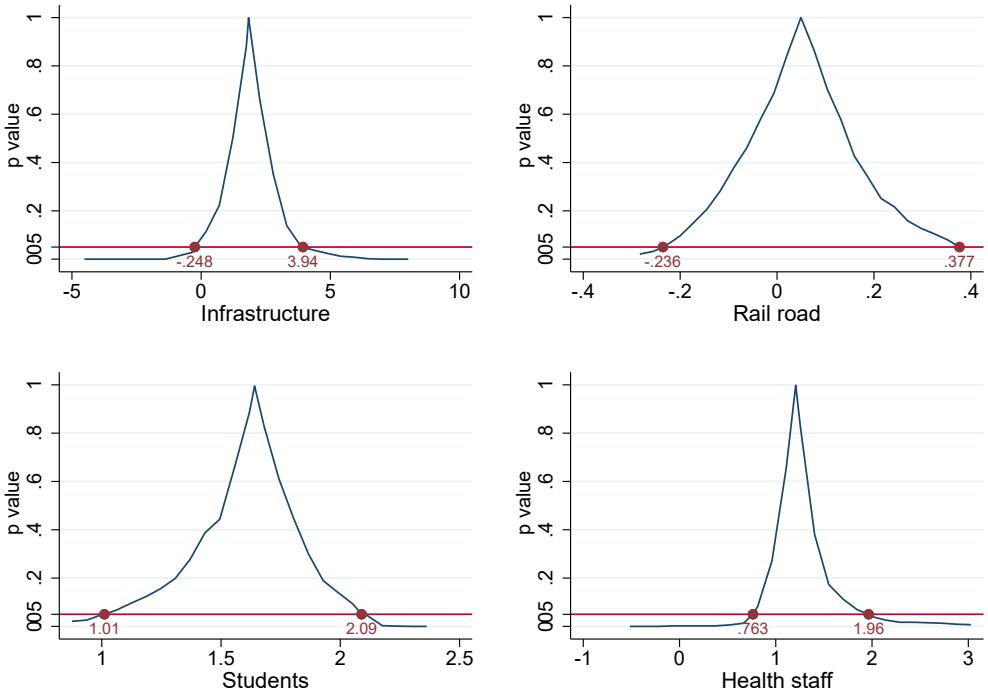
Table A.7: Second-stage results for the effect of pre-colonial trade on colonial investments (1910-1939 average) using various sets of controls

	Infrastructure				Railroad			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Pre-colonial trading post	3.53**	2.72*	2.77*	3.23**	0.17	0.07	0.10	0.03
	(1.22)	(1.08)	(1.09)	(1.20)	(0.18)	(0.20)	(0.19)	(0.20)
Colony FE	No	Yes	Yes	Yes	No	Yes	Yes	Yes
Locational fundamentals	No	Yes	Yes	Yes	No	Yes	Yes	Yes
Natural resources and soil quality	No	No	Yes	Yes	No	No	Yes	Yes
Socioeconomic characteristics	No	No	No	Yes	No	No	No	Yes
Districts (N)	211	211	211	211	211	211	211	211
R^2	0.03	0.38	0.39	0.42	0.01	0.26	0.28	0.34

	Students				Health staff			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Pre-colonial trading post	4.25**	3.70**	3.58**	3.24**	2.29**	2.29**	2.23**	2.21**
	(0.79)	(0.92)	(0.91)	(1.03)	(0.48)	(0.54)	(0.53)	(0.60)
Colony FE	No	Yes	Yes	Yes	No	Yes	Yes	Yes
Locational fundamentals	No	Yes	Yes	Yes	No	Yes	Yes	Yes
Natural resources and soil quality	No	No	Yes	Yes	No	No	Yes	Yes
Socioeconomic characteristics	No	No	No	Yes	No	No	No	Yes
Districts (N)	202	202	202	202	211	211	211	211
R^2	0.04	0.30	0.31	0.46	0.11	0.22	0.24	0.33

Notes: † $p < 0.10$, * $p < 0.05$, ** $p < 0.01$. Robust standard errors in parentheses. The table presents 2SLS (IV) results with varying sets of controls for each of the four outcomes. The last column for each outcome is identical to the 2SLS models presented in Table 2.

Figure A.3: Effect of pre-colonial trade using wild cluster bootstraped standard errors



Note: These p-values result from models analogous to the main OLS models (Table 2) but using clustered standard errors by colony. I calculate wild cluster bootstrapped standard errors with 999 replications using `boottest`, a post-estimation command designed precisely to account for data with few clusters as is the case here (Roodman et al., 2019). The plots present the confidence intervals present and the distribution of p-values for the effect of the district-level pre-colonial trade indicator on each outcomes at the 95% level. The p-values for the pre-colonial trade coefficient that correspond to the distributions above are are 0.0761 (infrastructure expenditure), 0.721 (rail road indicator), 0.000 (number of students), 0.002 (health staff). Compared to the main OLS results, the only difference is that the effect of trade on infrastructure is significant at the 0.1 rather than 0.05 level.

Table A.8: First-stage effect of geography on pre-colonial trade and reduced-form effect of geography on colonial investments (1910-1939 average): coastal districts only

	First-stage	Reduced form			
	(1) Trading post	(2) Infrastructure	(3) Railroad	(4) Education	(5) Health
Natural harbor or cape	0.47**	1.44	0.28*	1.58**	1.12**
	(0.14)	(0.89)	(0.13)	(0.54)	(0.38)
Colony FE	Yes	Yes	Yes	Yes	Yes
Locational fundamentals	Yes	Yes	Yes	Yes	Yes
African population	No	Yes	Yes	Yes	Yes
Districts (N)	56	56	56	53	56
R^2	0.34	0.65	0.55	0.67	0.61
A-P F statistic	11.10				

Notes: † $p < 0.10$, * $p < 0.05$, ** $p < 0.01$. Robust standard errors in parentheses. The models are analogous to Table 1 but I only include coastal districts, which leads me to exclude "post-treatment" controls both for theoretical reasons (trading posts were not chosen based on future events) and sample size limitations.

Table A.9: Second-stage results for the effect of pre-colonial trade on colonial investments (1910-1939 average): coastal districts only

	Infrastructure		Railroad		Education		Health	
	(1) OLS	(2) IV	(3) OLS	(4) IV	(5) OLS	(6) IV	(7) OLS	(8) IV
Pre-colonial trading post	1.27†	3.06*	0.25†	0.59*	1.39**	3.78**	1.27**	2.89**
	(0.74)	(1.55)	(0.13)	(0.23)	(0.48)	(1.14)	(0.33)	(0.81)
Colony FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Locational fundamentals	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
African population	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Districts (N)	56	56	56	56	53	53	56	56
R^2	0.65	0.59	0.54	0.44	0.61	0.33	0.57	0.28

Notes: † $p < 0.10$, * $p < 0.05$, ** $p < 0.01$. Robust standard errors in parentheses. The models are analogous to Table 2 but I only include coastal districts, which leads me to exclude "post-treatment" controls both for theoretical reasons (trading posts were not chosen based on future events) and sample size reasons.

Table A.10: Settlers, natural harbors, and capes

	European population			
	(1)	(2)	(3)	(4)
Natural harbor indicator	1.27*	1.32**		
	(0.51)	(0.43)		
Cape indicator	1.45*	0.65		
	(0.62)	(0.51)		
Natural harbor or cape indicator			1.76**	1.40**
			(0.39)	(0.35)
Colony FE	Yes	Yes	Yes	Yes
All controls	No	Yes	No	Yes
Districts (N)	200	200	200	200
R^2	0.28	0.50	0.30	0.51

Notes: † $p < 0.10$, * $p < 0.05$, ** $p < 0.01$. Robust standard errors in parentheses. Models 2 and 4 include all controls listed in Table 1. These models show that, as expected, the European population was higher in districts with a cape and especially a natural harbor.

Table A.11: Diffusion of investments (1910-1939 average) across districts within coastal colonies: logged distance from post

	(1)	(2)	(3)	(4)
	Infrastructure	Railroads	Education	Health
Pre-colonial trading post indicator	1.27*	0.08	1.90**	1.29**
	(0.64)	(0.11)	(0.40)	(0.26)
Distance from post, in 100km (logged)	-1.85**	-0.36**	-0.89*	-0.47†
	(0.60)	(0.12)	(0.43)	(0.26)
Distance from the coast, in 100km	-0.02	0.01	-0.15†	-0.05
	(0.13)	(0.02)	(0.08)	(0.04)
Colony FE	Yes	Yes	Yes	Yes
African population	Yes	Yes	Yes	Yes
Districts (N)	211	211	202	211
R^2	0.37	0.18	0.41	0.31

Notes: † $p < 0.10$, * $p < 0.05$, ** $p < 0.01$. Robust standard errors in parentheses. Models in this table are identical to those in Table 3 except that here I use logged distances between each district capital and its nearest pre-colonial trading post.

A.2 Colonial investments and current development

This section presents a series of robustness checks and alternative specifications examining the role of colonial investments on current development, as proxied by nightlight density. I begin by examining the OLS results in Table 5 using causal mediation models to determine the importance of each of the three investments as mediators, where mediator M is the colonial investment, treatment T is pre-colonial trade, and outcome Y is nightlights. Following Imai et al. (2011) and Hicks and Tingley (2011), I regress M on T and then I regress Y on M and T. Examined sequentially, infrastructure investments mediate 24% of the total effect, education investments 30% of the total effect, and health investments 55% of the total effect. The table presents the main quantities of interest with 95% confidence intervals in parentheses.

Table A.12: Causal mediation analysis

Effect	Infrastructure	Education	Health
ACME	0.33 (0.13, 0.61)	0.42 (0.20, 0.75)	0.77 (0.50, 1.15)
Direct Effect	1.06 (0.60, 1.51)	0.97 (0.53, 1.39)	0.63 (0.19, 1.05)
Total Effect	1.40 (0.96, 1.87)	1.40 (0.96, 1.87)	1.40 (0.97, 1.86)
% of Total Effect mediated	0.23 (0.17, 0.34)	0.30 (0.22, 0.44)	0.54 (0.41, 0.79)

Table A.13: Impact of colonial investments on current development by empire, proxied by average nightlights by district (1992-2012, logged)

	British colonies			French colonies		
	(1)	(2)	(3)	(4)	(5)	(6)
Pre-colonial trading post (pre-1900)	2.11**	1.08**	0.16	3.02**	1.46**	0.43
	(0.45)	(0.32)	(0.24)	(0.66)	(0.51)	(0.40)
Infrastructure expenditures, logged (1910-1940)			0.08**			-0.01
			(0.02)			(0.04)
Students, logged (1910-1940)			0.10**			0.14
			(0.04)			(0.19)
Public health staff, logged (1910-1940)			0.30**			0.66**
			(0.07)			(0.16)
Political centralization (pre-1900)		0.13	0.05		-0.04	-0.12
		(0.12)	(0.08)		(0.17)	(0.15)
Colony FE	Yes	Yes	Yes	Yes	Yes	Yes
Locational fundamentals	Yes	Yes	Yes	Yes	Yes	Yes
Natural resources and soil quality	No	Yes	Yes	No	Yes	Yes
Socioeconomic characteristics	No	Yes	Yes	No	Yes	Yes
Districts (N)	200	200	185	112	112	103
R^2	0.46	0.67	0.82	0.63	0.81	0.87

Notes: † $p < 0.10$, * $p < 0.05$, ** $p < 0.01$. Robust standard errors in parentheses. The list of controls is identical to Table 1.

Table A.14: Impact of pre-colonial trade and colonial investments on current development, proxied by average nightlights by district (1992-2012, logged): coastal district indicator

	(1) OLS	(2) IV	(3) OLS	(4) IV	(5) OLS	(6) IV
Pre-colonial trading post (pre-1900)	1.88**	3.14**	0.96*	2.26*	0.20	0.78
	(0.46)	(1.21)	(0.39)	(1.00)	(0.30)	(0.73)
Infrastructure expenditures, logged (1910-1940)					0.04*	0.04*
					(0.02)	(0.02)
Students, logged (1910-1940)					0.09*	0.08*
					(0.04)	(0.04)
Public health staff, logged (1910-1940)					0.36**	0.33**
					(0.07)	(0.07)
Political centralization (pre-1900)			0.11	0.09	0.03	0.03
			(0.10)	(0.10)	(0.08)	(0.07)
Coastal district indicator	0.70*	0.14	0.52†	0.00	0.25	0.03
	(0.32)	(0.59)	(0.28)	(0.41)	(0.24)	(0.34)
Colony FE	Yes	Yes	Yes	Yes	Yes	Yes
Locational fundamentals	Yes	Yes	Yes	Yes	Yes	Yes
Natural resources and soil quality	No	No	Yes	Yes	Yes	Yes
Socioeconomic characteristics	No	No	Yes	Yes	Yes	Yes
Districts (N)	312	312	312	312	288	288
R^2	0.53	0.51	0.70	0.68	0.81	0.81

Notes: † $p < 0.10$, * $p < 0.05$, ** $p < 0.01$. Robust standard errors in parentheses. Models in this table are identical to those in Table 5 except for two robustness checks: they include a coastal district indicator and they use population density of the colonial district instead of colonial population and area separately.

Table A.15: Impact of pre-colonial trade and colonial investments on current development, proxied by average nightlights by district (1992-2012, logged): per capita population (1990-2010)

	(1) OLS	(2) IV	(3) OLS	(4) IV	(5) OLS	(6) IV
Pre-colonial trading post (pre-1900)	0.48*	-0.64	0.96	-0.11	0.29	-2.45
	(0.20)	(1.21)	(0.72)	(1.03)	(0.47)	(1.74)
Infrastructure expenditures, logged (1910-1940)					0.15†	0.13†
					(0.08)	(0.08)
Students, logged (1910-1940)					-0.15	0.04
					(0.11)	(0.05)
Public health staff, logged (1910-1940)					-0.07	0.26
					(0.13)	(0.21)
Political centralization (pre-1900)			0.50†	0.49†	0.14	0.10
			(0.27)	(0.26)	(0.16)	(0.17)
Colony FE	Yes	Yes	Yes	Yes	Yes	Yes
Locational fundamentals	Yes	Yes	Yes	Yes	Yes	Yes
Natural resources and soil quality	No	No	Yes	Yes	Yes	Yes
Socioeconomic characteristics	No	No	Yes	Yes	Yes	Yes
Districts (N)	311	311	311	311	287	287
R^2	0.19	0.18	0.33	0.32	0.37	0.18

Notes: † $p < 0.10$, * $p < 0.05$, ** $p < 0.01$. Robust standard errors in parentheses. Models in this table are identical to those in Table 5 but the outcome is nightlights *per capita* using district population (1990-2010) as the denominator of the outcome variable.

A.3 Non-coastal colonies

Because the main results leverage variation in coastal colonies, here I analyze the relationship between early trade and colonial investments in non-coastal colonies. The variable I use, "first pre-colonial trading post", takes the value 1 in just 16 districts (the one in each colony containing the first pre-colonial trading post established by the British, in British colonies, or the French, in French colonies). The second variable is distance from that first post in hundreds of kilometers. For example, the first trading post in what would become Malawi was established in Blantyre in 1876 (it acted as both a trading post and a mission school).

Overall, results in Table A.16 show that public investments in these 16 districts were higher and that increasing distance from these district capitals reduced public investments, consistent with the main diffusion results and providing further evidence for theories of path dependence and increasing returns.

There are two major caveats to these correlational results. First, I do not claim any exogeneity regarding where the first pre-colonial trading posts in each future landlocked colony were established. For example, the British reached Uganda from Kenya and the French reached Mali as they expanded beyond Senegal in a non-random manner. Second, the coefficients of interest become insignificant, unlike in most results in the article, if I include the standard long set of colonial-era controls listed in Table 1. On the one hand, then, results for non-coastal colonies are less robust. On the other hand, this may not be surprising since colonial-era variables are "post-treatment" (especially in non-coastal colonies, which were colonized late) and many can be regarded as mechanisms.

The models in Table A.17 include the number of Europeans living in each district to show that settlers alone fully account for the effect of early trade on infrastructure and health investments in non-coastal colonies—even though settler presence was very limited in inland colonies.

Table A.16: Results for non-coastal (NC) colonies and all colonies

	Infrastructure		Railroad		Education		Health	
	(1) NC	(2) All	(3) NC	(4) All	(5) NC	(6) All	(7) NC	(8) All
First pre-colonial trading post	2.63*	1.96**	0.23	0.03	0.94	1.33*	0.95*	0.96**
	(1.29)	(0.59)	(0.16)	(0.13)	(0.76)	(0.52)	(0.46)	(0.33)
Distance to first trading post, in 100km	-0.04	-0.16	-0.04**	-0.07**	-0.11†	-0.13*	-0.02	-0.06*
	(0.15)	(0.12)	(0.01)	(0.01)	(0.06)	(0.05)	(0.02)	(0.03)
Distance to coast, in 100km	-0.28	-0.06	-0.07**	0.02	0.03	-0.12†	0.00	-0.05
	(0.22)	(0.13)	(0.02)	(0.02)	(0.11)	(0.06)	(0.04)	(0.04)
African population, logged	-0.15	0.64**	-0.05	0.07*	0.35	0.86**	0.13	0.36**
	(0.45)	(0.23)	(0.07)	(0.03)	(0.35)	(0.20)	(0.09)	(0.09)
Colony FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Locational fundamentals	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Districts (N)	101	312	101	312	86	288	101	312
R^2	0.41	0.43	0.35	0.31	0.74	0.52	0.80	0.44

Table A.17: Results for non-coastal colonies: settlers as a mechanism

	Infrastructure		Railroad		Education		Health	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
First pre-colonial trading post	2.63*	-0.06	0.23	-0.06	0.94	-0.80**	0.95*	0.34
	(1.29)	(1.00)	(0.16)	(0.12)	(0.76)	(0.27)	(0.46)	(0.38)
Distance to first trading post, in 100km	-0.04	0.00	-0.04**	-0.03**	-0.11†	-0.08*	-0.02	-0.01
	(0.15)	(0.13)	(0.01)	(0.01)	(0.06)	(0.04)	(0.02)	(0.02)
European population, logged		1.29**		0.14**		0.83**		0.29**
		(0.15)		(0.02)		(0.10)		(0.04)
Distance to coast, in 100km	-0.28	-0.21	-0.07**	-0.06**	0.03	0.08	0.00	0.02
	(0.22)	(0.21)	(0.02)	(0.02)	(0.11)	(0.09)	(0.04)	(0.03)
African population, logged	-0.15	-0.51	-0.05	-0.09	0.35	0.27	0.13	0.05
	(0.45)	(0.43)	(0.07)	(0.06)	(0.35)	(0.22)	(0.09)	(0.07)
Colony FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Locational fundamentals	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Districts (N)	101	101	101	101	86	86	101	101
R^2	0.41	0.59	0.35	0.53	0.74	0.91	0.80	0.88

Notes: † $p < 0.10$, * $p < 0.05$, ** $p < 0.01$. Robust standard errors in parentheses. The results in these two tables present OLS regressions. The main variable equals 1 for the First British (French) pre-colonial trading post" in the British (French) colony and 0 for all other districts in that colony.

B Administration of the colonial state

The institutional structure of the colonial state was similar in the two empires. At the top of the colonial hierarchy, there were the Ministry of the Colonies in Paris and the Colonial Office in London. These ministries sent a Governor to the colony that acted as the main link between the metropole and the civil servants in the colony, which included administrators, teachers, judges, engineers, doctors, and nurses. Each district (or *cercle*) was led by a district head administrator called District Commissioner (*Commandant de Cercle*).[34] These similarities between the two empires are often overlooked because much historical work focuses on how French ideas of assimilation and direct rule differed from British ideas of association and indirect rule (Crowder, 1964; Strang, 1994; Sharkey, 2013) and because studies of colonial finance and administration tend to focus on one empire (Delavignette, 1968; Suret-Canale, 1971; Constantine, 1984; Gardner, 2012).[35]

District administrators were also in charge of relations with village chiefs, and administrators partly relied on chiefs for policy implementation and revenue collection. "Local chiefs [in British colonies] had a guise of autonomy in their local jurisdictions, but they were actually guided and supervised by the British colonial administrators" (Strang, 1994, p. 149). Similarly, local chiefs in French West African villages were an autonomous but ultimately subordinate figure whose "influence [was limited] to small areas" (Huillery, 2009, p. 181).

[34]The administrative organization of the French and British colonies also presented some differences. There were two layers of hierarchy between the district administrators and the metropolitan ministry, but these were different between empires. French West Africa was a political federation under the Governor General, based in Senegal, that commanded and coordinated the eight Lieutenant Governors in each colony. The eight British colonies were the main eight territories in the continent controlled by the Colonial Office. However, they did not have the equivalent figure of the Governor General. Instead, Governors were directly under the Secretary of State for the Colonies. Another difference is that most British colonies were divided in provinces, while French West Africa presented no administrative layers between the colony and the districts. The British Provincial Commissioner was the layer between the Governor and the District Commissioner.

[35]There are historical studies spanning both empires on other issues, notably economic history (Hopkins, 1973) and labor policy (Cooper, 1996).

B.1 The lack of clear investment rules

Colonial institutions (i.e. rules) could explain investments, especially non-extractive ones (education and health), as well as why investments in some districts were much higher than in others within colonies. Instead, this section dispels the conception of the colonial state as a highly organized entity with a central planner following clear investment rules. In reality, colonial states in East and West Africa were decentralized. Limited central planning and budget constraints meant that large strategic investments to develop the periphery, such as the Uganda Railway, were rare. Reliance on existing infrastructure was the norm, especially before 1945. Autonomous colonial administrators in both empires often piggy-backed on existing infrastructure in or near pre-colonial commercial centers to allocate resources.

District administrators stationed outside the colonial core were not tightly subject to colonial institutions. Instead, they had much latitude in local rules and policy because of poor transportation and communication networks. "The administrative organization was officially centralized but effectively decentralized," making district administrators "the real chiefs of the French empire" (Huillery, 2009, p. 181; Delavignette, 1968). They oversaw the administration, taxation, justice, and other public services (Suret-Canale, 1971, p. 72; Baldwin, 2016, p. 29). Lugard (1922) devised his theory of indirect rule with the British Empire in mind, but its practice extended to much of the French empire.[36]

More generally, colonial documents do not present systematic investment rules to allocate resources within a colony. The lack of a clear investment strategy is only surprising if we use Weberian states as reference categories. It is less surprising if we consider that communication and knowledge of the territory were limited, which made policy coordination difficult between the core and the periphery (Darwin, 2012, p. xii; Delavignette, 1968, p. 63).

[36] Sharkey (2013) considers the differences between the two empires a matter of degree, consistent with the move by Lange (2004) and Gerring et al. (2011, p. 378) "to understand systems of [direct and indirect] rule along a continuum that reflects the degree of central control."

While expenditures presumably responded to particular needs, "no explicit investment strategy can be found in [French colonial] local budgets. Motivations reported at the beginning of each local budget explain the general level of annual resources but do not motivate the spatial distribution of public goods provision" (Huillery, 2009, p. 181). British local budgets present a remarkably similar focus on detailed descriptions rather than on policy. "Colonial tax and spending patterns did not follow a similar logic throughout British Africa" (Frankema, 2011, p. 147) because "[Britain] did not strive to apply a common financial policy to the various dependencies" beyond "general instructions [...] from the Secretary of State for the Colonies" (Stammer, 1967, p. 194).

C Missions

We have learned much from the recent wave of research on missionaries. As mentioned in the introduction, this article focuses on *public* investments in infrastructure, education, and health, the main three types of investments in each colonial empire. Private investments in infrastructure and education, such as trading companies and missions, are not the focus of this article. Besides, there exists by now a robust literature on missions and thus an emphasis on missions may reduce theoretical coherence. However, missionaries were central providers of education in British Africa and even in some parts of French Africa, especially before 1945, and some missions were publicly subsidized (Lugard, 1922; Jedwab, Meier zu Selhausen and Moradi, 2018). This section provides some discussion and results that examine the extent to which mission location was also influenced by pre-colonial trade.

Before discussing the tables where the reader can compare missions and students (education) results side by side, I note that data on students are slightly different for each empire for good reasons. Education in British colonies was outsourced to missions to a much larger extent than in French colonies, where missions were scarce in non-coastal areas. Because of these broad ideological and policy differences between colonizers, French colonial records do not include the number of students in missions while British colonial records do to some extent. Specifically, British colonial records generally list the number of students enrolled in secondary schools, in primary government schools, and in aided missions (missions that received public subsidies). The Blue Books typically provide numbers of students in aided missions because these schools were of higher quality, whereas data on "sundry missions", the actual term used in some Blue Books, is scarce because some British administrators, including (Lugard, 1922), believed that they provided low-quality instruction. That is important because it implies that the students included in the data are those that actually received a higher quality mission education.

I also note that the correlation between number of missions and number of students (where students comprise all those enrolled in secondary schools, primary government schools, and, in British colonies, publicly-aided missions) is 0.58 in British districts and 0.68 in French districts. The correlation between the number of missions and the number of government primary and secondary school students in British districts is 0.29.

The positive correlations suggest that, at the district-level, mission education and public education were not substitutes. They are consistent with path dependent theories and increasing returns to scale insofar as core districts had more public investments, more private investments, and more settlers than peripheral districts.

Results in Tables A.19 suggest that missionary education was also conditioned by pre-colonial trade. Some caveats for this additional outcome are in order. First, missions were largely private investments that had existed already pre-colonially—unlike colonial investments. Missions were often but not always established in pre-colonial trading posts. In Benin (in Nigeria, not Dahomey), for example, missionaries tried to evangelize in the 1500s without an accompanying trade fort. Second, the list of missions in Roome (1924), digitized by Nunn (2010), is incomplete because it does not include most missions were only Africans preached and taught (Jedwab, Meier zu Selhausen and Moradi, 2018). Therefore, I regard these results as very suggestive but possibly suffering from any of the three types of endogeneity.

Table A.18: First-stage effect of geography on pre-colonial trade and reduced-form effect of geography on colonial investments (1910-1939 average)

	First-stage			Reduced form			
	(1)	(2) Trading post	(3)	(4) Infrastructure	(5) **Missions**	(6) Education	(7) Health
Natural harbor or cape	0.56**	0.56**	0.54**	1.64*	0.35*	1.76**	1.15**
	(0.11)	(0.11)	(0.11)	(0.66)	(0.16)	(0.48)	(0.29)
Colony FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Locational fundamentals	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Natural resources and soil quality	No	Yes	Yes	Yes	Yes	Yes	Yes
Socioeconomic characteristics	No	No	Yes	Yes	Yes	Yes	Yes
Districts (N)	211	211	211	211	211	202	211
R^2	0.43	0.43	0.51	0.43	0.54	0.49	0.36
A-P F statistic	25.66	24.50	22.93				

Table A.19: Second-stage results for the effect of pre-colonial trade on colonial investments (1910-1939 average)

	Infrastructure		**Missions**		Education		Health	
	(1) OLS	(2) IV	(3) OLS	(4) IV	(5) OLS	(6) IV	(7) OLS	(8) IV
Pre-colonial trading post	1.84*	3.23**	0.41*	0.69*	1.64**	3.24**	1.21**	2.21**
	(0.74)	(1.20)	(0.16)	(0.27)	(0.43)	(1.03)	(0.27)	(0.60)
Colony FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Locational fundamentals	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Natural resources and soil quality	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Socioeconomic characteristics	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Districts (N)	211	211	211	211	202	202	211	211
R^2	0.43	0.42	0.54	0.53	0.49	0.46	0.37	0.33

Notes: † $p < 0.10$, * $p < 0.05$, ** $p < 0.01$. Robust standard errors in parentheses. These tables are identical to Tables 1 and 2 except that I replace the railroad indicator for the number of missions in the district. The original source is Roome's 1924 map digitized by Nunn (2010), which is incomplete but comprises many of the largest Catholic and Protestant missions.

Table A.20: Diffusion of investments (1910-1939 average) across districts within coastal colonies

	(1) Infrastructure	(2) Missions	(3) Education	(4) Health
Pre-colonial trading post indicator	1.34*	0.45**	1.92**	1.30**
	(0.62)	(0.16)	(0.40)	(0.26)
Distance from post, in 100km	-0.28**	-0.05*	-0.15**	-0.07*
	(0.10)	(0.02)	(0.06)	(0.03)
Distance from the coast, in 100km	-0.16	-0.08**	-0.22**	-0.09*
	(0.11)	(0.02)	(0.07)	(0.04)
Colony FE	Yes	Yes	Yes	Yes
African population	Yes	Yes	Yes	Yes
Districts (N)	211	211	202	211
R^2	0.38	0.46	0.42	0.32

Notes: † $p < 0.10$, * $p < 0.05$, ** $p < 0.01$. Robust standard errors in parentheses.

Table A.21: European settlers as a colonial investment diffusion mechanism

	(1) Infrastructure	(2) Missions	(3) Education	(4) Health
Pre-colonial trading post indicator	0.36	0.34*	1.51**	0.84**
	(0.58)	(0.17)	(0.39)	(0.19)
Distance from post, in 100km	-0.22**	-0.04†	-0.11*	-0.04
	(0.08)	(0.02)	(0.05)	(0.04)
Distance from the coast, in 100km	-0.08	-0.07**	-0.18**	-0.05
	(0.10)	(0.03)	(0.07)	(0.04)
European population, logged	0.99**	0.10**	0.49**	0.43**
	(0.12)	(0.03)	(0.13)	(0.05)
Colony FE	Yes	Yes	Yes	Yes
African population	Yes	Yes	Yes	Yes
Districts (N)	200	200	191	200
R^2	0.53	0.48	0.49	0.51

Notes: † $p < 0.10$, * $p < 0.05$, ** $p < 0.01$. Robust standard errors in parentheses. These tables are identical to Tables 3 and 4 except that I replace the railroad indicator for the number of missions in the district. The original source is Roome's 1924 map digitized by Nunn (2010), which is incomplete but comprises many of the largest Catholic and Protestant missions.

D Alternative explanations

Table A.22: The limited role of alternative explanations

	Infrastructure		Railroad		Education		Health	
	(1) Coastal	(2) All	(3) Coastal	(4) All	(5) Coastal	(6) All	(7) Coastal	(8) All
Pre-colonial trading post	1.61**	1.44*	0.10	0.06	1.93**	2.00**	1.31**	1.33**
	(0.61)	(0.61)	(0.10)	(0.10)	(0.39)	(0.38)	(0.26)	(0.25)
Geography								
Distance to coast, 100km	-0.19	-0.18†	-0.02	-0.04*	-0.18†	-0.11	-0.09†	-0.06†
	(0.13)	(0.10)	(0.02)	(0.02)	(0.09)	(0.07)	(0.05)	(0.03)
Navigable river (1910)	-0.87†	-0.32	-0.24**	-0.20**	-0.18	-0.21	-0.12	0.04
	(0.47)	(0.41)	(0.08)	(0.07)	(0.31)	(0.24)	(0.17)	(0.14)
Terrain ruggedness	0.53	0.78	0.05	0.06	0.68	0.35	-0.05	-0.02
	(0.89)	(0.69)	(0.12)	(0.10)	(0.74)	(0.54)	(0.29)	(0.22)
Natural resources								
Noble metals (1920)	0.70†	0.47	0.19*	0.20**	-0.20	-0.19	-0.18	-0.11
	(0.36)	(0.38)	(0.09)	(0.08)	(0.40)	(0.32)	(0.21)	(0.18)
Base metals (1920)	0.20	0.33	-0.04	-0.01	0.16	0.35	0.24	0.23†
	(0.43)	(0.41)	(0.09)	(0.07)	(0.23)	(0.22)	(0.17)	(0.14)
Soil quality index (2000)	0.01	0.17	0.04	0.02	0.21	0.05	-0.08	-0.05
	(0.22)	(0.20)	(0.03)	(0.03)	(0.19)	(0.13)	(0.09)	(0.06)
Disease environment								
Malaria prevalence (1900)	-0.63†	-0.37	-0.11*	-0.09*	0.17	0.06	-0.16	-0.10
	(0.35)	(0.30)	(0.05)	(0.04)	(0.30)	(0.22)	(0.13)	(0.10)
Tsetse fly index (1970)	-0.28	-0.42	-0.04	-0.07	-0.26	-0.09	-0.12	-0.04
	(0.44)	(0.36)	(0.08)	(0.06)	(0.29)	(0.22)	(0.19)	(0.14)
Ethnic and demographic characteristics								
Ethnic fractionalization	0.67	-0.47	-0.40**	-0.29*	-0.68	-0.98	-0.35	-0.30
	(1.09)	(0.96)	(0.15)	(0.12)	(0.71)	(0.60)	(0.39)	(0.29)
Political centralization	0.64	0.35	0.10*	0.05	0.17	0.01	0.06	0.02
	(0.39)	(0.32)	(0.05)	(0.04)	(0.24)	(0.18)	(0.13)	(0.09)
Prevalence of Islam (1910)	-0.54	-0.55†	-0.03	-0.04	-0.68**	-0.74**	-0.15	-0.17
	(0.35)	(0.33)	(0.05)	(0.05)	(0.23)	(0.22)	(0.13)	(0.12)
African population, logged	0.70**	0.63**	0.10*	0.09*	1.09**	0.88**	0.45**	0.38**
	(0.25)	(0.23)	(0.04)	(0.03)	(0.21)	(0.18)	(0.10)	(0.08)
Colony FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Districts (N)	211	312	211	312	202	288	211	312
R^2	0.42	0.43	0.31	0.31	0.47	0.57	0.34	0.48

Notes: † $p < 0.10$, * $p < 0.05$, ** $p < 0.01$. Robust standard errors in parentheses. The number of observations varies by colonial investment because the dataset lacks student data for Mauritania and public health staff data for Conakry. It also varies by whether the sample is restricted to coastal colonies or not.

All variables in Table A.22 are also included in the main results (Tables 1 and 2) as controls, but here I list them explicitly. I include them simultaneously because pairwise correlations are always below 0.4, reducing multicollinearity concerns.[37]

D.1 Other explanations: hostility

Table A.23: Local hostility and colonial investments (1910-1939)

	Infrastructure		Railroad		Education		Health	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Pre-colonial trading post	1.39†	1.44*	0.00	0.01	1.19**	1.27**	1.26**	1.33**
	(0.76)	(0.70)	(0.19)	(0.19)	(0.23)	(0.20)	(0.35)	(0.32)
Hostile events (1910-1939)	-0.23		-0.02		0.07		-0.09	
	(0.22)		(0.05)		(0.07)		(0.09)	
Hostile events (1906-1920)		-0.18		-0.02		-0.01		-0.10*
		(0.11)		(0.02)		(0.04)		(0.05)
Colony FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Locational fundamentals	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Natural resources and soil quality	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Socioeconomic characteristics	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Districts (N)	110	110	110	110	102	102	110	110
R^2	0.51	0.52	0.34	0.35	0.77	0.77	0.42	0.45

Notes: † $p < 0.10$, * $p < 0.05$, ** $p < 0.01$. Robust standard errors in parentheses. The models replicate Table A.22 but now include a count of hostile events by chiefs or subjects. The hostility data (Huillery, 2010) cover French West Africa only, hence the lower sample size.

Table A.23 suggests that local hostility—acts of anti-colonial resistance undertaken by subjects or chiefs—do not seem to reduce colonial investments significantly, except possibly in health staff. Both measures are "post-treatment" with respect to pre-colonial trade and most other controls. The 1910-1939 average is consistent with the dates for investments. The 1906-1920 is consistent with Huillery's (2010, p. 277) logic that early hostile events were more important in French West Africa than later hostile events.

[37]The exception is a 0.59 correlation between distance from the coast and the tsetse fly index (Alsan, 2015).

Huillery (2010, p. 263) shows that, in French West Africa, "hostile areas received less European settlers than they would have received had they not been so hostile." Hence, Table A.24 examines two hypotheses. First, whether the settler effect detected for the whole sample (Table 4) persists when we subset the sample to French. We observe that European settlers increase all investments as in the full sample. Second, whether the effect of settlers on investments is confounded by local hostility given that the two are negatively correlated. We see that accounting for hostile events does not change the coefficient size for settlers. Hostile events seem to have an independent effect in some outcomes: they reduce health staff and possibly infrastructure expenditures (although not railroads or health). There are two important caveats. First, the results are restricted to French districts because of data availability. Hostility may be a mechanism that accounts for the settler mechanism in British districts. Second, these cross-sectional results cannot capture the colonial dynamics between settlers, acts of hostility, and investments. Exploring the relationship between these three variables in a panel setting is interesting but beyond the scope of this article.

Table A.24: European settlers as a colonial investment diffusion mechanism

	Infrastructure		Railroad		Education		Health	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Pre-colonial trading post indicator	0.13	0.87	-0.37†	-0.43*	1.06**	0.83**	0.36	0.61†
	(0.85)	(0.87)	(0.19)	(0.20)	(0.23)	(0.25)	(0.32)	(0.35)
Distance from post, in 100km	-0.10	-0.03	-0.08**	-0.08**	-0.01	-0.05	-0.07*	-0.05
	(0.15)	(0.16)	(0.03)	(0.03)	(0.06)	(0.07)	(0.03)	(0.03)
European population, logged	0.79**	0.80**	0.17**	0.16**	0.30**	0.29**	0.43**	0.44**
	(0.17)	(0.18)	(0.03)	(0.03)	(0.05)	(0.05)	(0.05)	(0.04)
Hostile events (1906-1920)		-0.18†		-0.02		0.02		-0.06**
		(0.10)		(0.02)		(0.03)		(0.02)
Colony FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Distance to coast	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
African population	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Districts (N)	101	99	101	99	92	91	101	99
R^2	0.58	0.58	0.42	0.40	0.83	0.83	0.71	0.71

Notes: † $p < 0.10$, * $p < 0.05$, ** $p < 0.01$. Robust standard errors in parentheses. The models replicate Table 4 but now include a count of hostile events by chiefs or subjects. The hostility data come from Huillery (2010) and cover French West Africa but not British Africa, hence the lower sample size.

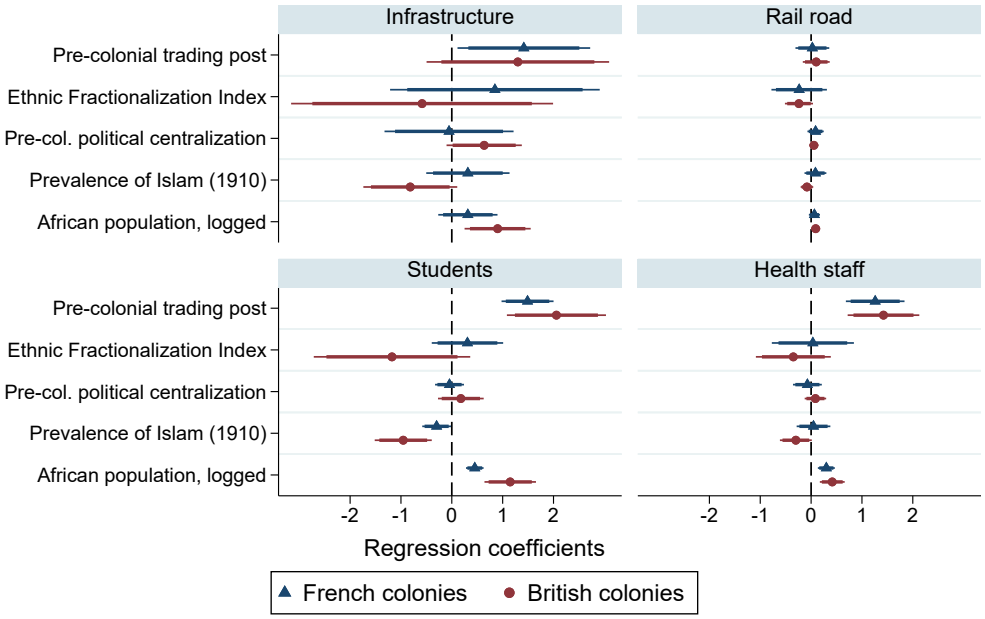
D.2 Differences by empire

I consider alternative explanations further by splitting the sample by empire, since considering them together may be masking relevant heterogeneity. While not the focus of this article, I provide some correlational results in light of the literature comparing both empires (Hopkins, 1973; Cooper, 1996; Lee and Schultz, 2012). Figure A.4 presents coefficients from the same models as in Table A.22 but now split by empire. Differences between empires are modest. Investments increase with population and pre-colonial trade in both empires, while pre-colonial political centralization is insignificant in both empires.

Europeans held many racial prejudices in both empires.[38] However, the British may have discriminated more than the French. British administrators invest less in more ethnically diverse groups. The negative correlation is similar if I use an alternative measure using the raw number of groups in the district, although with neither measure is the effect significant at the $p < 0.05$ level. The British also invest less in infrastructure, education, and health in districts with more Muslim presence, whereas in French districts the negative correlation is restricted to education. I find no evidence that the British invested more or less in districts with pre-colonial kingdoms or acephalous societies whether I used Murdock's measure (Figure A.4) or my own measures (Figure A.5). I find some evidence that public investments in French districts were lower in acephalous societies than in non-acephalous ones. Overall, these results are tentative but consistent with the notion that British administrators practiced divide and rule more than the French (Wucherpfennig, Hunziker and Cederman, 2016).

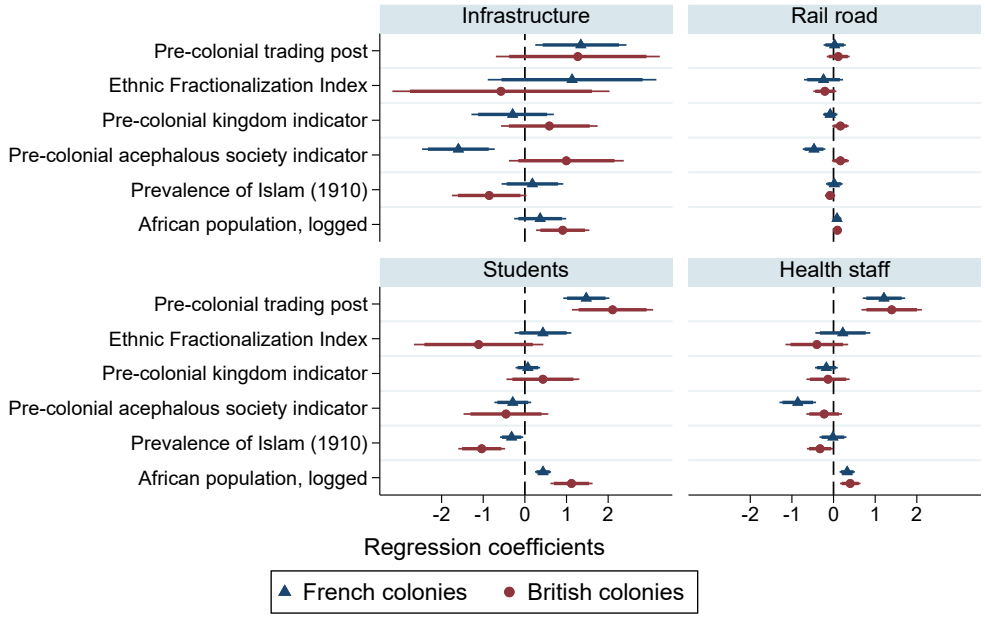
[38] Mamdani (1996) highlights that British racist stereotyping was pervasive: "The Baganda proper [in developed central Uganda] are eager to become educated [...] with a zest which is almost pathetic" (Herbertson and Howarth, 1914, p. 297). Yet French colonial officials were far from race blind: "The Wolof [in developed Western Senegal] was spoiled and had become a terrible snob," no longer fit to be a *tirailleur* [soldier] (Echenberg, 1991, chapter 2), while the Bambara [from Southern Mali] was not very intelligent but possessed "all the strong warrior's virtues."

Figure A.4: Results by empire



Note: These coefficients result from models identical to those in Table A.22, but now splitting the sample by empire. Confidence intervals shown at the 95% and 90% level.

Figure A.5: Results by empire using pre-colonial kingdom and acephalous society indicators instead of Murdock's measure



Note: This figure is identical to the one above but uses pre-colonial kingdom and acephalous society indicators (the baseline being districts which were neither) instead of Murdock's ordinal measure

E Inequality during colonial times

Figure A.6: Persistence of public investments in French West Africa

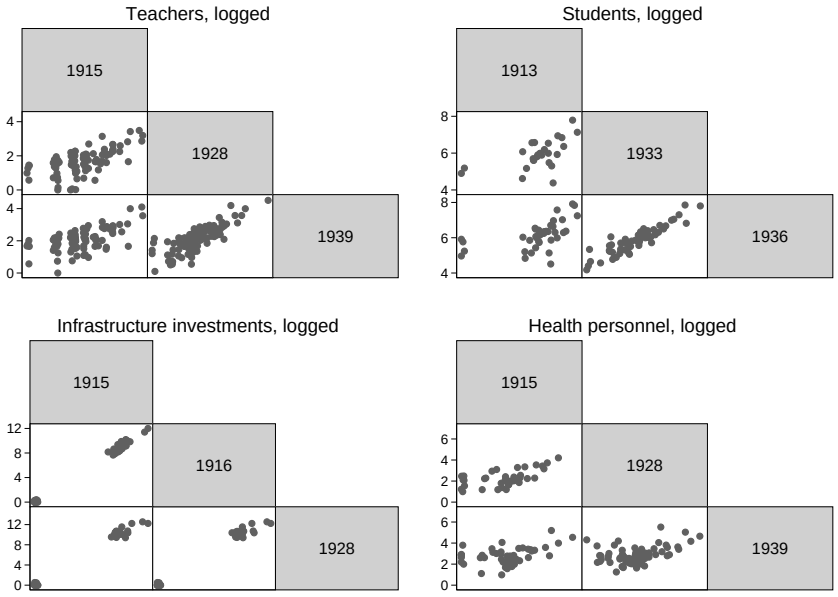
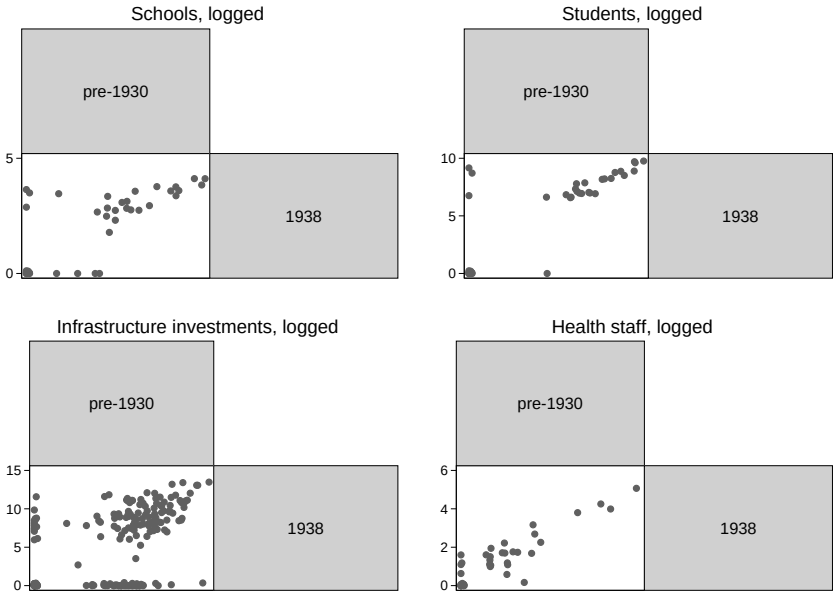


Figure A.7: Persistence of public investments in British East and West Africa



Note: The correlation matrices show continuity in logged levels of public investments over time. Both X and Y axis use the same logged scale.

Education inequalities seem very persistent: serial correlations for the number of students and teachers in French West African districts are around 0.8 (Figure A.6) across years with sufficient data between 1910 and 1939. In health staff, the correlation is above 0.5, and for infrastructure it is around 0.95 for any of the three pairwise correlations. In the case of British colonies, the number of schools, students and health staff also correlate at 0.8 or above, while for infrastructure investments it is 0.57 (Figure A.7). The pattern is overall similar in both empires: those ahead in the 1910s are still ahead at the eve of World War II, even if shocks such as the Great War and the Great Depression reduced overall levels of revenue collection and therefore investment (Gardner, 2012, p. 6).

I test more formally whether investment patterns over time converged or diverged for the case of French West Africa using autoregressive models with one lag (AR1) (equation 5). One advantage of AR1 models, as opposed to simple serial correlations, is that the constant controls for deterministic trends.[39] I also examine whether initial levels of colonial investments (I_{it_0}) predict successive differences (equation 6):

$$I_{it} = \alpha + \gamma I_{it-1} + \beta I_{it_0} + \epsilon_{it} \tag{5}$$

$$\triangle I_{it} = I_{it} - I_{it-k} = \alpha + \beta I_{it_0} + \epsilon_{it} \tag{6}$$

Investments (I) are indexed by district i and year t. Models 1 and 2 in Tables A.25-A.26 use levels of investments, while models 3 and 4 are logged to reduce dependence on outliers. Equation 5 is an AR1 process that includes the initial value (t_0) of I in the time series to adjust for baseline levels of I (models 1 and 3). Equation 6 considers changes in investments over time (models 2 and 4). $\beta > 0$ indicates increasing divergence and $\beta < 0$ indicates convergence when compared to the distribution at t_0. The approach of equation 5 is more rigorous than that of equation 6 but the cost is a reduced sample size. Because the panel is unbalanced and incomplete, the previous value I_{t-k} (equation 6) is not necessarily the

[39] In other words, the constant would capture a constant increase across districts due to inflation (already accounted for by using real 1910FRA), a larger budget, or other factors.

previous year as in equation 5 but the nearest previous year for which there is data available. I report both for completeness because data gaps could lead to bias in either modeling strategy.

All models except one indicate either increasing ($\beta > 0$) or constant ($\beta = 0$) disparities, consistent with a logic of increasing returns. Teachers and health staff per district in 1915 predict a later increase in teachers and health staff, respectively. The results on infrastructure investments vary depending on the specification. Schools and hospitals likely benefited from complementarities and economies of agglomeration more than infrastructure, which was partly intended to create transportation networks with more remote areas.

Table A.25: Disparities in infrastructure investments per district (1915-1939, in 1910 FRA)

	(1) Levels (eq. 5)	(2) FD (eq. 6)	(3) Levels (eq. 5)	(4) FD (eq. 6)
Infrastructure, lagged	0.32**			
	(0.04)			
Infrastructure in 1915	0.27**	-0.45**		
	(0.09)	(0.14)		
Infrastructure, logged first lag			0.67**	
			(0.09)	
Infrastructure in 1915, logged			0.11	-0.12*
			(0.08)	(0.06)
Districts (N)	181	195	181	195
R^2	0.68	0.22	0.87	0.29

Table A.26: Disparities in educational investments per district (1915-1939)

	(1) Levels (eq. 5)	(2) FD (eq. 6)	(3) Levels (eq. 5)	(4) FD (eq. 6)
Teachers, lagged	0.86**			
	(0.06)			
Teachers in 1915	0.17**	0.20**		
	(0.07)	(0.06)		
Teachers, logged first lag			0.64**	
			(0.05)	
Teachers in 1915, logged			0.31**	-0.00
			(0.05)	(0.03)
Districts (N)	374	632	374	632
R^2	0.97	0.28	0.97	0.01

Table A.27: Disparities in health investments per district (1915-1939)

	(1) Levels (eq. 5)	(2) FD (eq. 6)	(3) Levels (eq. 5)	(4) FD (eq. 6)
Health staff, lagged	0.40**			
	(0.07)			
Health staff in 1915	0.82**	0.08		
	(0.16)	(0.09)		
Health staff, logged first lag			0.61**	
			(0.06)	
Health staff in 1915, logged			0.35**	0.06
			(0.05)	(0.04)
Districts (N)	178	267	178	267
R^2	0.94	0.23	0.97	0.11

Notes: $\dagger p < 0.10$, * $p < 0.05$, ** $p < 0.01$. For Tables A.25-A.27, robust standard errors in parentheses for panel data models (columns 1 and 3). FD stands for first-difference estimation (columns 2 and 4).

F Coding of natural harbors, capes, and pre-colonial trading posts

This section provides colony-by-colony discussions to explain coding decisions for three variables: natural harbors, capes, and pre-colonial trading posts. As I mention in Section 2, pre-colonial trading posts were centers of commerce between the 1500s and late 1800s where Europeans—and Arabs in the cases of North and East Africa—sold clothes, guns, and other manufactured goods in exchange for African slaves and raw mineral and agricultural commodities such as gold, ivory, copper, and palm oil. Natural harbors are bodies of water that are protected and deep enough to furnish anchorage. Capes are large promontories extending into a body of water.

The sources to code pre-colonial trading posts are the Africa Map of the Center for Geographic Analysis at Harvard University (2015); Slave Voyages (2013); Curtin et al. (1995); Huillery (2009); *Encyclopedia Britannica* (2020), including Britannica Academic; and the Oxford Encyclopedia of Africa Gates and Appiah (2010).

In addition to the sources above, the main sources for capes are two historical maps (to avoid capes developed in the 1900s) showing the main capes across the continent (Rapkin, 1851; Adam and Charles Black, 1854), while Ramsar (2016) and Deasy (1942) provide lists of natural harbors. Following Deasy (1942, p. 325), "open-roadstead ports will not be considered" as *natural* harbors (they aren't) "even though they are occasionally of some commercial significance", such as Accra on the Gold Coast.

Coastal districts with a natural harbor, a major cape, or a major pre-colonial trading post equal 1 for the respective variable and 0 otherwise. They are coded as including a pre-colonial trading post (indicator equals 1) if they satisfy at least one of two conditions: (i) 250 or more slave ships sailed from pre-colonial trading posts/forts located in that district (e.g. Ouidah in Benin), as provided by Slave Voyages and the Transatlantic Slave Trade Database

included in Harvard's Africa Map, or (ii) the district includes an important pre-colonial post that traded commodities (e.g. Saint Louis in Senegal). Given the lack of detailed trade volume data for each location, these criteria focus on major trading posts and purposely exclude minor ones.

I also code the first British (or French) pre-colonial trading post in each British (French) colony, *regardless of size* and including inland colonies, to examine whether early trade, and distance from it, explains investment diffusion in non-coastal colonies (Tables A.16 and A.17).

F.1 Benin

I code three colonial districts as possessing an important pre-colonial trading post: Ouidah, Porto-Novo, and Cotonou (consistent with Huillery). Ouidah was one of the most important centers of the slave trade in all of Africa. At least half a million people were shipped from Ouidah alone. This was in spite of the geography not being favorable and ships not being able to anchor at Ouidah. Porto-Novo, as its name indicates, was a Portuguese pre-colonial slave trading center since the 1600s. Cotonou became a slave trading post in the 1800s and in other goods such as palm oil, as did neighboring Lagos.

By contrast, the slave trade further west in Grand Popo (colonial district of Mono) was minor, as the Africa Map confirms. Huillery does not code it as a pre-colonial trading post either.

Colonial districts with major pre-colonial trading posts: Ouidah, Porto-Novo, Cotonou.

The first French pre-colonial trading post in today's Benin was Ouidah (1671).

There are no natural harbors or capes in Benin.

F.2 Cote d'Ivoire

Consistent with Huillery and Curtin, I only code the colonial districts of Assinie (or Assini) and Bassam (Grand-Bassam) as possessing pre-colonial trading posts because they were the two major ones. Smaller ones such as Sassandra are coded as 0. Grand Bassam was the most important pre-colonial trading post in Cote d'Ivoire in the second half of the 19th century prior to becoming the colonial capital.

Colonial districts with major pre-colonial trading posts: Assinie and Bassam.

Assinie (1635) was the first French pre-colonial trading post in today's Cote d'Ivoire. Over 100 slave ships set sail from Assinie.

There are no natural harbors or capes in Cote d'Ivoire. The lagoons in Bassam and Assinie may explain why the Portuguese and the French established forts near them, but lagoons did not provide a particular advantage to ships in the Age of Sail.

F.3 Ghana

The then-Gold Coast was central to the slave trade and the gold trade since the 1600s. Besides slaves and gold, many traded in other precious metals, ivory, and local spices. Therefore, its coast included several important trading posts. Accra traded in gold and over 100 slave ships departed from its shore. Fort St. Anthony in Axim (Ahanta district) was a Portuguese, then Dutch, and then British fort involved in the gold trade. Cape Coast and Elmina Castle (built by Portugal in 1482), both in Cape Coast district, were as important as they were infamous slave trading posts. About 2150 ships set sail from Elmina alone, according to the Slave Trade database, a number that is second only to Luanda in Angola. Fort William in Anomabo (Saltpond district) was second only to Cape Coast in importance in the slave trade. 669 ships set sail from Anomabo.

Colonial districts with major pre-colonial trading posts: Accra, Ahanta, Cape Coast, Keta, Saltpond.

The first British pre-colonial trading post in today's Ghana was Fort Kormantin (Saltpond district) (1638).

Ghana does not have any natural harbors. However, its accidented geography comprises Cape Coast (Cape Coast district) and Cape Three Points (Ahanta district).

Colonial districts with capes: Ahanta, Cape Coast.

F.4 Guinea

The major pre-colonial trading post in today's Guinea was Conakry. Before the French formally established a port in the late 1880s, Conakry and the neighboring Îles de Los had been under the influence of British slave traders since the mid-eighteenth century. Trade was facilitated by Tombo Island's natural deep-water harbor in Conakry. Like Huillery, I do not consider smaller trading posts such as Rio Pongo (Boffa district) or Rio Nuñez (Boke district) as major pre-colonial trading posts. However, Boke in 1865 was the first French pre-colonial trading post in Guinea, so I code Boke district as 1 when coding the first pre-colonial trading post in each colony.

The first French pre-colonial trading post in today's Guinea was Boke (Boke district) (1865).

Colonial districts with major pre-colonial trading posts: Conakry.

Colonial districts with a natural harbor: Conakry.

There are no capes in Guinea.

F.5 Kenya

Mombasa's port played a very important role in Africa's pre-colonial trade with Asia and later with the Portuguese, who built Fort Jesus there. Malindi (Kilifi district) had been a city and a trading post before Portuguese arrival in the 16th century. It remained a city engaged in the slave and ivory trade for centuries until its decline to the benefit of neighboring Mombasa in the immediate pre-colonial period (late 1800s). Lamu (Lamu district) was a popular trade location for Arab traders, especially between the 17th and 19th centuries, when it served as a depot for the export of gold, ivory, and, to a lesser extent, slaves headed to Asia and the Middle East.

Colonial districts with major pre-colonial trading posts: Kilifi, Mombasa.

The first British pre-colonial trading post in today's Kenya was Mombasa (Mombasa district) (1895).

Colonial districts with natural harbors: Mombasa (Mombasa district) and Manda Bay (Lamu district). Malindi (Kilifi district) is not a natural harbor.

There are no capes recorded in the historical maps in Kenya.

F.6 Mauritania

Colonial district Baie du Lévrier (Levrier Bay in English, Dakhlet Nouadhibou in Arabic) contains a coastal natural harbor (the bay itself) and a cape (Cap Blanc or Ras Nouadhibou). Arguim, located near Baie du Lévrier, was the only location from which slaves were shipped. However, consistent with Huillery, the Bay was not a pre-colonial trading post and there is only one recorded ship that shipped slaves from Arguim in the Trans-Atlantic Slave Trade Database used by Harvard's Africa Map. The district is therefore a case of favorable coastal geography that nonetheless was not a center of pre-colonial trade.

Colonial districts with major pre-colonial trading posts: none.

The first French pre-colonial trading post in Mauritania was actually Saint Louis (1659), which although today part of Senegal sits at the border between Senegal and Mauritania and was the capital of colonial Mauritania.

Colonial districts with a natural harbor: Baie du Lévrier.

Colonial districts with a cape: Baie du Lévrier.

F.7 Nigeria

There were several pre-colonial slave trading posts along the coast. I code the three major ones, i.e., the ones that shipped the most slaves since the late 1500s: over 250 slave ships set sail in Lagos (Lagos district), 1,500 between Bonny and New Calabar, today's Port Harcourt (Owerri district), and 935 from Calabar (Calabar district). They also traded in palm oil and other commodities. I code smaller trading posts, such as Benin and Forcados (Warri district), as 0.

Nigeria's coast is endowed with four natural harbors: Port Harcourt (Owerri district), Forcados (Warri district) and Lagos (Lagos district), and Calabar (Calabar district). Cape Formosa (Warri district) marks the Eastern end of the Bight of Biafra.

Colonial districts with major pre-colonial trading posts: Calabar, Lagos, Owerri.

The first British pre-colonial trading post was Lagos.

Colonial districts with a natural harbor: Calabar, Lagos, Owerri, Warri.

Colonial districts with a cape: Warri.

F.8 Senegal

The main pre-colonial trading posts are Saint Louis (Saint Louis district), Gorée and Dakar (Dakar district), and Ziguinchor (Casamance), consistent with Huillery. They were by far the largest pre-colonial trading posts. I discuss Dakar and Saint Louis in section 2. As regards to Casamance, the Portuguese traded slaves with local Ziguinchor rulers since the 1600s. The French only took over in the 1880s, at which point they also developed the nearby Port of Karabane. I code the smaller trading post of Joal (Thies district) as 0.

Dakar's Cap Vert (Dakar district) is the westernmost point in West Africa and the only cape in Senegal. Goree Island provided a deep-water natural harbor that was first called Goede Reede by the Dutch ("good port"). That is the main reason many slave ships left from Goree rather than mainland Dakar. The Senegal and Casamance rivers provide natural harbors to Saint Louis and to Ziguinchor and later Karabane (Casamance).

Colonial districts with major pre-colonial trading posts: Casamance, Dakar, Saint Louis.

The first French pre-colonial trading post was Saint Louis.

Colonial districts with a natural harbor: Casamance, Dakar, and Saint Louis.

Colonial districts with a cape: Dakar.

F.9 Sierra Leone

Freetown was the most important natural harbor, cape, and trading port in the area that later became Sierra Leone. 487 slave ships departed from Freetown. Thus, it was an important trading post before it was selected by an English abolitionist as a site for African slaves that had been freed in England in 1787, hence its name. It would become an early British colony in West Africa in the 1800s. Freetown was the only major pre-colonial trading

post. Other minor posts such as Scarcies (Port Loko district) and Bonthe and Sherbro Island (Sherbro district), are coded as 0.

Colonial districts with major pre-colonial trading posts: Freetown.

The first British pre-colonial trading post was Freetown.

Colonial districts with a natural harbor: Freetown and Sherbro. Sherbro Island and the Sherbro river provide a second natural harbor to Sierra Leone.

Colonial districts with a cape: Freetown.

F.10 Tanzania

Tanga, Kilwa, and Mikindani are all natural harbors where trading posts and even developed ports existed for centuries for Arab-African and later European-African trade. The Portuguese took advantage of Tanga's natural harbor and established a trading post in Tanga (Tanga district) in the 1500s. Both the Portuguese and Arabs engaged in the slave and ivory trade through the 1800s. Kilwa island (Kilwa district) is another natural harbor and trading post with a long history of rivalry between Arabs, the Portuguese, the French, and the Germans. As in other parts of the Tanzanian coast, the slave trade gave way to trade in rubber and copal for varnish. Mikindani was another African-Arab trading post where slaves, rubber, and sisal were traded.

Unlike the three cases above, Dar-es-Salaam is a natural harbor but only begins to be used for commerce by the German East Africa Company right before German occupation. Therefore, I do not code it as *pre-colonial* trading port. By contrast, Bagamoyo is not a natural harbor but became an important trading post in slaves, ivory, and salt in the early 1800s.

Colonial districts with major pre-colonial trading posts: Bagamoyo, Kilwa, Mikindani, Tanga.

The first British pre-colonial trading post, other than Zanzibar, was Bagamoyo, which is located opposite Zanzibar on the mainland.

Colonial districts with a natural harbor: Dar-es-Salaam, Mikindani, Tanga.

There are no capes recorded in the historical maps in Tanzania.

F.11 Inland colonies

French West Africa comprised three inland colonies: Mali (then French Soudan), Burkina Faso (then Haute Volta), and Niger. Most of the territory was conquered militarily rather and did not have a long history of trade with the French empire. The purposes of the conquest were political (keeping the British out) and commercial: "This was a colonization of military men and merchants. Missionaries have no place there" [C'est une colonisation de militaires et de marchands. Le missionaire n'y a pas sa place] (de Benoist, 1987, p. 47).

Mali The first fort in Mali is in Médine (later Kayes district) in 1855, in Western Mali because the French were conquering West to East (from Senegal to Mali).

Burkina Faso The first concession the French obtained was a protectorate in Yatenga (later Ouahigouya district) in 1895.

Niger The French occupied the then-little town of Niamey (Niamey district) in the 1890s, in the banks of the Niger river, even though Zinder was a more important center of commerce, because they came from the West.

British East Africa and Southeastern Africa were conquered more progressively and less militarily.

Uganda The first missionaries reached today's Uganda in the mid 1800s. Frederick Lugard's British expedition arrived in 1890. All of them stayed in Mengo (later Mengo district) because the King of Buganda lived in Mengo, where the capital Kampala is located. Unlike Niamey, which was selected because of geographic reasons (proximity to French-controlled areas further West and the presence of the Niger river), the reasons in Uganda where political.

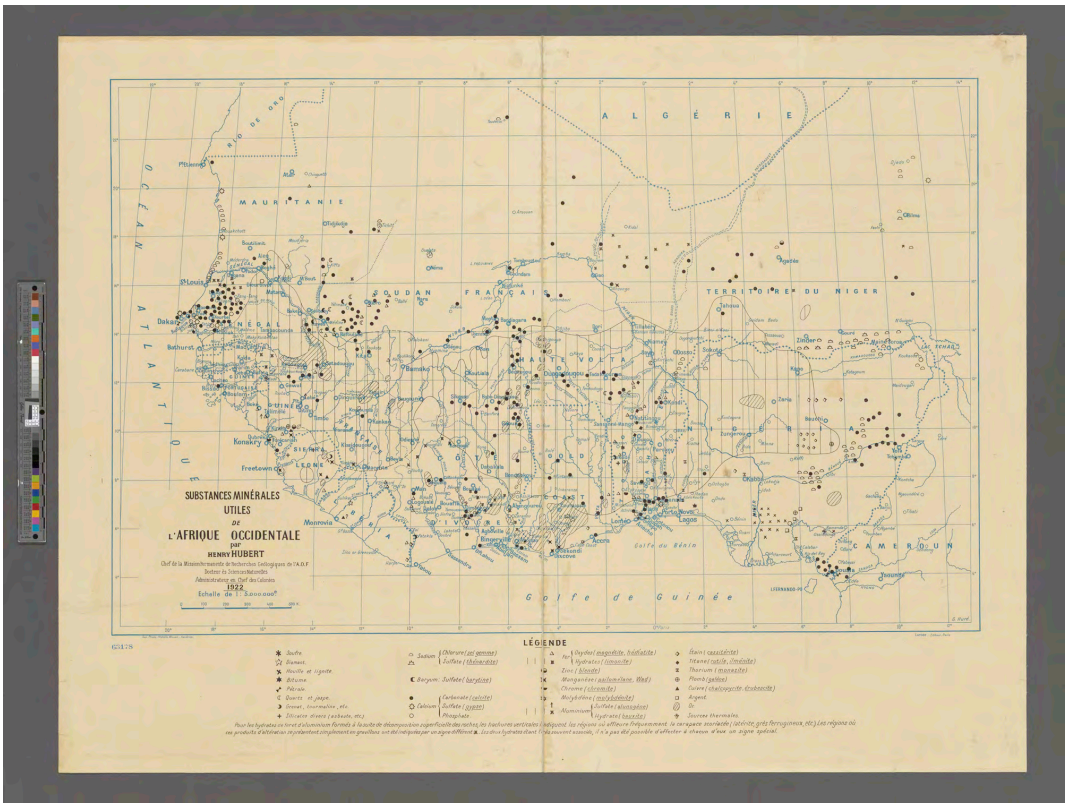
Malawi Early British inroads in today's Malawi were driven by missionaries, most famously David Livingstone, in the 1860s. The first trading post, which doubled as a mission, was established in Blantyre (later Blantyre district) in 1876. The Nyasaland Protectorate was only established in 1907.

Zambia As in Malawi, the first incursions in Zambia by any British were also the result of Livingstone's missionary explorations in the 1860s along the Zambezi River, which divides Zambia (Northern Rhodesia) and Zimbabwe (Southern Rhodesia). Both missionaries and Cecil Rhodes' company first established permanent presence for religious and economic purposes, respectively, in the ares where Victoria Fals and the town of Livingstone (later Livingstone district) were located in the late 1800s.

G Historical data on natural resources

The maps by Hubert (1922), Kuhne (1927), and USGS (1921) provide an improved snapshot of natural resources for East and West Africa in the early colonial period when compared to recent research which often uses current location of mineral deposits. However, the detailed coverage of these historical maps does not solve two other issues. First, the maps show resource location but not resource output or production by location. This introduces measurement error when correlating natural resources with infrastructure expenditure. Second, natural resources may be a function of investments (reverse causality). Using location rather than production in fact alleviates this second concern because production is endogenous to market and colonial state needs. Resource discovery can also be endogenous to investments. A comprehensive map of exclusively pre-colonially known deposits may not exist precisely because topographers had not surveyed most of East and West Africa until the 20th century, which makes the issue a "catch-22."

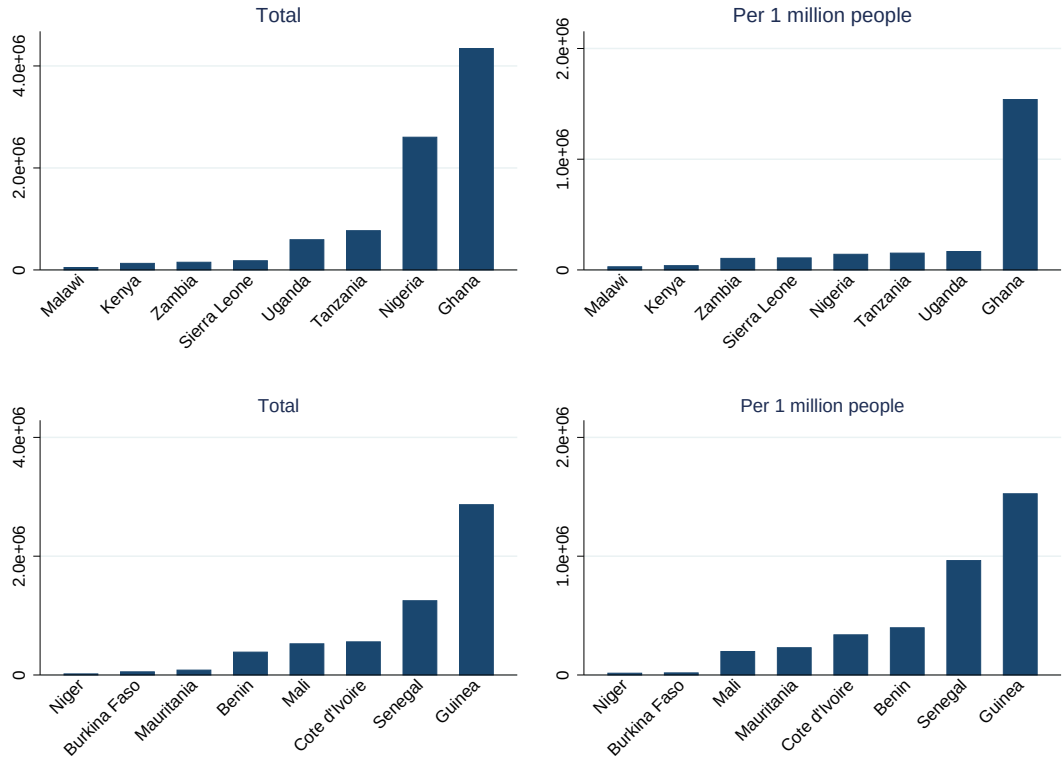
Figure A.8: Natural resources in West Africa



Note: The map visualizes known locations as of 1922 of minerals in former French West Africa. The list includes diamonds, noble metals such as gold and silver; and base metals such as calcium and iron ore, both of which were very common.

H Additional figures

Figure A.9: Infrastructure expenditures in British and French colonies (1910-1939, in 1910 FRA)



Note: Expenditures in infrastructure per colony in absolute levels and per capita. Except for Ghana, per capita investments were lower in British than in French colonies. The denominator includes African and European population, but because colonies had only a few thousand Europeans the results are almost identical if we exclude Europeans.

Figure A.10: Public expenditures by district in British colonies (1920-1938, in 1910 FRA)

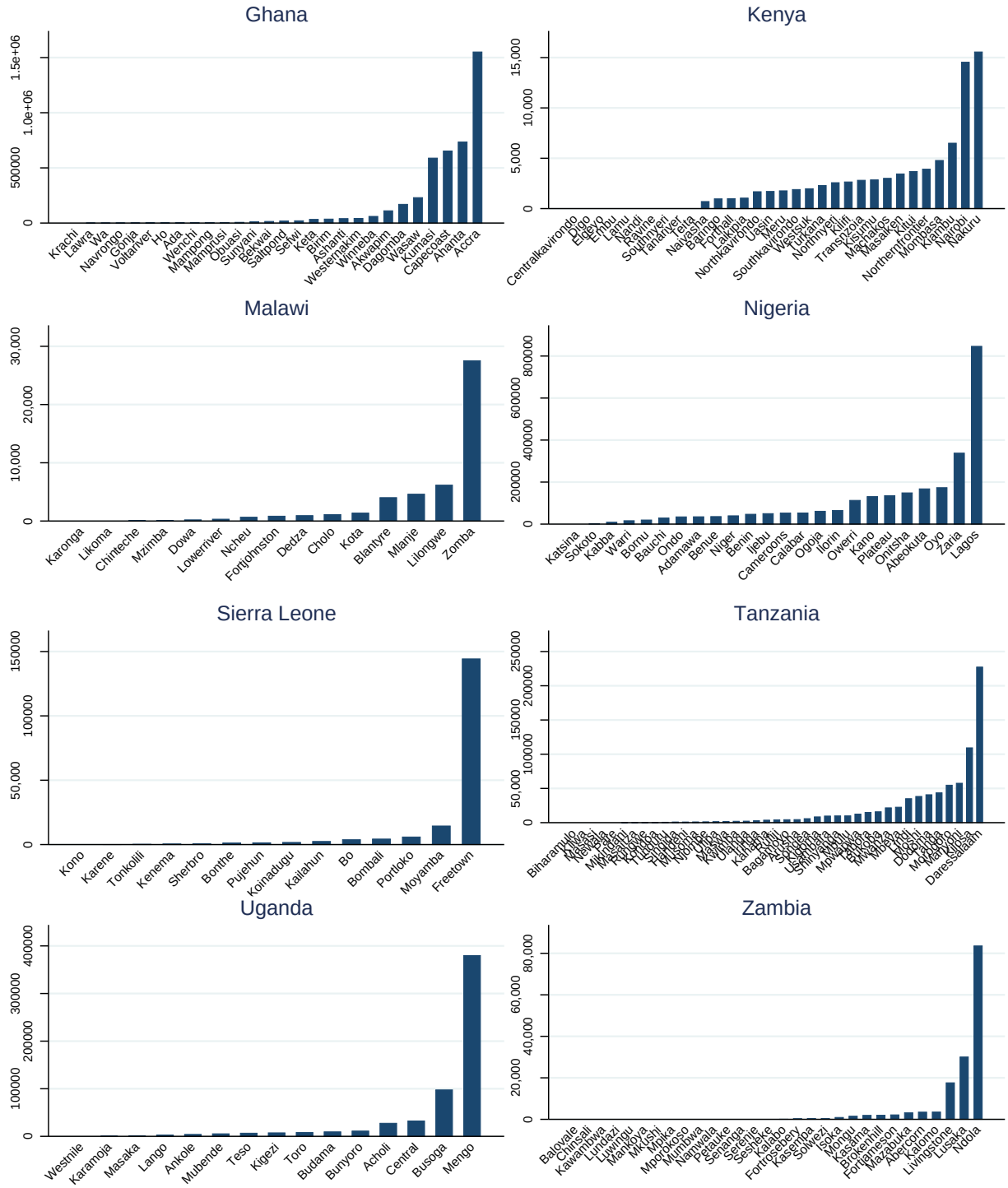


Figure A.11: Public expenditures by district in French colonies (1910-1939, in 1910 FRA)

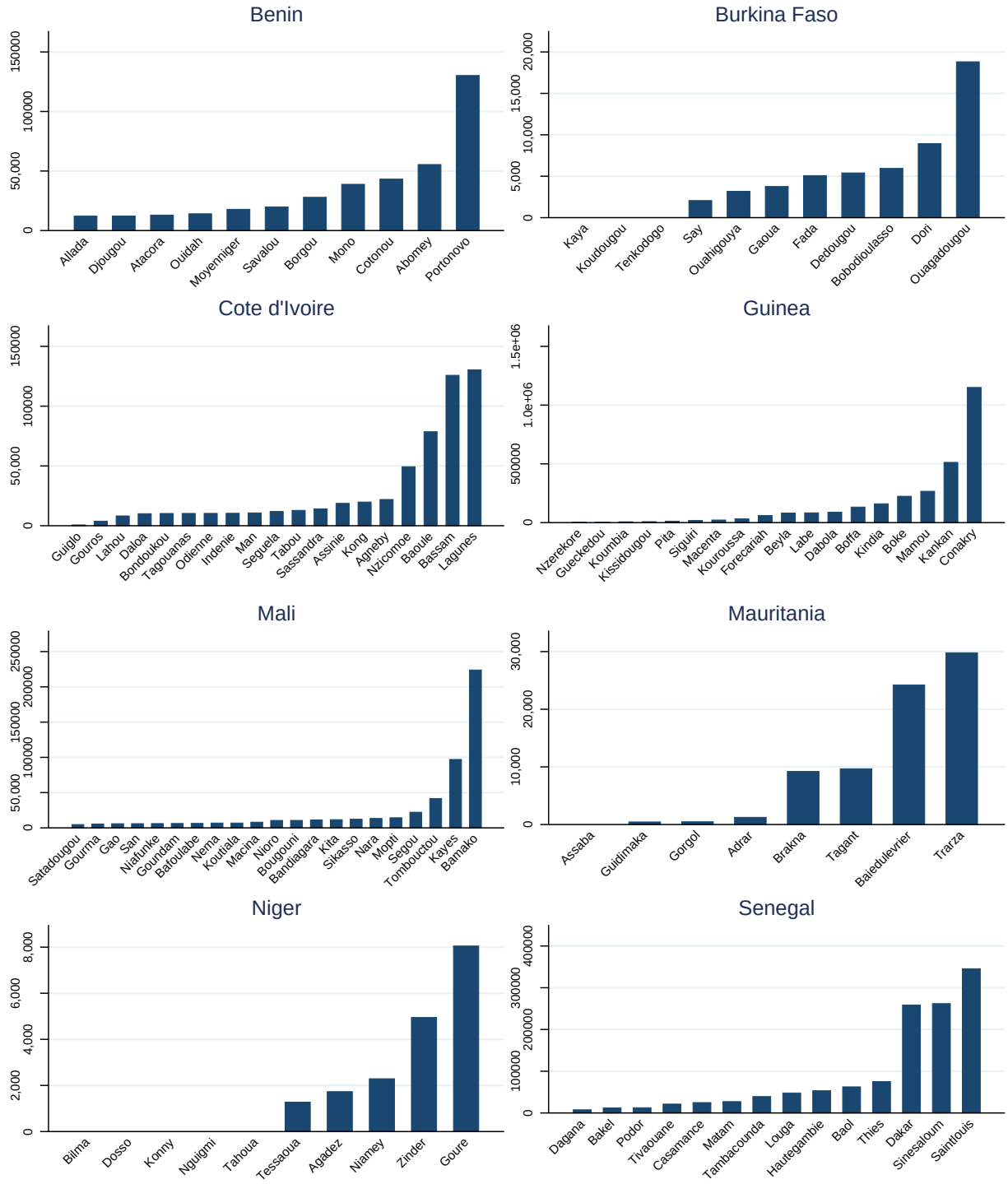
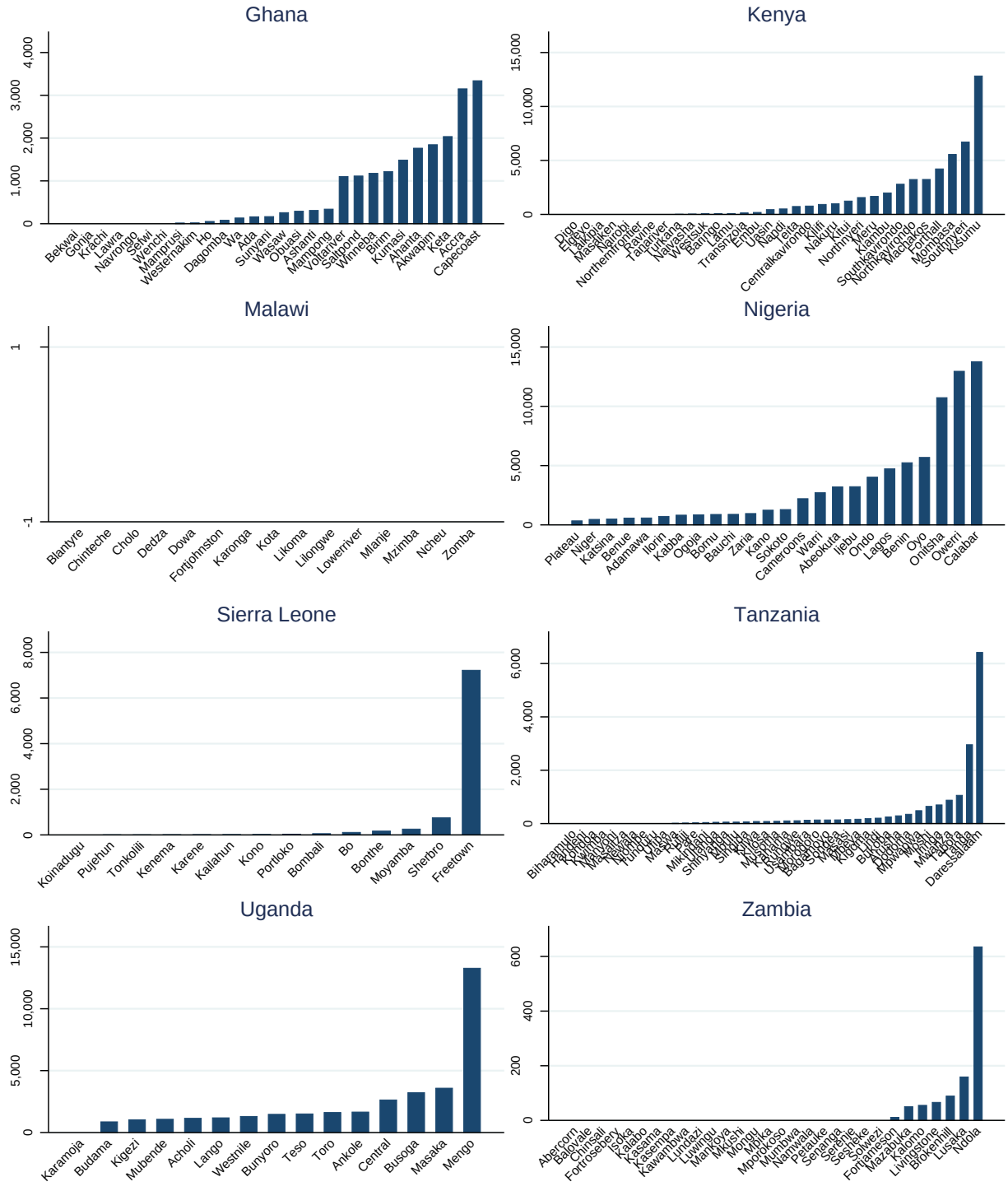
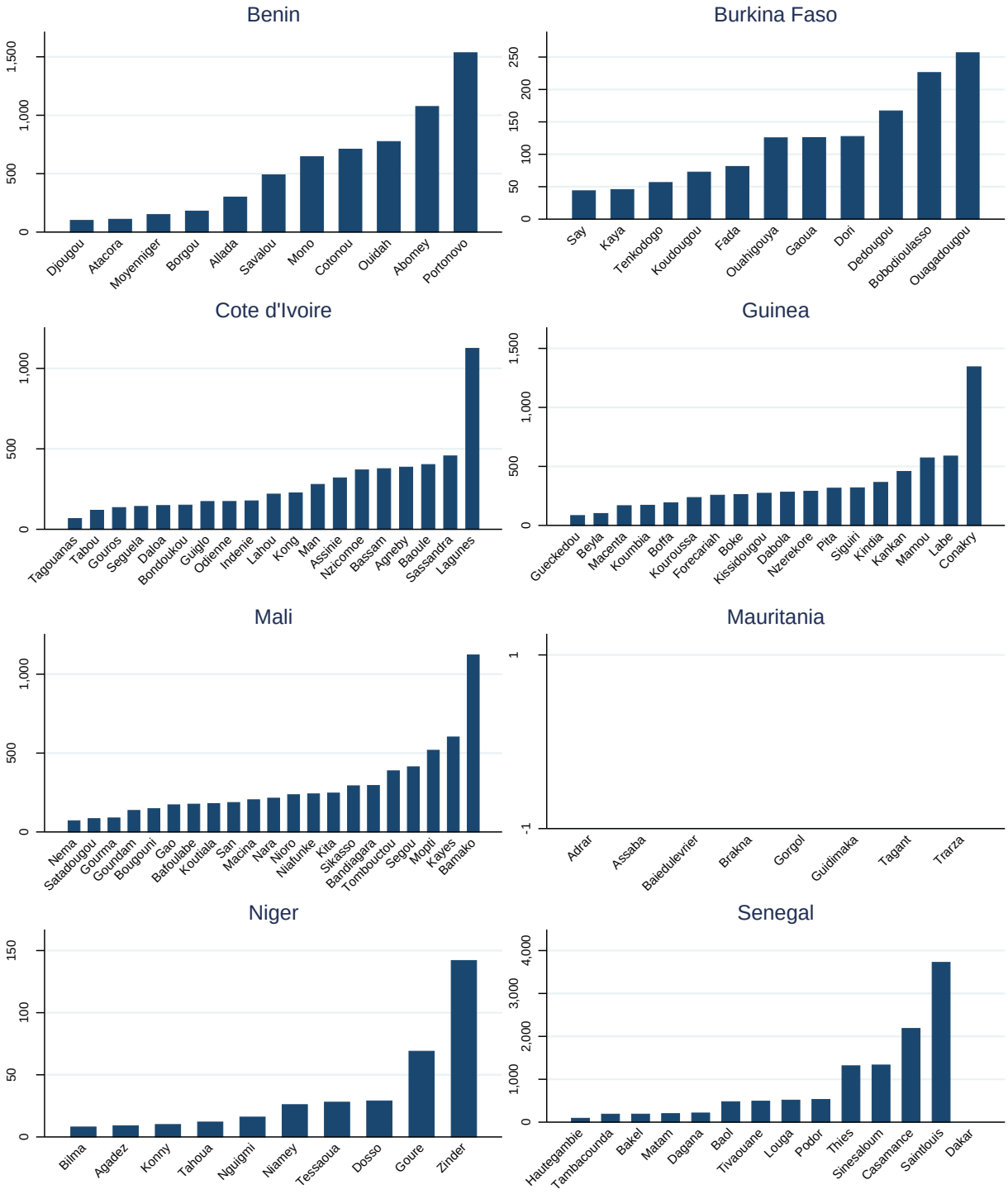


Figure A.12: Students by district in British colonies (1920-1938)



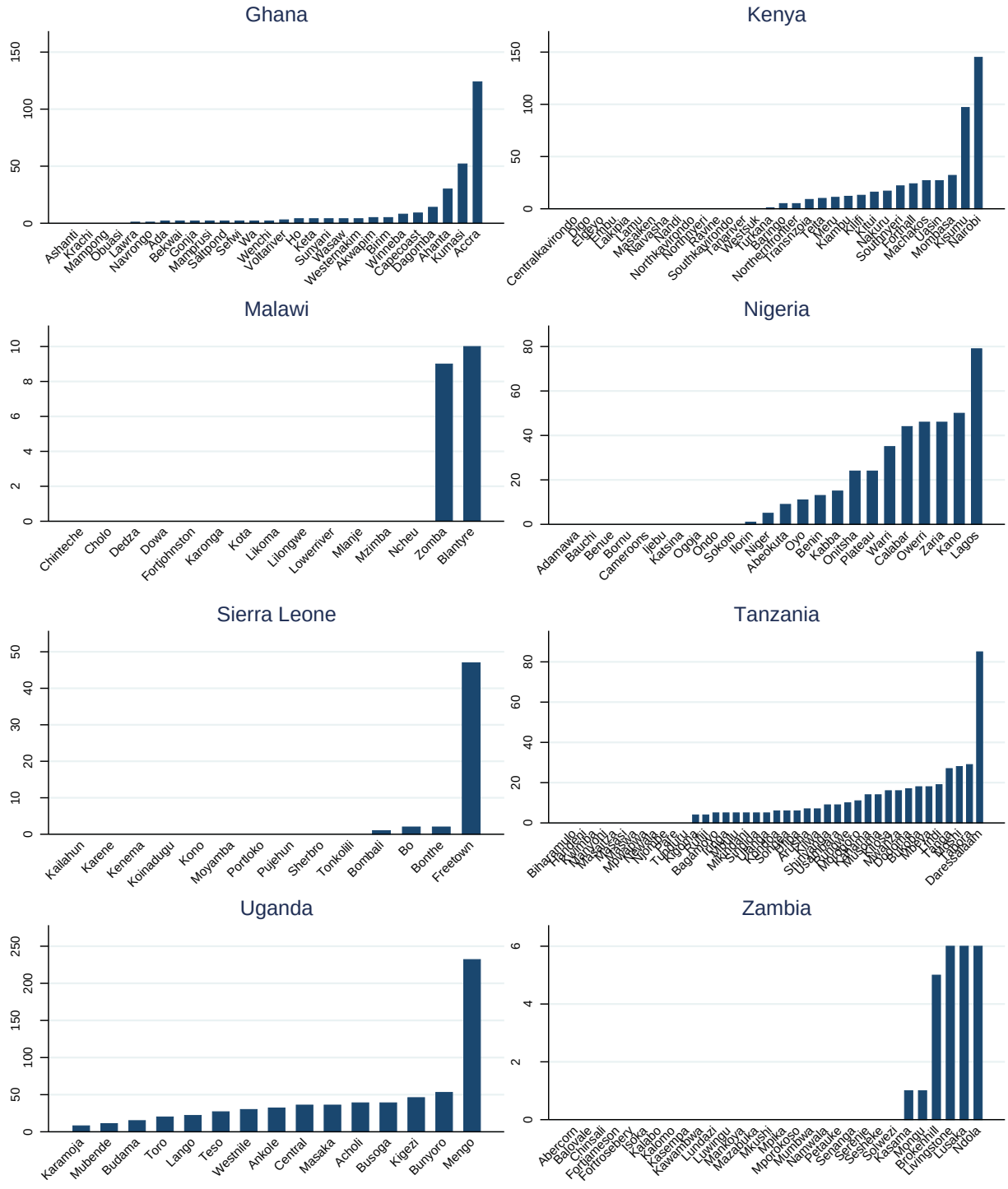
Note: British colonial records (the Blue Books) do not provide disaggregated education data for Malawi.

Figure A.13: Students in French colonies (1910-1939)



Note: Student data for Mauritania is missing in Huillery (2009).

Figure A.14: Public health staff by district in British colonies (1920-1938))



Note: Many districts did not have any doctors or nurses employed by the colonial state, especially in colonies acquired late such as Malawi and Zambia.

Figure A.15: Public health staff in French colonies (1910-1939)

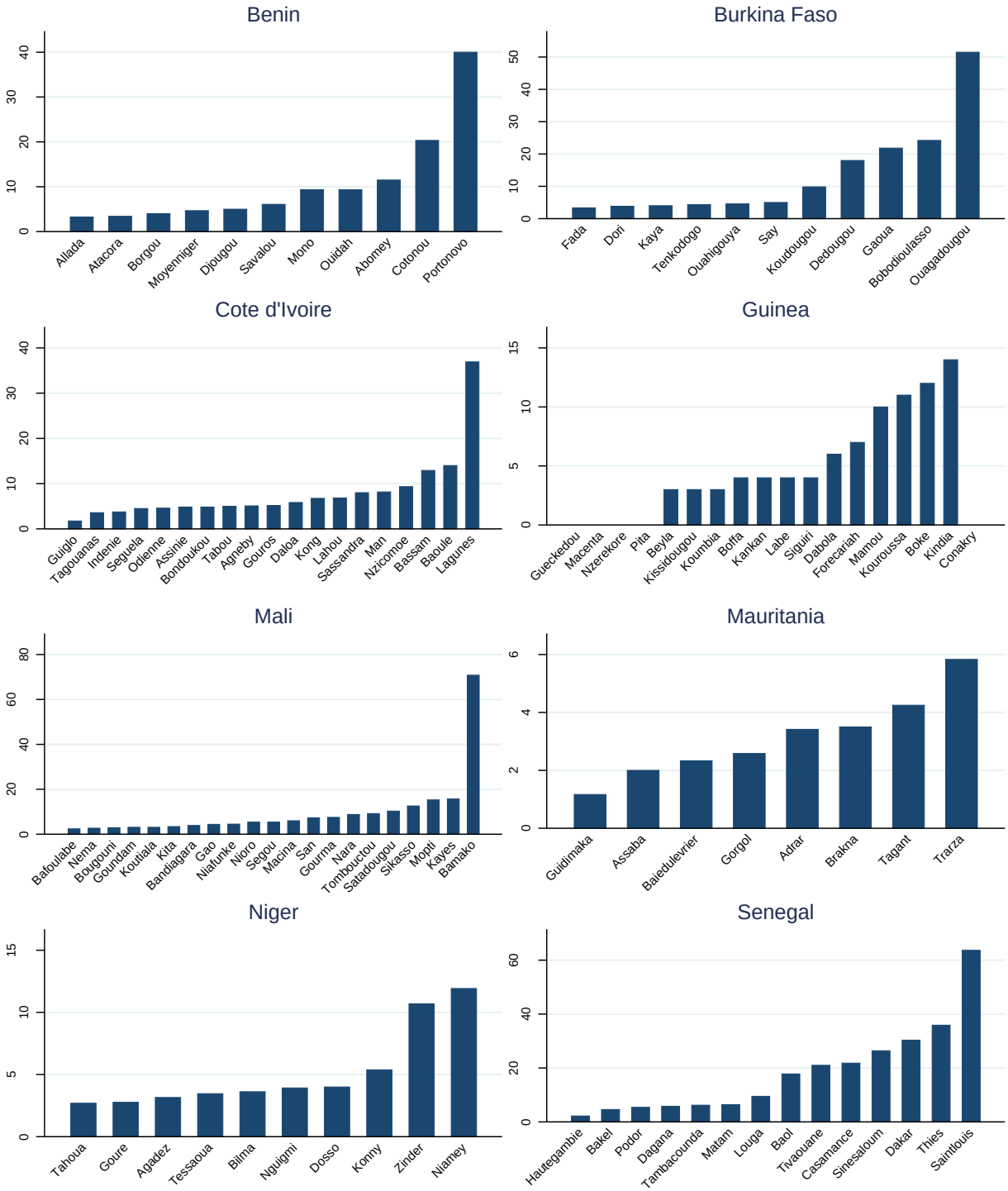
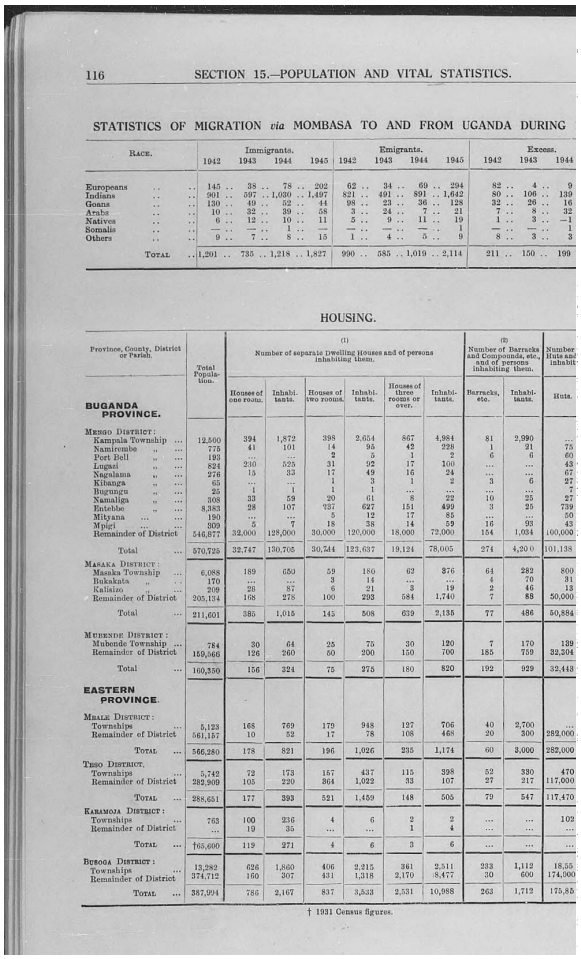


Figure A.16: Pages of a Blue Book page for Uganda, 1945 (left) and of a Compte Définitif for Benin, 1928 (right)



116 SECTION 15.—POPULATION AND VITAL STATISTICS.

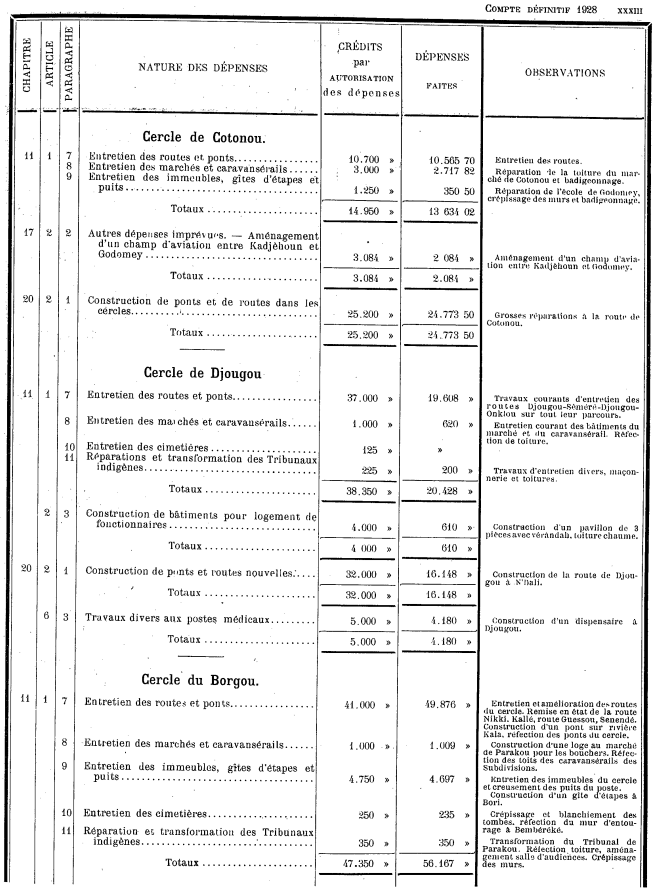
STATISTICS OF MIGRATION *via* MOMBASA TO AND FROM UGANDA DURING

Race.	Immigrants. 1942	1943	1944	1945	Emigrants. 1942	1943	1944	1945	Excess. 1942	1943	1944
Europeans	145	38	78	202	62	34	69	294	82	4	9
Indians	901	597	1,030	1,497	821	491	891	1,642	80	106	139
Goans	130	49	52	44	98	23	36	128	32	26	16
Arabs	10	32	39	58	3	24	7	21	7	8	32
Natives	6	12	10	11	5	9	11	19	1	3	−1
Somalis	—	—	1	—	—	—	—	1	—	—	1
Others	9	7	8	15	1	4	5	9	8	3	3
Total	1,201	735	1,218	1,827	990	585	1,019	2,114	211	150	199

HOUSING.

Province, County, District or Pariah.	Total Population.	(1) Number of separate Dwelling Houses and of persons inhabiting them. Houses of one room.	Inhabitants.	Houses of two rooms.	Inhabitants.	Houses of three rooms or over.	Inhabitants.	(2) Number of Barracks and Compounds, etc., and of persons inhabiting them. Barracks, etc.	Inhabitants.	Number Huts and inhabit Huts.
BUGANDA PROVINCE.										
Mengo District:										
Kampala Township ...	12,500	394	1,872	398	2,654	867	4,984	81	2,990	...
Namirembe ,, ...	775	41	101	14	95	42	228	1	21	75
Port Bell ,, ...	193	...	...	2	5	1	2	6	6	60
Lugazi ,, ...	824	210	525	31	92	17	100	...	...	43
Nagalama ,, ...	276	15	33	17	49	16	24	...	...	67
Kibanga ,, ...	65	...	...	1	3	1	2	3	6	27
Bugungu ,, ...	25	1	1	1	1	...	...	...	...	7
Namaliga ,, ...	308	33	59	20	61	8	22	10	25	27
Entebbe ,, ...	8,383	28	107	737	627	151	499	3	25	739
Mityana ...	180	...	...	5	12	17	85	...	...	50
Mpigi ...	309	5	7	18	38	14	59	16	93	43
Remainder of District	546,877	32,000	128,000	30,000	120,000	18,000	72,000	154	1,024	100,000
Total ...	570,725	32,747	130,705	30,544	123,637	19,124	78,005	274	4,200	101,138
Masaka District:										
Masaka Township ...	6,088	189	650	59	180	62	376	64	282	800
Bukakata ,, ...	170	...	...	3	14	...	...	4	70	31
Kalisizo ...	209	26	87	6	21	3	19	2	46	13
Remainder of District	205,134	168	278	100	293	584	1,740	7	88	50,000
Total ...	211,601	385	1,015	145	508	639	2,135	77	486	50,884
Mubende District:										
Mubende Township ...	784	30	64	25	75	30	120	7	170	139
Remainder of District	159,966	126	260	50	200	150	700	185	759	32,304
Total ...	160,350	156	324	75	275	180	820	192	929	32,443
EASTERN PROVINCE.										
Mbale District:										
Townships ...	5,123	168	769	179	948	127	706	40	2,700	...
Remainder of District	561,157	10	52	17	78	108	468	20	300	282,000
Total ...	566,280	178	821	196	1,026	235	1,174	60	3,000	282,000
Teso District.										
Townships ...	5,742	72	173	157	437	115	398	52	330	470
Remainder of District	282,909	105	220	364	1,022	33	107	27	217	117,000
Total ...	288,651	177	393	521	1,459	148	505	79	547	117,470
Karamoja District:										
Townships ...	763	100	236	4	6	2	2	...	...	103
Remainder of District	...	19	35	...	...	1	4	...	...	...
Total ...	765,600	119	271	4	6	3	6	...	...	...
Busoga District:										
Townships ...	13,282	626	1,860	406	2,215	361	2,511	333	1,112	18,55
Remainder of District	374,712	160	307	431	1,318	2,170	8,477	30	600	174,000
Total ...	387,994	786	2,167	837	3,533	2,531	10,988	263	1,712	175,85

† 1931 Census figures.



COMPTE DÉFINITIF 1928 XXXIII

CHAPITRE	ARTICLE	PARAGRAPHE	NATURE DES DÉPENSES	CRÉDITS par AUTORISATION des dépenses	DÉPENSES FAITES	OBSERVATIONS
			Cercle de Cotonou.			
11	1	7	Entretien des routes et ponts	10.700 »	10.565 70	Entretien des routes.
		8	Entretien des marchés et caravansérails	3.000 »	2.717 82	Réparation de la toiture du marché de Cotonou et badigeonnage.
		9	Entretien des immeubles, gîtes d'étapes et puits	1.250 »	350 50	Réparation de l'école de Godomey, crépissage des murs et badigeonnage.
			Totaux	14.950 »	13 634 02	
17	2	2	Autres dépenses imprévues. — Aménagement d'un champ d'aviation entre Kadjèhoun et Godomey	3.084 »	2 084 »	Aménagement d'un champ d'aviation entre Kadjèhoun et Godomey.
			Totaux	3.084 »	2.084 »	
20	2	1	Construction de ponts et de routes dans les cercles	25.200 »	24.773 50	Grosses réparations à la route de Cotonou.
			Totaux	25.200 »	24.773 50	
			Cercle de Djougou			
11	1	7	Entretien des routes et ponts	37.000 »	19.608 »	Travaux courants d'entretien des routes Djougou-Sémèrè-Djougou-Onklon sur tout leur parcours.
		8	Entretien des marchés et caravansérails	1.000 »	620 »	Entretien courant des bâtiments du marché et du caravansérail. Réfection de toiture.
		10	Entretien des cimetières	125 »	»	
		11	Réparations et transformation des Tribunaux indigènes	225 »	200 »	Travaux d'entretien divers, maçonnerie et toitures.
			Totaux	38.350 »	20.428 »	
	2	3	Construction de bâtiments pour logement de fonctionnaires	4.000 »	610 »	Construction d'un pavillon de 3 pièces avec vérandah, toiture chaume.
			Totaux	4 000 »	610 »	
20	2	1	Construction de ponts et routes nouvelles	32.000 »	16.148 »	Construction de la route de Djougou à N'bali.
			Totaux	32.000 »	16.148 »	
	6	3	Travaux divers aux postes médicaux	5.000 »	4.180 »	Construction d'un dispensaire à Djougou.
			Totaux	5.000 »	4.180 »	
			Cercle du Borgou.			
11	1	7	Entretien des routes et ponts	41.000 »	49.876 »	Entretien et amélioration des routes du cercle. Remise en état de la route Nikki, Kallé, route Guesson, Senendé. Construction d'un pont sur rivière Kala, réfection des ponts du cercle.
		8	Entretien des marchés et caravansérails	1.000 »	1.009 »	Construction d'une loge au marché de Parakou pour les bouchers. Réfection des toits des caravansérails des Subdivisions.
		9	Entretien des immeubles, gîtes d'étapes et puits	4.750 »	4.697 »	Entretien des immeubles du cercle et creusement des puits du poste. Construction d'un gîte d'étapes à Bori.
		10	Entretien des cimetières	250 »	235 »	Crépissage et blanchiement des tombes, réfection du mur d'entourage à Bembéréké.
		11	Réparation et transformation des Tribunaux indigènes	350 »	350 »	Transformation du Tribunal de Parakou. Réfection toiture, aménagement salle d'audiences. Crépissage des murs.
			Totaux	47.350 »	56.167 »	

Note: The Blue Book page (left) shows 1945 migration statistics. It also presents population and other demographic characteristics for the Uganda Protectorate broken down by province, district, and township. They are 1931 census figures because World War II prevented the colonial government from conducting their decadal census in 1941. The Compte Définitif for Benin in 1928 lists infrastructure investments by district ("cercle") concerning, among other issues, the maintenance of bridges and roads ("entretien des routes et ponts") and the construction of buildings to lodge colonial administrators ("construction de bâtiments pour logement de fonctionnaires").

Figure A.17: Colonial map of Nigeria (1948)

Note: The map shows the georeferencing process for Nigeria. It is one of several maps for each colony that include province and district borders published by the British Colonial Office. Around 80% of colonial district boundaries in the 16 colonies under study remain in place today. Districts today are often partitions of a larger colonial district, indicating their long-term relevance as organizational units of the colonial and post-colonial states.