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IFN Working Paper, No. 1234

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Suggested Citation: Bergh, Andreas; Fink, Guenther (2018) : The French curse? On the puzzling economic consequences of French colonization, IFN Working Paper, No. 1234, Research Institute of Industrial Economics (IFN), Stockholm

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IFN Working Paper No. 1234, 2018

The French Curse? On the Puzzling Economic Consequences of French Colonization

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The French Curse?

On the Puzzling Economic Consequences of French Colonization

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Abstract: More than 50 years after independence, the majority of countries in Sub-Saharan Africa remain poor with limited rates of economic growth. One of the most striking features of economic development on the sub-Saharan subcontinent is the remarkably poor performance of French colonies relative to British ones. While British and French colonies had similar GDP per capita shortly after independence, their economic trajectories have increasingly diverged, with particularly large gaps in the post-2000 period. Neither measures of human capital, geography nor measures of institutional quality appear to explain this gap, suggesting that colonialism affected deeper societal factors that are crucial for economic growth but that are not captured in standard macroeconomic variables.

Keywords: Growth, development, colonies, institutions

JEL codes: F63, O43, F54

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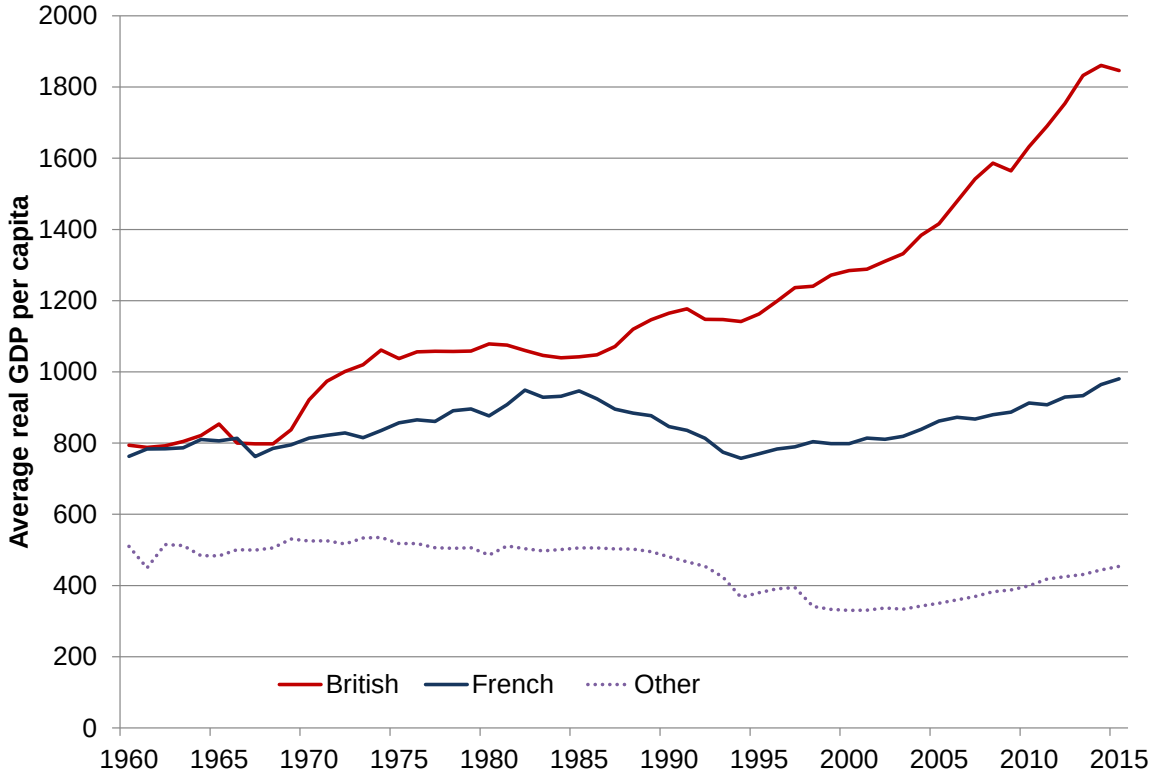
Financial support from the Swedish Research Council and Torsten Söderberg's Foundation (Bergh) is gratefully acknowledged.

Despite several years of relatively stable economic development and major improvements in key indicators targeted by the Millennium Development Goals (MDGs), most sub-Saharan African countries continue to lag behind the rest of the world with respect to income, with an estimated average per capita income of less than US$ 2000 in 2015 according to the World Development Indicators. A large literature has documented the weak economic performance of sub-Saharan countries in the decades following their colonial independence, and several factors have been identified as potentially explaining the weak economic progress including lack of human capital, low institutional quality, and challenging climatic and geographic settings (Bertocchi and Canova 2002, Grier 1999, Acemoglu et al. 2014, Sachs 2003). Empirically, all factors are highly correlated, making it difficult to identify the exact mechanisms through which colonial origin affect economic growth (Joireman 2004, Klerman et al. 2011).

One of the most striking features of economic development on the subcontinent in recent years is the increasing divergence of former French and British colonies. As of 1960, the overwhelming majority of countries on the sub-Saharan subcontinent today (48/61) was either ruled by the French or the British empires (see Figure A1 in the appendix). In terms of their income per capita, French and British colonies did not differ much before colonies became independent in the 1960s (Figure 1). This changed in the early 1970s, when average income per capita started to increase more rapidly in British colonies. Between 1975 and 1985, the difference between colonial groups seemed to slowly fade as one might have expected, but rather remarkably this convergence stopped around 1985, with gaps in economic outcomes widening ever since. Starting around the mid-1990s British colonies experienced relatively stable growth rates around 3-5% per year, while the French colonies continued to grow at rates below 2% per year on average. Overall, average income per capita more than doubled in British colonies between 1970 and 2015, while average income per capita grew by less than 25% in French colonies over the entire 45-year period.

Figure 1. Average Real GDP per capita 1960-2015 in British, French and Other Colonies.

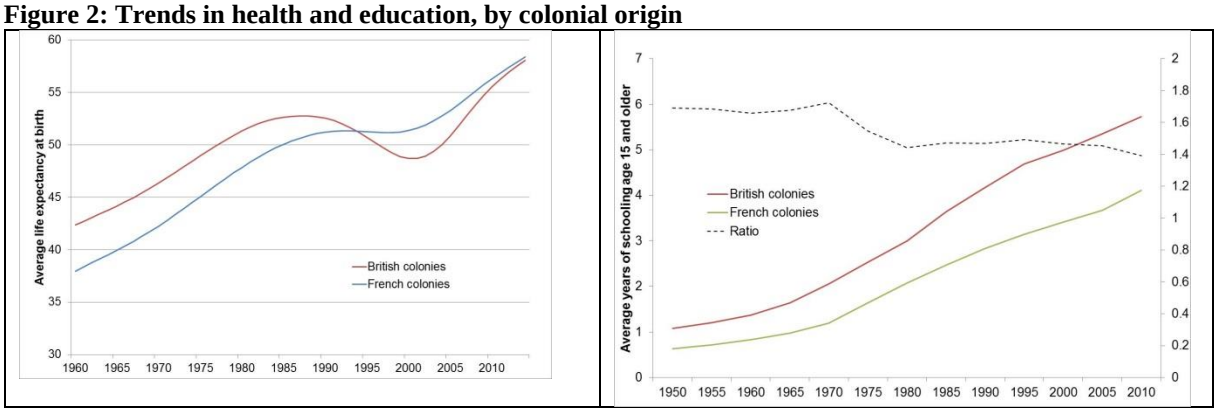


From a historical and cultural perspective, colonial powers did not only bring their own linguistic and cultural heritage with them, but also relied on a fundamentally different colonial rule. In British colonies, the use of missionary education led to higher schooling enrolment rates, population densities were higher, and the British rule of law enforced, which generally has been perceived as conducive to economic development (Bolt and Bezemer 2009, La Porta et al. 2008). French colonies generally had less independence under colonial regimes and remained more closely connected to the French government after the colonial period and received continued financial and in some cases also military support over the subsequent decades.

Given these policies, it seems plausible that British rule simply resulted in healthier and better educated populations. Empirically, the idea of overall weaker development has some but limited support: average life expectancy increased from a level around 40 years in the mid-1960s to almost 60 years in 2015 in both groups; average years of schooling increased from one to about four years in French colonies, and to almost six years in British colonies, which is rather impressive. In terms of health, French colonies were not affected as much by HIV as some of the British colonies in the 1990s and early 2000s, which explains the temporary reversal in the relative life expectancies. For human capital, absolute gaps between French and British colonies appear to have widened over time, while relative gaps (the ratio of

average schooling in UK colonies over average years of schooling in French colonies) appears to have declined.

Figure 2: Trends in health and education, by colonial origin



It is still possible, however, that education may at least partially explain the divergence. In Table 1, we use multivariable regression models to assess the potential contributions of human capital as well as a wider set of variables to this developmental gap. Given the critical importance of geography, institutions and human capital as determinants of economic growth (Acemoglu et al. 2014, Glaeser et al. 2004). we explore several measures of geography, human capital, and institutional quality to explain the recent differentials. Our core sample consists of 30 former Sub-Saharan African colonies with GDP data available for the entire 1970 to 2015 period shown in Figure A2 in the appendix. 13 of these countries were British colonies, 13 were French colonies, three were Belgian colonies, and one was a Portuguese colony. The countries in this sample gained independence between 1847 (Liberia) and 1974 (Guinea Bissau), with the overwhelming majority – 27 out of 30 countries – becoming independent between 1957 and 1968.

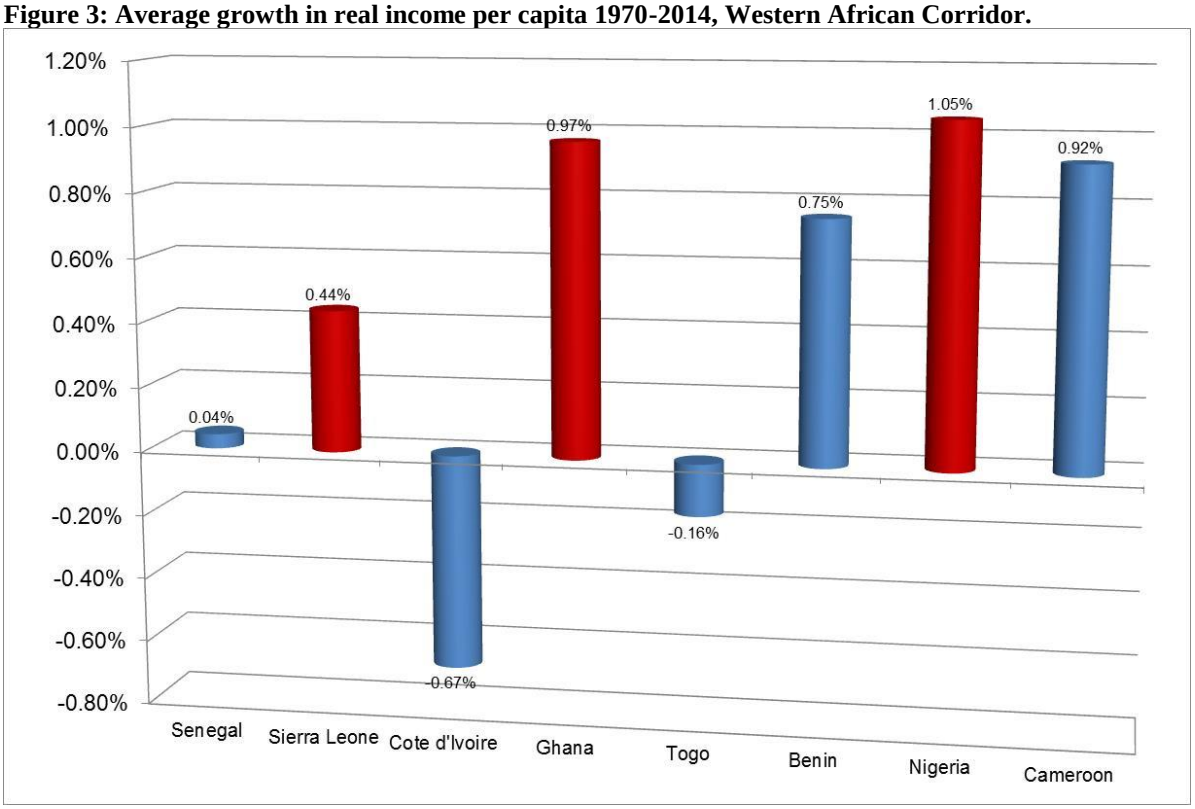
As shown in the appendix (Table A1), the only major difference between French and British colonies is significantly lower educational attainment levels for the former French colonies. Table 1 shows the results of a simple OLS growth regression of average annual growth in GDP per capita on colonial origin, initial GDP per capita (in logs), life expectancy and years of schooling in the periods 1970-2000, and 2000-2015, respectively. The effect of French colonial origin is negative but not statistically significant in the 1970-2000 period. Consistent with previous research, the negative sign of French colonial origin turns positive once controlling for education in this period (but education is far from significant). Rather remarkably, the effect of French colonization becomes much stronger in the new millennium:

for the 2000-2015 period the French colonial origin dummy is the only variable that predicts growth, with an estimated growth deficit of 1.5 percentage points per year.

In the appendix (Table A2), we explore an extensive range of institutional measures to explain these differences. In terms of the general levels of the six dimensions of institutional quality captured in the Worldbank's Worldwide Governance Indicators, Political stability and Absence of Violence is the factor with largest deficits for French colonies. Despite this, estimated growth differentials barely change when we control for this factor. Table A2 shows a series of regressions run and testing all six WGI indicators of institutions as well as the Polity 2 measure. Note that the regression does not control for human capital, which is assumed to be a link in the causal chain from institutions to development (and thus including it would tilt the results against the importance of institutions). None of the institutional quality measures appear to predict economic growth in the 2000-2015 period.

Another variable that might explain observed growth differences is geographic location. As illustrated in Figure A1, most French colonies are in Western Africa and the Sahel zone, whereas British colonies are spread somewhat more evenly across the continent. It is thus possible that British colonies could have benefitted from more favorable natural environments over all. This should not be the case on Africa's West Coast, were British and French colonies almost look randomly assigned (see Figure A3 for details). In Figure 3, which shows average growth for eight countries in the corridor sorted according to geographic location from West to East: in all cases, the UK colony (red color) outperforms the two surrounding French colonies (blue color).

Figure 3: Average growth in real income per capita 1970-2014, Western African Corridor.



Legend: Figure 2 shows average annual growth in real GDP per capita from 1970 to 2014 (percent growth per year). British colonies are colored in red, French colonies are colored in blue.

In Table 2, we show growth results for this corridor using regression models. Despite the very small sample size (n=11), the patterns observed are almost identical to those shown for the larger sample shown in Table 1. While both British and French colonies in this corridor grew very little in the 1970-2000 period, average growth was above 3% in the British colonies post-2000, while average growth in the French colonies was less than 1% per year. Once again, these differences do not appear to be driven by differences in observable variables.

In terms of the causal mechanism underlying this gap beyond institutions, one could also speculate that British colonies had better initial endowments or access to resources that French colonies do not have; this would however not be consistent with the almost identical initial GDP per capita, and also seems somewhat unlikely in the Western African corridor. In general, French and British colonies look very similar with respect to most observable characteristics except for human capital which we find does not explain the observed growth gap.

If neither human capital nor institutions nor geography explain the large and sustained differences in economic growth, what does? One potential explanation could have been

investor or donor preferences – most economies in sub-Saharan African heavily rely on foreign aid for public programs, and on foreign investment to develop their industrial sectors. One could speculate that English-speaking colonies may be more prone to receive foreign investment, or that French colonies receive less foreign aid – neither theory seems to hold true empirically – as Figure 3 shows, there is almost no difference in either type of foreign transfer: French colonies received historically slightly more development aid, but these differences have disappeared both 2000; for FDI, differences were minor throughout.

Figure 3: Foreign development assistance and foreign direct investment in British and French colonies 1980-2015

Figure 3 notes: Data extracted from World Development Indicators database on November 29th, 2017. French colonies included are Benin, Burkina Faso, Cameroon, CAR, Chad, Comoros, Congo, Rep., Cote d'Ivoire, Djibouti, Guinea, Madagascar, Mali, Mauritania, Niger, Senegal, Togo. British colonies included are Botswana, Gambia, Ghana, Kenya, Lesotho, Liberia, Malawi, Nigeria, Sierra Leone, Somalia, Sudan, Swaziland, Tanzania, Uganda, Zambia, Zimbabwe.

Having tested and dismissed the usual suspects in the macro-economic literature on long-run growth, what factors remain that could plausibly explain the divergence? As it turns out, there is a lot of qualitative evidence on the differences between British and French colonial strategies.

In 1937, British and French colonial techniques in West Africa were described in Foreign Affairs, and the first difference noted is the British model of indirect ruling, which roughly means governing Africans through their native rulers (Whittlesey 1937). In contrast, the French (and most other rulers) put their own countrymen on all important positions in the colony's administration. Consequently, the British typically left more traditional structures and institutions intact.

An interesting study of Cameroon (Lee and Schultz 2012) takes advantage of the fact that a small western part of Cameroon was once colonized by Britain, with a border that was drawn based on a hastily made agreement in March 1916. The border cuts across existing ethnic and religious boundaries and does not follow and does not follow pre-existing cultural or political

boundaries. Using a national demographic survey, they analyze the discontinuity created by the artificial boundary and show that rural areas on the British side have higher levels of wealth and local public provision of piped water. Because they find no differences for urban areas and centrally-provided public goods, they conclude that central institutions are unlikely to explain the difference. Discussing why the former British part of Cameroon had better functioning local political and social institutions, they point both to the British strategy of indirect rule and to the the presence of forced labor on the French side (the so-called prestastion). Colonial officials were often able to divert laborers for work on private farms and plantations. The use of forced labor made it harder to generate institutional trust and made it harder to overcome free rider problems when building small scale public works. In addition, the railroads that were supposed to be built in French colonies using forced labor were often not completed and did very little to improve the colonial economy. Instead, the railroads were a way to boost the spirit of the French nation, with blueprints and photographs of railways being essential to the prestige of the French empire (Starostina 2010).

Factors related to the indirect rule of the British and the use of forced labor by the French may well affect economic growth without fully captured by indices of institutional quality. It remains puzzling, however, that the gap between British and French colonies is diverging rather than closing. More research will be needed to understand the historical roots of economic systems in former colonies as well as for identifying the most effective ways for increasing the potential for future growth in French colonies as well as sub-Saharan Africa more generally.

Table 1: Growth Outcomes 1970-2000

Dependent variable	**Average annual growth in GDP per capita 1970-2000 (%)**				**Average annual growth in GDP per capita 2000-2015 (%)**				
French colony	-0.827	-0.943	-0.251	0.518	-1.508**	-1.457**	-1.526*	-1.875**	-1.452*
	(0.852)	(0.811)	(0.600)	(0.638)	(0.684)	(0.676)	(0.746)	(0.785)	(0.765)
Other colony	-1.800	-2.664**	-2.465***	-2.791***	-0.447	-0.270	-0.317	0.500	-0.468
	(1.231)	(1.051)	(0.863)	(0.753)	(1.138)	(1.215)	(1.271)	(1.571)	(1.295)
Ln initial GDP/capita		-1.557**	-2.330***	-2.764***		0.161	0.147	0.415	0.219
		(0.600)	(0.565)	(0.596)		(0.354)	(0.383)	(0.479)	(0.421)
Initial life expectancy			0.210***	0.206**			0.0191	0.0602	0.0269
			(0.0704)	(0.0880)			(0.0872)	(0.0896)	(0.0832)
Initial years of schooling				0.457				-0.0672	
				(0.411)				(0.264)	
Political stability									-0.219
									(0.383)
Constant	0.579	10.98**	6.402**	8.422**	2.694***	1.589	0.756	-2.909	-0.281
	(0.777)	(3.984)	(2.958)	(3.410)	(0.566)	(2.473)	(4.541)	(5.376)	(4.353)
Observations	30	30	30	25	30	30	30	25	30
R-squared	0.082	0.242	0.504	0.593	0.151	0.154	0.156	0.254	0.165

Table 2: Growth Outcomes in Western African Countries 1970-2000

Dependent variable	**Average annual growth in GDP per capita 1970-2000 (%)**				**Average annual growth in GDP per capita 2000-2015 (%)**				
French colony	0.415	0.474	0.297	0.581	-2.656**	-2.752**	-2.493	-1.765	-2.597*
	(0.550)	(0.521)	(0.410)	(0.644)	(1.145)	(1.080)	(1.315)	(1.625)	(1.274)
Other colony	0.611	0.281	0.126		-2.460*	-2.133	-1.911		-1.857
	(0.407)	(0.651)	(0.560)		(1.132)	(1.317)	(1.343)		(1.374)
Initial ln GDP per capita		-0.656	-0.860	-1.303*		1.024	1.198	-0.0788	1.178
		(0.511)	(0.536)	(0.492)		(0.910)	(0.950)	(1.267)	(1.003)
Initial life expectancy			0.0687	0.0620			-0.0848	-0.0713	-0.0309
			(0.0605)	(0.0785)			(0.109)	(0.108)	(0.115)
Initial years of schooling				0.204				0.424	
				(0.324)				(0.505)	
Initial political stability									-0.452
									(0.812)
Constant	-0.513	3.877	2.442	5.166	3.316**	-3.380	-0.321	5.264	-3.250
	(0.407)	(3.738)	(4.147)	(2.675)	(1.132)	(6.700)	(5.182)	(8.744)	(8.330)
Observations	10	10	10	8	11	11	11	8	11
R-squared	0.108	0.291	0.427	0.446	0.529	0.593	0.653	0.570	0.676

Notes: French colonies are Benin, Burkina Faso, Cameroon, Cote d'Ivoire, Senegal and Togo. British colonies are Gambia. Ghana. Liberia. Sierra Leone. Robust standard errors in parentheses.

Table A1. Income, health, institutional quality and human capital for former French, British and other colonies.

	French			British			Other			H0: UK=France	H0: All 3 equal
	Mean	*Min*	*Max*	*Mean*	*Min*	*Max*	*Mean*	*Min*	*Max*	*p-value*	*p-value*
Real GDP per capita 1970	851	274	1887	922	299	1621	525	265	1016	0.716	0.152
Real GDP per capita 2000	814	326	2453	1284	341	4931	330	216	502	0.242	0.004
Real GDP per capita 2015	981	292	3163	1846	367	7080	454	207	690	0.141	0.012
Life expectancy	55.1	46.4	62.0	52.9	45.3	60.7	54.6	53.1	57.1	0.297	0.537
Under-5 mortality	122.5	74.8	169.1	106.2	63.9	184.5	120.1	99.0	134.9	0.205	0.376
Rule of law	-0.8	-1.5	-0.2	-0.7	-1.7	0.6	-1.2	-1.7	-0.6	0.465	0.148
Voice and accountability	-0.7	-1.3	0.2	-0.6	-1.7	0.5	-1.2	-1.5	-0.9	0.659	0.012
Regulatory quality	-0.7	-1.2	-0.2	-0.7	-1.9	0.6	-1.0	-1.5	-0.4	0.986	0.283
Political stability and absence of violence	-0.8	-2.1	0.2	-0.5	-2.4	1.0	-1.1	-2.2	-0.2	0.268	0.344
Government effectivness	-0.9	-1.5	-0.3	-0.7	-1.4	0.5	-1.1	-1.7	-0.3	0.298	0.378
Control of corruption	-0.7	-1.3	-0.3	-0.6	-1.3	0.9	-0.9	-1.4	0.1	0.452	0.639
Years of schooling 2000	3.4	1.2	5.7	5.0	2.6	8.8	3.1	2.6	3.4	0.053	0.018
Years of schooling 2010	4.2	1.9	6.2	5.7	3.2	9.6	3.8	3.3	4.4	0.043	0.016

Notes: French colonies are Benin. Burkina Faso. Cameroon. Central African Republic. Chad. Congo. Cote d'Ivoire. Madagascar. Mali. Mauritania. Niger. Senegal. Togo. British colonies are Botswana. Gambia. Ghana. Kenya. Lesotho. Liberia. Malawi. Nigeria. Sierra Leone. Sudan. Swaziland. Zambia. Zimbabwe. Other colonies are Burundi (Belgium). Congo DRC (Belgium). Guinea-Bissau (Portugal) and Rwanda (Belgium).

Table A2: Alternative measures of institutional quality

Dependent variable	**Average annual growth in GDP per capita 2000-2015 (%)**					
	(1)	(2)	(3)	(4)	(5)	(6)
French colony	-1.471**	-1.457**	-1.539**	-1.463**	-1.466**	-1.410**
	(0.685)	(0.668)	(0.659)	(0.693)	(0.682)	(0.673)
Other colony	-0.0786	-0.272	-0.0211	-0.136	-0.136	-0.314
	(1.346)	(1.321)	(1.428)	(1.263)	(1.281)	(1.206)
Ln(Initial ln GDP per capita)	0.0846	0.162	0.0562	-0.0138	0.0224	0.119
	(0.423)	(0.359)	(0.461)	(0.441)	(0.455)	(0.378)
Rule of law (year 2000)	0.335					
	(0.593)					
Voice and accountability (year 2000)		-0.00335				
		(0.404)				
Regulatory quality (year 2000)			0.467			
			(0.792)			
Government effectiveness (year 2000)				0.543		
				(0.586)		
Control of corruption (year 2000)					0.594	
					(0.762)	
Polity 2 Index (year 2000)						-0.0412
						(0.0574)
Constant	2.363	1.585	2.602	3.158	2.877	1.879
	(3.103)	(2.453)	(3.373)	(3.211)	(3.279)	(2.667)
Observations	30	30	30	30	30	30
R-squared	0.164	0.154	0.169	0.173	0.172	0.165

Notes: French colonies are Benin. Burkina Faso. Cameroon. Central African Republic. Chad. Congo. Cote d'Ivoire. Madagascar. Mali. Mauritania. Niger. Senegal. Togo. British colonies are Botswana. Gambia. Ghana. Kenya. Lesotho. Liberia. Malawi. Nigeria. Sierra Leone. Sudan. Swaziland. Zambia. Zimbabwe. Other colonies are Burundi (Belgium). Congo DRC (Belgium). Guinea-Bissau (Portugal) and Rwanda (Belgium).

Figure A1: Colonial powers in Sub-Saharan Africa

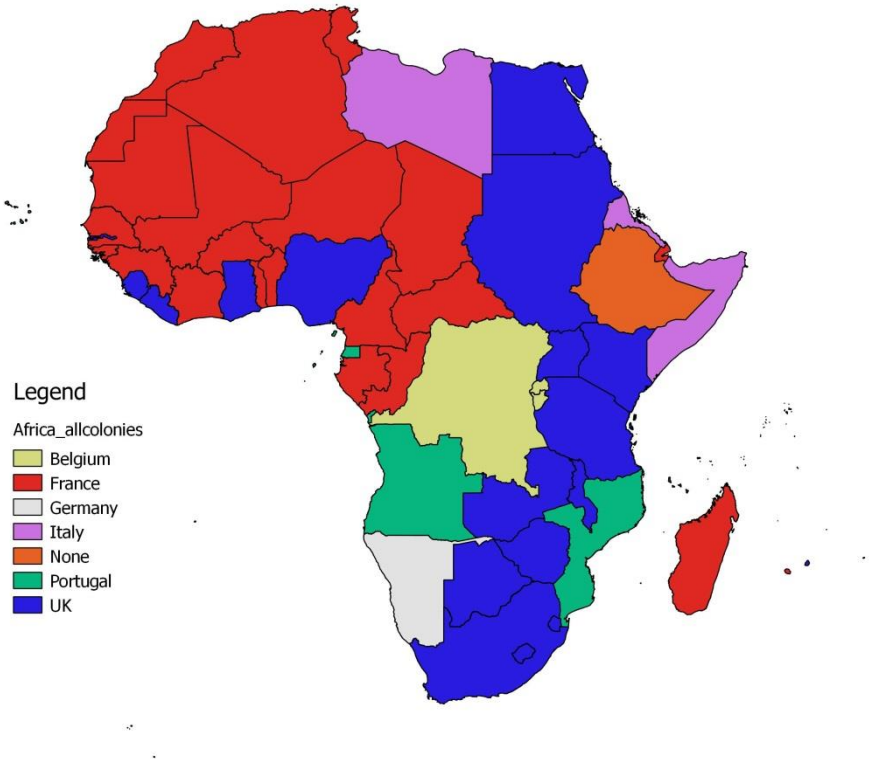


Figure A2: Map of countries in main sample

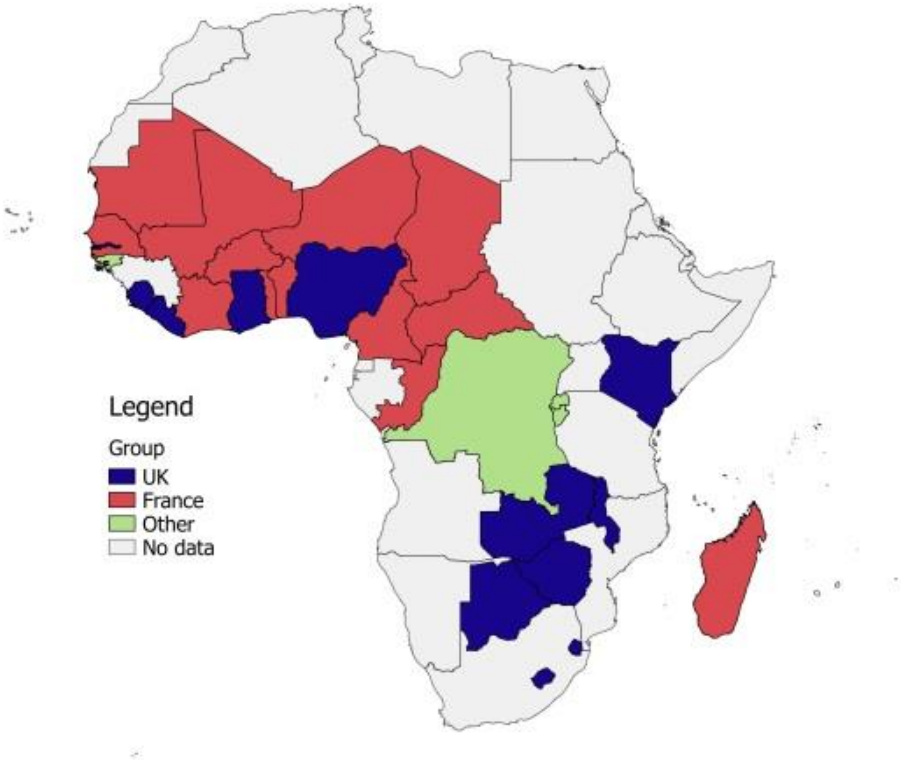
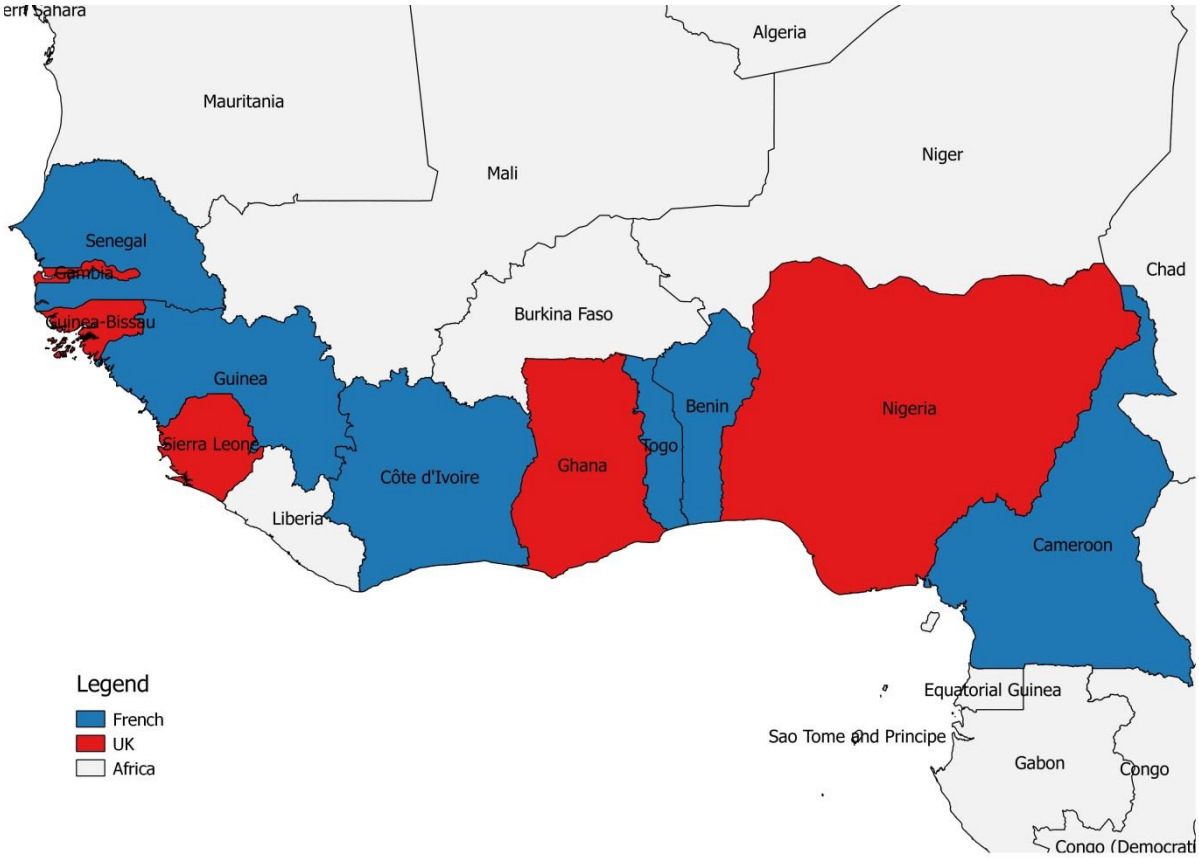


Figure A3: Map of Western African Coast Colonial Countries



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