

# The origins of formal education in sub-Saharan Africa: was British rule more benign?

EWOUT H. P. FRANKEMA

*Humanities, Utrecht University, The Netherlands, e.frankema@uu.nl*

British colonial rule has often been praised for its comparatively benign features, such as its support of local educational development. This study argues that the impact of British educational policies and investments on the *supply* of schooling in British Africa should not be overstated. Until 1940, mission schools, mainly run by African converts, provided the bulk of education at extremely low costs. Given the limited financial capacity of missionary societies, the *Africanization* of the mission was a prerequisite for rising enrolment rates and this only occurred in areas where the *demand* for Western education was high. The British happened to control most of these “fertile” areas.

## 1. Introduction

Metropolitan identity is an oft-cited determinant of comparative colonial development. The consensus holds that British colonial rule was less repressive and more supportive of long-term development goals than the rule of its European contenders. Notable scholars have lauded the classical virtues of liberal political and economic institutions, which are supposed to have set the spirit of the “British World Order” apart from other imperial philosophies (North 1989; Landes 1998; Ferguson 2002). Empirical studies have presented evidence that British rule has a positive correlation with the quality of present-day government institutions (La Porta et al. 1999), post-colonial levels of capital investment, and post-colonial rates of economic growth (Grier 1999; Bertocchi and Canova 2002).

Education is a major aspect of the supposedly “benign” British legacy. This has not only been argued for the Americas (Mariscal and Sokoloff 2000) and Asia (Booth 2003), but also for sub-Saharan Africa, where school enrolment rates in British colonies were considerably higher than in the French, Spanish, and Portuguese territories on the eve of independence (Benavot and Riddle 1988; Brown 2000). The “British legacy” is still observable. Bolt and Bezemer (2009) have argued that colonial education is the key to explaining long-run growth disparities in Africa and that the former British colonies grew faster as a result of their educational lead. Lloyd et al. (2000) have shown that the transition from high to low fertility rates has only been completed in five sub-Saharan African countries, all of which are former British colonies with relatively high educational standards (Ghana, Botswana, Zimbabwe, Kenya, and South Africa).

This study does not question the educational lead of British African colonies nor its long-term effects. This study investigates the extent to which the British legacy can be attributed to deliberate educational policies in the first place. My departure point is the observation that school enrolment rates *within* British Africa varied at least as much as those between British and non-British African colonies. Previous studies focusing on the link between metropolitan identity and educational outcomes have largely ignored the *within-group* inequality. However,

if British “developmental” policies were successful in boosting primary-school enrolment rates in some places, then why not everywhere?

Presenting new estimates of colonial school enrolment rates and educational investment based on data from the British colonial blue books, this study shows that British financial support to African education was unimpressive until the Second World War. Only after 1940 were British educational policies backed up by the material, administrative, and institutional resources necessary to achieve more ambitious enrolment targets, but the same was true in French, Belgian, or Portuguese Africa. Prior to 1940, the involvement of Christian missions explains nearly all of the variation in enrolment rates. The overarching motivation for missionary interest in Africa was to pave the way for God’s kingdom on earth by converting and saving as many souls as possible. Christian education was effective in leading indigenous people into the Christian faith and essential to raise the number of converts over time, because educated converts helped spread the Christian message in the local vernacular.

On the whole, the British tended to offer a better climate for missionary work to various denominations, and this work stimulated denominational competition and, consequently, the supply of missionary schooling. However, when exploring the origins of formal education in Africa in a supply and demand framework, it appears that the large variation in missionary settlement patterns *within* British Africa must be attributed to local conditions affecting the African demand for, and reception of, Western education. A proper understanding of variations in human capital accumulation in sub-Saharan Africa, therefore, requires a reconsideration of the role of native African agency and a de-emphasis of the metropolitan policy impact. Taking the data to a multivariate regression framework reveals that the British controlled more of the “fertile” territories, and that this explains the major part of the “benign” British legacy.

## 2. Varying perspectives on colonial educational legacies

The inter-generational transmission of agricultural knowledge and production skills forms the cornerstone of human survival in fragile ecological environments (Illife 2007). In various ways, African communities organized the transfer of knowledge before colonial intervention. Most often, knowledge was transferred in the informal spheres of the extended family, the tribal network, or the farmer’s village community. “Formal education” differed in the sense that children (and adults) congregated according to a predetermined weekly schedule in a classroom setting to engage in prescribed curricular activities. Formal education in Africa thus adhered to the organizational principles of Western education and gained popularity during the colonial era. Formal education differed because of its non-vocational approach, focusing on the acquisition of reading and writing abilities instead of learning on the job. Formal education accumulates the “propositional knowledge” required to grasp the mechanisms underlying certain techniques, practices, or processes, that is, “prescriptive knowledge”. In the short-run formal education was not necessarily more rewarding than the prevalent indigenous forms of education, nor did the former replace the latter, but it initiated a long-run trajectory towards universal primary schooling, which is why the literature has paid ample attention to colonial educational legacies in Africa.

For the assessment of these legacies, scholars have relied mainly on primary-school enrolment rates in the late colonial period (Brown 2000; Lloyd et al. 2000; Bertocchi and Canova 2002; Cogneau 2003; Bolt and Bezemer 2009). Figure 1 shows the primary-school enrolment rates (age five to fourteen) of forty-two African countries in 1950, subdivided into

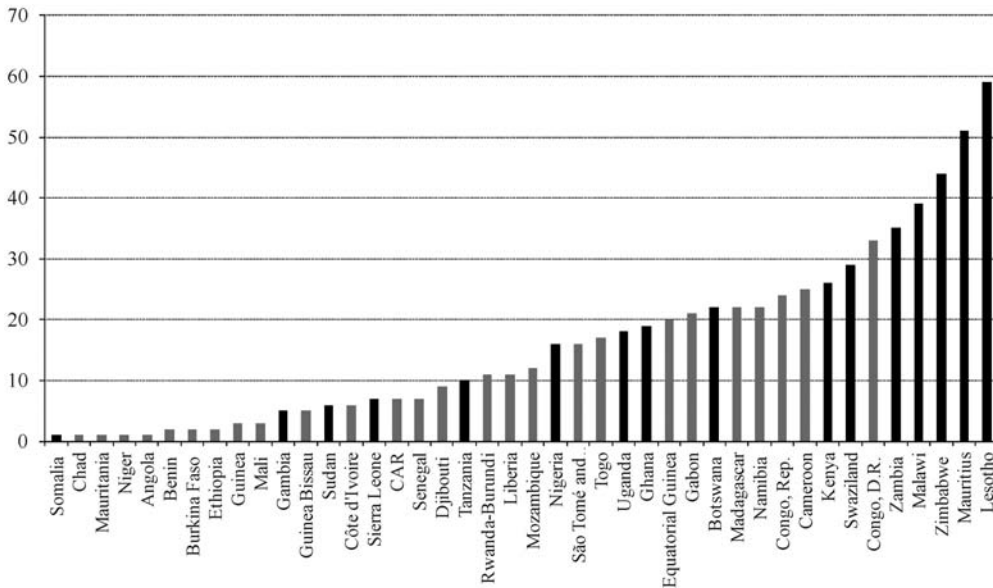


Figure 1. Gross primary-school enrolment rates (age 5–14) subdivided by British (black) and non-British (grey) African colonies, 1950. Source: UNESCO, *Statistical Yearbook 1964*, table 9.

British- and non-British-ruled territories (for details see online Supplementary material, table A2). The figure illustrates the variation in enrolment rates and shows that the British African colonies were, on average, much better off: their un-weighted average enrolment rate of 24.2 was considerably higher than the French (9.4) or Portuguese (8.5) average.

Conventional explanations for the gap between the British and non-British colonies focus on colonial policy effects. The main argument is that the British chose to “outsource” most of the education to private voluntary agencies, in particular the Protestant, Anglican, and Catholic missionary societies, while the French opted for public schools financed and controlled by the colonial government. These different approaches, among others, have been attributed to British pragmatism and French anti-clerical sentiments (Subramanian 1979). In their attempt to keep state and church separated, the French restricted the activities of Christian missions, and especially non-Catholic missions, while the British welcomed missionaries of all denominations to support their system of indirect rule.

Cogneau and Moradi (2011) offer compelling evidence that the post-World War division of German Togoland among the French and the British resulted in diverging educational development trajectories at on both sides of the border, as the French started to shut down missionary schools, while the British promoted them. Consequently, primary-school enrolment rates in French West Africa (3.6 percent) were roughly half of that of British West Africa (7.1 percent) in 1938, whereas the average government expense per student was considerably higher in the French colonies: an estimated £1.63–2.44 versus £0.92.<sup>1</sup> These spending patterns show the larger financial involvement, but lesser effectiveness of the French in

<sup>1</sup> Because the French franc was undervalued in the late 1930s, I constructed a rough education expenditure purchasing power parity (PPP) based on accounts of annual teacher salaries. These ranged between 12,000 and 18,000

developing mass education. A liberal attitude regarding missionary settlement enabled the British to expand local enrolment rates without burdening tight colonial budgets.<sup>2</sup>

The French are also said to have neglected the development of primary education at the expense of higher education because they were primarily interested in training an indigenous elite to be employed as professional administrators. The British paid more attention to primary education because they considered higher education as a potential fertilizer of anti-colonial sentiment (Crowder 1970; Debeauvais 1964). In line with their imperial philosophy of *assimilation*, French government schools adopted the French curriculum and language of instruction. The British, instead, supported the use of the vernacular. The question remains to what extent these “formal policy” differences truly made a difference. Lewis has pointed out that mission schools in French Africa often neglected the language rules by adopting the vernacular. After all, missionaries were involved in a global competition for new church members and not primarily interested in the creation of overseas “Frenchmen” (Lewis 1970, p. 175). In British Africa, missionary schools often switched to English in response to the preferences of African students (and their parents), who believed using English would enhance their social and economic qualifications.

However, more important is the observation that British educational policies were not effective everywhere: in 1950, gross primary-school enrolment rates *within* British Africa ranged from a minimum of 1 percent in British Somaliland to a maximum of 59 percent in Lesotho (Basutoland), which leaves much more to explain than just the enrolment differences *between* metropolitan powers. For an accurate understanding of the variation in enrolment rates, noting that the gap between British and non-British Africa was established *prior to 1940* and did *not* further widen during the two decades thereafter, when all colonial powers started to increase public investments in mass education, is important. The average 11 percentage point rise in British African enrolment rates between 1938 and 1960 was actually a bit smaller than elsewhere (see online Supplementary material, table A2). In other words, the British lead in African education was mainly due to the higher rate of missionary activity prior to 1940, rather than more effective educational investment policies thereafter.

The pre-1940 differences in enrolment rates were nevertheless important, because the differences persisted for a long time and still correlate ( $R^2 = 0.64$ ) with present-day literacy rates, as illustrated by figure 2.<sup>3</sup> This correlation endorses the argument of Callego and Woodberry (2010) that current educational performances are significantly better in former British colonies where Protestant and Catholic missions were allowed to compete on equal terms, in contrast to the French, Belgians, Spanish, and Portuguese, who restricted entry to Protestant missionaries.

But the problem remains that the emphasis on metropolitan policy differences confines the explanation of educational development variety to supply-side factors. Callego and Woodberry treat variation in demand-side factors as a set of “control variables” in their

---

French francs against 100–150 British pounds: a FFR/£ rate of 80–120 to 1. The exchange rate was 170 to 1 in 1938, coming from 74 to 1 in 1935. *Source*: Online Supplementary material, table A1.

<sup>2</sup> Public schools in French West Africa may have maintained higher-quality standards than mission schools in British West Africa. Modern survey data suggest that literacy in former French colonies is achieved with fewer years of schooling, testifying to higher quality standards (Mingat and Suchaut 2000).

<sup>3</sup> Nunn (2010) found a comparable long-term relationship between early missionary presence (around 1923) and present-day Christian self-identification. Huillery (2011) found long-term persistent effects of private and public investments in French West Africa.

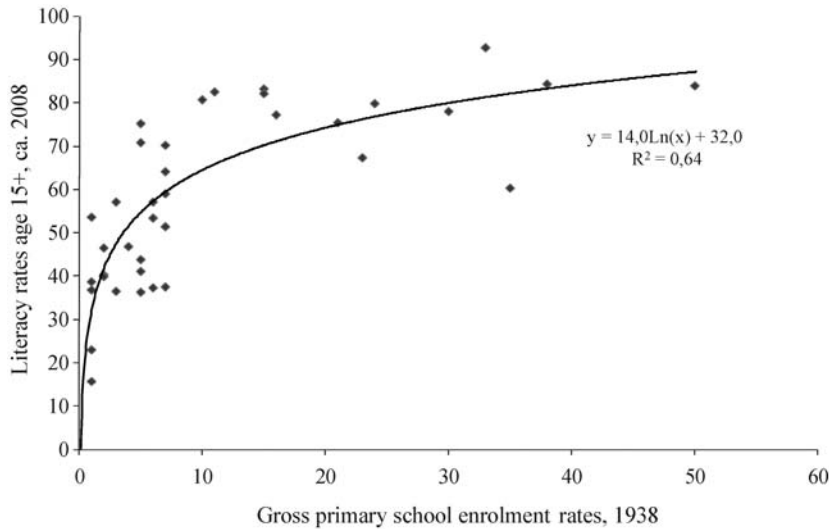


Figure 2. Scatter plot of gross primary-school enrolment rates in 1938 (age 5–14) and literacy rates in 2008 (age 15+), 40 African countries.

Sources: Online Supplementary material, table A1; literacy rates from UNESCO, Institute for Statistics, Data Centre: <http://stats.uis.unesco.org/> (accessed 01-04-2011).

regression analyses (2010, pp. 314–321), creating surprising flaws. For instance, the role of Islam in the indigenous demand for Western/Christian education is completely neglected, despite overwhelming evidence of Muslim resistance against Christian conversion practices affecting colonial policies (Debeauvais 1964; Daun 2000). The governor of Nigeria, Frederick Lugard, prohibited the establishment of Christian missions in Northern Nigeria, because he did not want to risk the destabilization of a well-functioning system of indirect rule via Muslim chiefs (Sutton 1965, p. 64). The French colonies *outside* the Islamic heartlands achieved far higher enrolment rates than any of the British African colonies *within* this area. In 1938 French-ruled Madagascar had a primary-school enrolment rate of 14 percent and French Cameroon 21 percent, much higher than the 7.6 percent in British West Africa, and far higher than the 1 percent in British Somaliland or Sudan. In Madagascar and Cameroon, missionaries of various denominations supplied a significant part of schooling. In 1925, 299 foreign Protestant missionaries were active in Madagascar, more than three times as many per head of the population as in the British Gold Coast (Beach and Fahs 1925).

In sum, conventional explanations of African educational development focusing on metropolitan policy differences highlight the ideologies and practices of European policymakers and Western missionary societies, but tend to neglect the existence of African agency. I will argue in the following sections that African agency is key to understanding the great wave of missionary school expansion during the first half of the twentieth century.

### 3. Educational development in British Africa, 1830–2000

To appreciate the role of African agency, we concentrate on educational development patterns *within* British Africa, thus controlling for metropolitan policy differences. For this

purpose, I constructed a new dataset of primary-school enrolment rates for the period 1830–1990 (see online Supplementary material table A3). The enrolment data before 1950 are collected from annual colonial blue books, which provide detailed accounts of the number of children (and adults) enrolled in government and mission schools and, in most cases, offer data on Islamic schools. Inadequate population census data complicate the computation of historical enrolment rates for sub-Saharan Africa. African demographers widely agree that the colonial censuses underestimate the African population (Manning 2010).

This problem was addressed by extrapolating 1950 benchmark-estimates on the basis of the hypothetical growth rates recently provided by Manning (2010), who draws an analogy with demographic growth trends on the Indian subcontinent. This method should improve the estimates of Benavot and Riddle who relied on official census data reported by Mitchell (Benavot and Riddle 1988; Mitchell 2007). Estimating the population share of the age group five to fourteen, I followed Benavot and Riddle's (1988, p. 199) estimate of 22–27 percent in less developed countries. Given the lack of age distribution data for colonial Africa, a 25 percent share was applied in all cases. A comparison with the UNESCO school-enrolment data (age five to fourteen) for 1950 offers a reliability check.<sup>4</sup>

This dataset shows three things. First, enrolment rates already varied *before* the scramble for Africa had begun. In colonies such as Kenya and Nigeria, enrolment rates were close to zero in the late nineteenth century, whereas in Mauritius the primary-school enrolment rate was around 20 percent.<sup>5</sup> The coastal colony of Freetown (Sierra Leone) even obtained enrolment rates between 60 and 80 percent during the second half of the nineteenth century! Secondly, primary-school enrolment rates increased exponentially *after* the consolidation of British rule in the late nineteenth century. Thirdly, a pronounced geographical distribution appeared in enrolment levels: educational expansion in the Northern parts of sub-Saharan Africa was far less impressive than in the Central to Southern parts of the continent. Importantly, this pattern holds for British and non-British colonies. Christian missions were almost exclusively responsible for the diverging trajectories in British Africa. Table 1 shows the total number of students on the roll in mission schools and their estimated percentage share in total enrolment around 1900 and 1938. Mission schools provided for more than 95 percent of the total rise in primary-school enrolment.<sup>6</sup>

The term “mission school” may raise the impression of an institution run by male, European, ordained pastors or priests in isolated areas across the African tropics, but this stereotypical image is misleading. As missionary societies started to increase their activities in Africa, much work (religious ceremonies and services, schooling, medical care, etc.) was performed by African converts, not by foreigner missionaries. During 1903 and 1925, seven out of eight official staff members in the Protestant missions were African (Beach and Fahs 1925). In the mission schools, the ratios were even more skewed. In Uganda in 1938, for instance, 8,456 African teachers taught in primary schools. The 285 European teachers constituted barely 3 percent of the total number of primary-school teachers.<sup>7</sup>

<sup>4</sup> UNESCO adopted official school-age-based enrolment rates in the 1960s (*Statistical Yearbook*, various issues).

<sup>5</sup> This relates to the age group five to fourteen. School-age-based (5–10 years) enrolment rates were about 40 percent higher.

<sup>6</sup> Mauritius was the only colony where government schools had a market share of 40 to 50 percent. In view of Mauritius' spectacular post-colonial economic performance, a discussion of the causes and consequences of this outlier status is interesting, but beyond the scope of this study.

<sup>7</sup> Data were taken from the *Blue Book of the Uganda Protectorate* (1938).



Table 1. *The share of mission schools in total enrolment in British Africa, ca. 1900 and 1938*

	No. enrolled in mission schools		Share in total enrolment (%)	
	ca. 1900	ca. 1938	ca. 1900	ca. 1938
Sierra Leone	10,697 <sup>a</sup>	20,372	99.6	92.8
Gold Coast	11,158	62,228	87.2	83.0
Nigeria, Southern	59,002*	266,342	91.1	97
Mauritius	9,635	24,607	50.6	61.6
Uganda	11,954 <sup>a</sup>	267,837	100	98.9
Nyasaland	61,091 <sup>a</sup>	206,202	100	99.9
Kenya	2,432	129,101	100	92.2
Tanganyika		66,753		85.6
N. Rhodesia	2,400 <sup>a</sup>	122,312	100	99.2
S. Rhodesia		ns		ns
Bechuanaland	2,236	14,239	100	98.4
Total/weighted average	170,638	1,179,993	93.3	95.5

Source: Online Supplementary material, table A1.

Notes: <sup>a</sup>Sierra Leone 1890, Southern Nigeria 1914, Uganda 1905, Nyasaland 1905. The figure for Northern and Southern Rhodesia in 1900 is a guesstimate for the combined territories of Rhodesia.

That mission school expansion was more of an African, rather than a Western, undertaking has often been disregarded in conventional explanations of African educational development. In fact, the *Africanization* of the mission was an absolute prerequisite for the scale of enrolment expansion witnessed before 1940. The success of the missionary effort did not depend on a passive acceptance by Africans of Western culture and religious values—Africans taking the *initiative* to spread the gospel and develop the infrastructure needed for the communication of the Christian message was crucial to the missionaries.

In a similar vein, it is important to note that the costs of these activities were not primarily borne by European or American church members. Mission schools were financed by a combination of sources. Missionary funds were initially generated in the homeland countries of the larger missionary societies (that is, the US, the UK, France, Italy, the Netherlands, Germany, Switzerland, and Sweden), but missionaries increasingly depended on the contributions of African converts. Colonial government expenditures, which were assigned at the central state-level and partly re-allocated to local native administrations, were paid from native tax money. Private and communal school fees paid by African parents, parishes, or villages constituted a substantial part of the mission-school budget, especially if one considers that the construction and operation of mission stations was often taken care of by un(der)paid community members (Oliver 1962, pp. 52–53). The so-called African “bush-schools”, ungraded village schools that were spontaneously set up by village communities in many parts of Central and Southern Africa, usually had to finance the project entirely on their own.

The relative contributions of the church, the state, and the local community to a mission school varied from region to region. On the basis of more detailed accounts of missionary school expenses, the contribution of the Nyasaland government more than likely did not exceed 8 percent of the total primary-school expenses around 1938. In Uganda, the contributions to the missionary societies accounted for 20–30 percent of the total reported costs. In the relatively rich Gold Coast colony, approximately two-thirds of the total missionary education expenses were covered by grants-in-aid from the government, while another

30 percent was covered by school fees: missionary home funds only filled some gaps; African tax payers provided the bulk.

Table 2 presents colonial government educational expenditures per person enrolled between 1900 and 1950. The figures are presented in constant British pounds of 1910, based on a price index of British public services from Feinstein (1972, p. T132). The data have been retrieved from the annual accounts of government revenue and expenditure as published in the colonial blue books and includes expenses on the education department (central administration), on government schools, and the subsidies (so-called “grants-in-aid”) to missionary schools.

The table shows vast differences in the financial support of British colonial governments throughout the period 1870–1950. Until the mid-1920s, the colonial governments in East and Central British Africa hardly spent a single penny on education. In Nyasaland, for instance, the government spent £1,000 in 1913, which was raised to £2,000 in 1921, in response to post-war inflation. In 1926, after the appearance of two authoritative reports on the state of education in British Africa by the Phelps-Stokes committee and ensuing decrees from the colonial office in London to raise education budgets (Windel 2009), the Nyasaland government increased its education budget to £21,500 in 1938. However, this increase was still under two shillings per student, and comparable with the amount the Gold Coast government spent in the 1880s. The Gold Coast government spent £3.99 (current value) per student enrolled in 1929, about 40 times as much as the Nyasaland government!

Figure 3 shows that no clear relationship existed between colonial government spending on education and enrolment rates in British Africa before 1940. The size of the education budget depended primarily on the size of the total government budget, which was large in the successful exporting economies of Mauritius and the Gold Coast (Frankema 2011a) and much smaller in the “peripheral” colonies. Nevertheless, with the notable exception of Mauritius, the financial resources that were made available were insufficient to have a big effect on primary-school enrolment rates. The voluntary missionary effort of Africans made the difference.

Table 2. *Central government expenditure per person enrolled in primary education, in constant £1910*

	1900	1910	1920	1929	1938	1950
Sierra Leone	0.51	0.78	0.98	1.60	0.99	1.45
Gold Coast	0.53	0.90	0.64	2.15	1.47	
Nigeria	0.92	0.76	0.28	0.38	0.30	
Mauritius	1.76	1.89	1.65	1.95	1.41	
Uganda	0.00	0.05	0.03	0.13	0.20	0.49
Nyasaland	0.00	0.00	0.00	0.05	0.06	
Kenya	0.00	0.80		0.98	0.73	1.12
Tanganyika					0.66	0.98
N. Rhodesia			0.05	0.08	0.17	0.44
European educ.			10.68	18.23	15.92	9.73
African educ.			0.00	0.03	0.14	0.22
Bechuanaland	0.30	0.53	0.21	0.32	0.26	0.58

Source: Online Supplementary material, table A1.



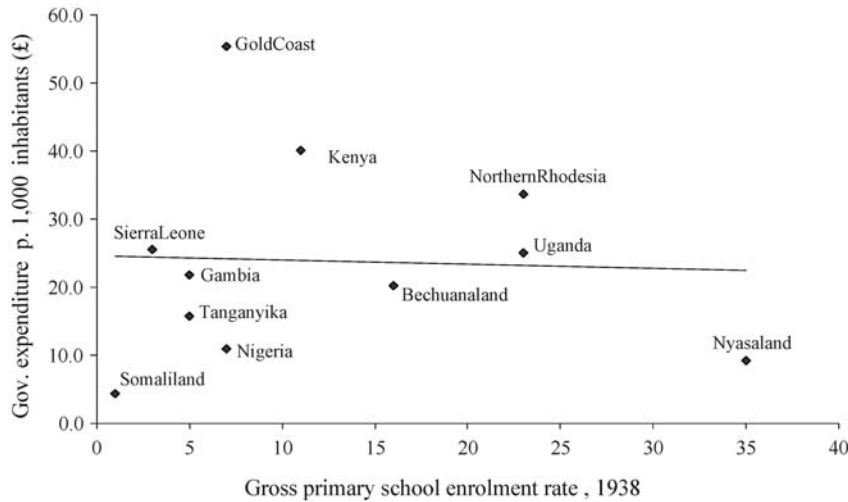


Figure 3. Scatter plot of gross primary-school enrolment rates (age 5–14) and government education expenditure per capita (current £) in British Africa, 1938.

Source: Online Supplementary material, table A1.

Notes: The scatter plot excludes Mauritius (outlier) and Lesotho, Sudan, Swaziland, and Southern Rhodesia for lack of expenditure data.

The expansion of missionary education between 1900 and 1940 would have been financially impossible without the contribution of African teachers. Teacher salaries comprised most of the education budget, and European teachers commanded payments 50–100 times the salary or subsidy paid to a native teaching assistant or African village school teacher. That Catholic missionary societies sent more European teachers than Protestant societies was also largely a financial issue. Celibacy enabled Catholic missionary societies to recruit young priests prepared to run a mission station while sharing the poor living conditions of the local community. Protestant missionaries more often adopted a lifestyle requiring higher salaries. As Oliver put it:

The European parish priest of the Universities mission, living beside his church in a house of mud and thatch without wood in the doorways or glass in the windows, often quite alone and without speaking English for weeks on end, represented indeed the very extreme of missionary assimilation to the environment. At other Protestant stations missionaries lived in comfortable bungalows set in spacious gardens [...] They travelled in motor-cars, albeit old ones. Their wives and families necessitated large domestic staffs and regular visits to Europe. (Oliver 1962, p. 242)

Consequently, the largest Protestant mission in Uganda, the Church Missionary Society, serviced a little over half of all primary school students in the late 1920s (some 100,000 students) with a European staff of 30–40 teachers (approximately 2 percent of the total). The Catholic missions servicing the other half, that is, the White Fathers (French), the Mill Hill (British), and the Verona Fathers (Italian), had about 260–290 European teachers in the field.

For the boards of the missionary societies, quantity was all that counted. Ungraded Christian village schools were often run by a single-native teacher, who taught students of

Table 3. *Government expenses and student–teacher ratios in European and African schools in (semi-)settler colonies, ca. 1938*

	year	Government expenses per student (current £)		Average no. of students per teacher	
		European	African	European	African
Kenya	1938	18.87	0.42	15.1	38.6
Northern Rhodesia	1938	30.21	0.27		
Southern Rhodesia	1936			21.0	46.3
Tanzania	1938	12.38	1.02		
Nyasaland	1938	20.99	0.22	11.2	
Bechuanaland	1938	34.35	0.98	11.6	58.9

Source: Online Supplementary material, table A1.

varying ages. In Southern Rhodesia, 54 percent of primary schools were run by one person, and another 34 percent by two in 1943. In Uganda the average class size was estimated at 31 students in 1938, but the ungraded schools of the Protestant missions in Buganda had an average of 65 students per teacher.<sup>8</sup> The allocation of government fund in African settler colonies, where European schools were erected alongside the indigenous schools, puts the “British approach” to colonial education in its proper perspective. Table 3 shows the results of a comparison of balance sheets of separate European and African schools in six colonies with a smaller or larger settled European minority. The table shows that approximately 2.5 percent of the children of European origin absorbed about one-third (32.1 percent) of the total government budget for education. Africans were subsidizing European children via native tax schemes (Frankema 2010, 2011a). Indeed, British education policies were not so “benign” up to 1940. Above all, they were extremely cheap.

#### 4. Diverging patterns of mission school expansion in British Africa: Sierra Leone and Uganda

A comparison of mission school expansion in Sierra Leone and Uganda illuminates some of the key factors for the diverging educational trajectories *within* British Africa. Figure 3 shows that educational expenditures per student in 1938 were virtually identical in both colonies. Hence, the huge gap in enrolment rates between Sierra Leone (5 percent) and Uganda (23 percent) in 1938 was not the result of different investment policies, but rather of different missionary settlement conditions. The maps in figure 4 show that the number of schools per 100,000 inhabitants in each of the four administrative provinces of the Uganda Protectorate greatly exceeded that of Sierra Leone’s Northern and Southern provinces. The maps also show that in Sierra Leone most of the schools were located in the coastal colony around Freetown. Especially among the *Temne* tribes in Sierra Leone’s Northern Province, Christian mission schools hardly developed: 38 schools for an estimated population of

<sup>8</sup> Calculations were based on surveys published in the *Official Year Book of the Colony of Southern Rhodesia* (1952) and the *Blue Book of the Uganda Protectorate* (1938).

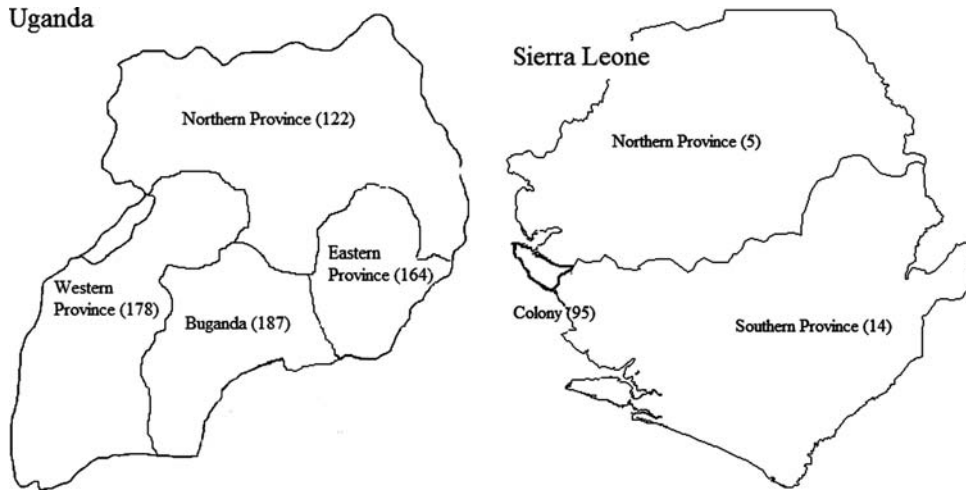


Figure 4. The provincial distribution of mission schools in Sierra Leone and Uganda in 1938 (no. of schools per 100,000 inhabitants).

Sources: maps by author; data from *Blue book of Sierra Leone 1938* and *Blue book of the Uganda Protectorate 1938*.

780,000. In comparison, in Uganda's Northern Province no fewer than 994 registered mission schools existed for an estimated population of 815,000.

This is all the more remarkable, given that the arrival of the first missionaries in Sierra Leone (1787–1792) pre-dated the first Christian mission in Uganda (1877) by almost a full century. Freetown was founded as a new homeland for freed African slaves from North American and Caribbean slave plantations. The British navy used the area to release captives from the slave ships intercepted along the West African coast. The incipient Creole community was acquainted with Christianity. The prestigious Fourah Bay College (founded in 1827) became the first Western-style university in the region and gave the city Freetown its nickname “Athens of West Africa”. By the 1840s, approximately one-fifth of the Freetown population was enrolled in a Christian mission school, which was the highest school enrolment level in sub-Saharan Africa at the time. However, missionary expansion in the hinterland was a completely different experience. The two largest tribes, the *Temne* and the *Mende*, lived in outright hostility with the Creoles in Freetown, whom they regarded as foreign intruders.<sup>9</sup> Christian missionaries (of European and African origin) were regarded with great suspicion. When the introduction of a native hut tax in the hinterland induced violent revolts (the Hut Tax Wars 1898–1900), the hostilities were not only directed against British and Creole soldiers and traders, but also against missionaries (Kilson 1966).

Islam and Arab trade connections provided an alternative social, political, and cultural orientation uniting the resentments against the Creoles (Abu 1975, pp. 98–99). But Islamic schools did not offer an equal alternative to Christian mission schools. *Qur'an* schools focused on reciting the *Qur'an* in Arabic, which remained an alien language to

<sup>9</sup> The provincial boundaries drawn by the British reflected the existing territorial demarcations between the *Temne* in the North and the *Mende* in the South.

most Africans. Parents sent their children to Islamic schools for spiritual purposes, not with the intention of acquiring literacy skills (Reichmuth 1993), as passive reproduction was given priority over receptive reading. Islamic teaching remained largely a free profession conducted on an individual basis by spiritual leaders or imams. Students would go the *imam's* home, or parents would invite him to their place. This exclusive education was an expense reserved for people of higher social standing. Female enrolment shares in Islamic schools remained extremely low (Reichmuth 1993; Sperling 1993). Islamic schools spread at a markedly slower pace: in the 13 Islamic core countries, including Sierra Leone, the average primary-school enrolment rate was 3 percent in 1938, and in none of these countries did enrolment rates exceed 5 percent. By 1960, on the eve of independence, the primary-school enrolment gap had grown even larger: 9 percent versus 30 percent.<sup>10</sup>

The contrasts with Uganda were multiple. Firstly, whereas Sierra Leone was widely known as the “white man’s grave” because of its high malaria incidence, Uganda was situated 1,200 m above sea level for a large part, offering a far healthier settlement climate to Western missionaries. Fertile and rain-fed soils had formed the basis for the development of a comparatively productive and densely populated feudal economy with several competing central states such as Buganda, Toro, Ankole, and Bunyoro (Ofcansky 1996). Confronted with Islamic and Christian encroachment in the 1880s, indigenous leaders were forced to make strategic choices. Protestants and Catholic missionaries as well as Muslim traders made considerable numbers of converts in Buganda, some of whom gained influence at the court of *Mutesa I* (the *kabaka*). The attempt by Mutesa’s predecessor *Mwanga* to get rid of these foreign influences proved a fatal mistake. He commanded the killing of European missionaries in 1886 and their expulsion from Buganda, but was deposed himself in 1888 after several factions of African Christian converts had regained the upper hand in the ensuing civil war. Arab traders from Zanzibar, who were initially successful in proclaiming an Islamic state in Buganda, were defeated by Christian forces. Subsequently, in 1892, African Catholic and Protestant factions started to fight against each other (Oliver 1962; Obdeijn 1983). Order was restored after the intervention of the *British East African Company* under the command of Lugard, who supplied the Protestant factions with heavy military equipment such as sniper rifles, muzzle loaders, and a maxim gun (Oliver 1962, pp. 146–147). Indeed, the British were not denominationally unbiased either.

Despite deep objections against blind imperial expansion, the British parliament failed to resist the lobby by British missionary and anti-slavery societies and hesitantly approved the proclamation of the Protectorate of Uganda in 1894. It was difficult to set aside the argument that a scheduled British retreat from the area would invite Arab traders to re-develop the slave trade (Mwanzi 1985; Pakenham 1992), as such a scenario would destroy the entire reputation of the imperial project in East Africa. After the pacification of Buganda, the British allied with the new political leaders to extend control over their neighbouring states. Catholic and Protestant missions started to increase their activities and mission stations expanded at impressive rates in the entire region (Ofcansky 1996).

What this comparative case reveals is that the decision to embrace, or resist, missionary activities was made by Africans and that it was greatly influenced by internal African power conflicts. European missionaries tried to further their interests in both cases, but only in Uganda they really gained ground. After the British–Buganda alliance had

<sup>10</sup> This consists of 13 countries: (British Africa) British Somalia, Gambia, Sierra Leone, Sudan; (French Africa) Burkina Faso, Chad, Djibouti, Guinea, Mali, Mauritania, Niger, Senegal; (Portuguese Africa) Guinea-Bissau.

consolidated its supremacy, Christian education spread rapidly. In the tribal hinterlands of Sierra Leone, the two largest tribes managed to keep Christian missionaries out. This exclusion was part of a successful attempt to retain a high degree of independence from the coastal Creole population. The interweaving of Islamic beliefs with traditional spiritual practices helped the paramount chiefs to legitimize their rejection of missionary interference. African political and strategic concerns could tilt the balance of sympathy in favour of Christian missionaries as quickly and whole-heartedly as it could turn against them.

## **5. Missionary education in a supply and demand framework**

The following discussion distinguishes three types of supply and demand factors: (1) exogenous factors constraining supply; (2) endogenous supply–demand responses; and (3) factors that changed African demand for Western education over time while under the influence of consolidated colonial rule and colonial trade. The hypotheses yielded in this section are tested in a multivariate regression framework in Section 6.

### *5.1 Exogenous supply constraints*

*5.1.1 Metropolitan policy principles.* The differences in metropolitan policies on the role of the church and the state in the provision of education have been amply addressed above. The continental powers used to offer preferential conditions for the settlement to Catholic societies. The British maintained a more liberal stance and exerted pressure for relieving the restrictions on Protestant missions. The extent to which open or hidden discrimination of Protestant missionaries in French, Belgian, Spanish, or Portuguese Africa hampered their activities varied largely, but there were also advantages to operating outside the orbit of the colonial state. Unaided Protestant mission schools could avoid state inspections that were made conditional upon state support and enjoyed a larger degree of freedom in the design of their educational programmes.

*5.1.2 Geographical and logistical constraints.* Early missionary settlement patterns were largely affected by local disease environments (Curtin 1989). Tropical diseases caused such high mortality rates that mission posts were frequently aborted. Advances in tropical medicine (especially the adoption of quinine as an anti-malaria drug) and improved disease prevention practices (especially the use of mosquito nets) during the colonial era reduced the health risks of Western missionaries, but never fully erased regional differences in disease incidence. The comparative absence of tropical diseases in the southern part of sub-Saharan Africa is the major reason why early initiatives in the South were more successful than early attempts to enter the African interior in West or Equatorial Africa. The lack of natural transportation routes also posed major constraints. The consolidation of colonial rule helped to relieve these constraints by offering the political stability necessary for large-scale projects in infrastructure and health care. In view of these logistic barriers, scarcely populated areas were less attractive for missionary settlement.

### 5. 2 *Endogenous supply–demand responses*

5.2.1 *African resistance and Islam.* As geographical and logistical supply constraints were gradually relieved, the revealed demand for Christian conversion became more important for the investment decisions of missionary societies. Given their quest for new souls, missionaries were primarily attracted to areas where they envisaged a large potential return. Denominational competition was more likely to arise in the “fertile” areas, such as Uganda, than in the areas where Africans resisted conversion practices, such as Sierra Leone. African responses to colonial rule thus shaped colonial policies with respect to missionary activities. In Islamic areas, colonial governments were reluctant to allow free missionary settlement. The French actively discouraged missionary infiltration in large parts of French West Africa (Cogneau and Moradi 2011), but not in French Equatorial Africa or Madagascar. The British prohibited missionary activities in Northern Nigeria, but not in Southern Nigeria. Indeed, the risk of political disorder and social revolt was a far more pressing concern for local colonial governments than the policy principles of metropolitan governments in London or Paris.

Large-scale organized resistance occurred especially in the Islamic heartlands of Africa (Boahen and M’Baye Gueye 1985; Ibrahim 1985), but was certainly not confined to these areas. In non-Islamic slave-trading areas, for instance, the position of Christian missionaries was also precarious. Slave raiders who were economically and politically dependent on the continuation of the trade opposed missionary attempts to ban the trade. Those who feared to be captured were inclined to embrace Christian missionaries as potentially powerful allies. Missionaries could also be regarded as trustworthy intermediaries in negotiations over territorial control, colonial taxes, and labour *corvée*. Many African and European missionaries coordinated peaceful or violent resistance against colonial regimes, such as Protestant missionaries protesting against the rubber trade in the Congo Free State (Pakenham 1992) and the Catholic Chewa communities led by John Chilembwe against the British colonial government in Nyasaland (Linden and Linden 1974).

5.2.2 *Indigenous state institutions.* Some scholars have emphasized the importance of centralized indigenous state structures for the supply of public goods such as infrastructure, education, and health care, as these structures allowed colonial powers to capitalize upon existing institutions for administration, taxation, and investment (Bockstette et al. 2002). Gennaioli and Rainer (2007, pp. 188–192) argued that centralized state institutions raised the accountability of local chiefs. The case of Uganda has shown that the central state facilitated the missionary effort after African leaders adopted Christianity as an official state religion. However, in case of organized resistance against European rule, state centralization could have the opposite effect. Missionary expansion in the Tukulor empire and the Sokoto caliphate, for instance, was severely hampered by African military resistance and induced colonial administrations to restrict missionary encroachment.

### 5.3 *Changing African demand under consolidated colonial rule*

5.3.1 *Socio-economic mobility.* Demand for missionary education depended on a range of cost–benefit calculations made by African political leaders on the macro level and African families on the micro level. The implementation of a new set of social and political institutions altered the (perceived) benefits of formal education, which were related to new



venues of political influence and new opportunities for socio-economic mobility. To many Africans, these benefits were not clear at the onset. Traditional African customs such as slavery, polygamy, ancestor worship, or infanticide conflicted diametrically with the value system of “Christian civilization”. Missionaries publicly depicted African cultures as barbarous and considered the banning of pagan rituals and heathen practices as a precondition for conversion (Berman 1975). Moreover, as missionaries sought to create new societies governed by new values, beliefs, and loyalties, the condemnation of “pagans” often implied that new adherents were forced to abandon their families and friends (Spear 1997, pp. 95–98).

Accordingly, much of the attractiveness of Christianity lay in its promise of a new alliance to those who felt threatened or challenged by changing political or economic circumstances (Vansina 2010, p. 278–283). Obtaining access to the skills and knowledge that endorsed the power and prosperity of “the whites” was a key aspect of such considerations. Western education thus became the default option for an increasing number of Africans *after* it had become clear that European control would define the long-term political status quo. In the Buganda kingdom, for instance, the court’s decision to adopt Christianity as a state religion paved the way for a rapid adoption of mission schools in the lowest echelons of society.

The advantages of receiving Western formal education grew with the number of job opportunities in the colonial economy. For tribal societies engaged in cattle rearing, to send their herding sons to school was impractical and costly. For sedentary rural communities, the costs were lower (depending on distance), and the potential benefits were probably higher. Especially in the urban centres, the material, commercial, and social benefits attached to acquiring literacy and comprehension of the metropolitan language were large, as the rising demand for white-collar workers by commercial enterprises, railway companies, or the colonial administration was concentrated in the major cities. Real wage calculations in British Africa indicate that skill-premiums in the urban construction sector in the 1930s were between 200 and 400 percent, which was considerably larger than in a large set of cities in other developing regions (Frankema 2011b; Frankema and van Waijenburg 2012). This was also true for mushrooming mining cities, where large numbers of “detribalized” Africans built new social ties that helped them to adapt to the living conditions in alien urban-industrial environments.

## 6. A multivariate analysis

In this final section, we test supply and demand factors in a multivariate regression framework. This analysis should be regarded as complementary and exploratory. The argument presented in the previous sections has made it clear that framing the native African reception of missionary ideas and practices in quantitative terms is bound to miss much of the historical complexity of the inter-cultural encounters that are key to understanding the (changing) demand for formal education among Africans. Data to conduct a panel analysis or make a regional decomposition of the dependent and independent variables are unavailable. Therefore, this analysis is confined to a cross-country regression based on 40 African colonies and two independent countries, Liberia and Ethiopia. This sample size means that we have to treat the results with caution. The model is specified as

$$y = \alpha + \beta_1 x_1' + \beta_2 x_2' + \beta_3 x_3' + \varepsilon,$$

where  $y$  refers to the educational outcome in the late colonial period,  $\alpha$  is a constant, and  $\varepsilon$  is the error term. The vectors  $x_1$ ,  $x_2$ , and  $x_3$  represent, respectively, the exogenous supply constraints (1), the endogenous supply–demand responses (2), and the impact of the colonial economy and the consolidation of colonial rule on the African demand for education (3). The *primary-school enrolment rates* of 1938 and 1960 are the dependent variables. The 1938 benchmark is expected to pick up the effect of the independent variables on the spread of missionary education, whereas the 1960 benchmark also incorporates the effects of these variables on the success of post-1940 government investment programmes.

Vector  $x_1$ , reflecting the effects of exogenous supply conditions, includes a dummy variable for *British rule*, an index number for *malaria ecology* and the natural logarithm of *population density* in 1938 (persons per square kilometre). Note that *malaria ecology* does not reflect the historical incidence of malaria, which is arguably endogenous to educational development, but a set of exogenous ecological characteristics determining the feasibility of malaria in a given area. Vector  $x_2$ , reflecting endogenous supply–demand responses, includes a dummy variable for the pre-colonial influence of *Islam*, an index number for the extent of *pre-colonial state centralization* and a newly constructed index measuring the extent of *native African resistance* against colonial rule: the total number of years of pacified rule before 1938. Vector  $x_3$ , reflecting African demand responses to consolidated colonial rule, consists of a dummy variable for centres of peasant cultivation of major export crops such as cotton, tobacco, cocoa, palm oil, or groundnuts for European markets, and a dummy variable for the development of a sizeable and geographically concentrated mining industry, such as the copper enclaves in the Katanga region at the border of Belgian Congo and Northern Rhodesia. A full description of the independent variables and an overview of summary statistics are presented in online Supplementary material, tables A4 and A5.

The correlation matrix presented in the online Supplementary material, table A6 underwrites the key argument of this study: British African territories possessed more favourable conditions for missionary settlement than non-British African colonies. On average, the British colonies faced less severe malaria ecologies, higher indigenous population densities, fewer territories with considerable pre-colonial Islamic influence, and lower degrees of native African resistance (approximated by years of pacified rule). Also in terms of colonial economic development, the British tended to control the “fertile” areas. Peasant export cultivation flourished in a comparatively large number of British colonies, and the revealed presence of sub-soil deposits (gold, bauxite, copper, tin, lead, and manganese) was larger in the British areas. The correlation matrix further shows that the potential multicollinearity problem that arises from the correlation of *British rule* with the other variables is not so severe that it inhibits a correct estimation of the model. The mean variance of inflation factor (VIF) is 1.50. All independent variables retain a VIF score below 2.0. *Malaria ecology* appears to correlate with *African state centralization* (−0.52) and *Islamic core area* (0.42), hence, specifications were run including and excluding this variable.

To deal with heteroskedasticity (detected by a Breusch-Pagan/Cook-Weisberg test) and the censored design of the dependent variable, I adopted an OLS regression with heteroskedasticity-consistent standard errors (Huber-White) and a two-limit Tobit model to cross-check the OLS results. The Tobit model generated slightly different standard errors, but did not offer fundamentally different significance levels. Table 4 presents the OLS results with robust standard errors.

Column 1 through 3 shows the results of the baseline regression adding the vectors  $x_1$ ,  $x_2$ , and  $x_3$  one by one. The results show that the coefficient of *British* is significant for the 1938 benchmark and turns insignificant for the 1960 benchmark. *Malaria ecology* yields the

Table 4. Regression results

Dependent variable: primary school enrolment rate																		
	(1)		(2)		(3)		(4)		(5)		(6)		(7)		(8)		(9)	
	1938	1960	1938	1960	1938	1960	1938	1960	1938	1960	1938	1960	1938	1960	1938	1960	1938	1960
British rule	8.47** (3.36)	5.73 (4.52)	7.96*** (2.66)	4.46 (3.36)	10.56** (4.33)	6.81 (4.91)	7.45*** (2.57)	4.39 (3.40)	6.35** (3.50)	2.56 (4.32)	8.05*** (2.70)	4.64 (3.36)	6.37** (2.75)	3.16 (3.38)	6.72** (2.69)	3.02 (3.63)	8.23*** (2.93)	3.70 (3.16)
Malaria ecology	-0.62*** (0.19)	-0.60** (0.25)					-0.31** (0.14)	-0.13 (0.17)	-0.66*** (0.20)	-0.68*** (0.23)			-0.44*** (0.15)	-0.16 (0.19)	-0.53*** 0.14	-0.49*** (0.18)		
Population density	1.76 (1.11)	1.82 (1.66)					-0.12 (0.91)	-0.54 (1.21)	2.17* (1.25)	2.06 (1.71)	-0.34 (0.92)	-0.63 (1.18)	0.92 (0.86)	0.03 (1.19)				
Islamic core area			-5.99*** (2.01)	-16.74*** (2.62)			-4.46* (2.31)	-16.17*** (2.91)			-6.03*** (2.05)	-16.82*** (2.66)	-3.05 (2.52)	-14.68*** (3.38)			-6.36*** (2.03)	-15.81*** (2.80)
Years of pacified rule			0.21*** (0.06)	0.29*** (0.10)			0.26*** (0.07)	0.30*** (0.09)			0.25*** (0.06)	0.30*** (0.09)	0.28*** (0.07)	0.29*** (0.09)	0.29*** (0.06)	0.35*** (0.11)	0.28*** (0.06)	0.29*** (0.10)
African state centralization			8.71** (3.46)	0.53 (4.95)			5.48 (3.73)	0.55 (5.15)			8.90** (3.62)	0.88 (5.00)						
Peasant cash crop exports					3.20 (4.69)	7.30 (5.28)			2.90 (3.72)	7.22 (4.78)			-2.23 (3.67)	-0.04 (4.06)				
Mining economy					5.50 (5.73)	8.80* (5.17)			8.52** (4.06)	11.69*** (3.95)			6.99** (3.24)	5.88 (3.68)	6.63** (3.00)	10.53*** (3.22)	4.30 (4.42)	5.39 (3.39)
Adjusted R <sup>2</sup>	0.43	0.21	0.64	0.62	0.27	0.18	0.67	0.62	0.50	0.34	0.65	0.62	0.69	0.64	0.70	0.48	0.61	0.63
n	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42

Source: Online Supplementary material, table A4.

Notes: Robust standard errors (Huber-White) reported in rows below coefficients.

\*Significant at 10 percent.

\*\*Significant at 5 percent

\*\*\*Significant at 1 percent.

expected negative effect. Population density yields a positive sign but is insignificant and unstable in specifications including a larger set of variables. The dummy for Islamic core areas yields the expected negative sign and is significant. The coefficient increases approximately 10–12 percentage points between 1938 and 1960. The number of years under pacified colonial rule proves the most robust and significant variable in all of the specifications. Each year of pacified rule before 1938 translated in a 0.21–0.29 percentage point gain in the primary-school enrolment rate in 1938 and 0.29–0.35 in 1960. Indigenous state centralization had a positive and significant effect on enrolment rates in 1938, but loses explanatory power for the 1960 benchmark. Finally, we see a very weak effect of peasant cash crop exports. The dummy for mining economies is positive and significant in most specifications, but is not robust to changing specifications. Columns 4–9 show different specifications to study the robustness of the included variables to changes in specifications. These specifications alternate the inclusion of the malaria ecology variable on the one hand, and the Islam and state centralization variables on the other hand. The overall results thus seem to imply that British policies did facilitate the expansion of mission schools in comparison with French, Spanish, or Portuguese policies, when controlling for various other factors of supply and demand, but that this effect rapidly eroded during the post-1940 era when all colonial governments started to increase investments in local education programmes. In the closing two decades of colonial rule, the demand for Western education determined the effectiveness of educational investments, not British “benevolent” policies. This demand was higher in areas where native African resistance had been (or was) less powerful and where competing monotheistic religions (Islam) did not take root.

## 7. Conclusion

Recent studies of African educational development have given ample credit to the benign features of British rule. By granting free entry to missionaries of different denominations, the British are supposed to have supported the development of mass education, resulting in primary-school enrolment rates that were almost three times as high as in French or Portuguese Africa in the year of independence (ca. 1960). This study has argued that the impact of British educational policies should not be overstated, because the supply of missionary education was deeply affected by conditions that had little to do with metropolitan policy conventions. Varying African responses to missionary activities induced varying colonial policies regarding entry of missionaries. The degree of British “liberalism” was endogenous to the local political and economic context.

The missionary effort in Africa was driven by global competition for new church members. The societies were effective in enhancing the scale of African education at extremely low costs. The fact that missionary expansion in colonial Africa was as much an African as a Western phenomenon has been largely overlooked in supply-side explanations of African educational development. For carrying the missionary effort beyond the limited financial and personnel capacity of the missionary societies, African tax money, African school fees, and indigenous community initiatives were essential. Africans had to embrace the missionary zeal and make it theirs. Colonial administrations had little means to enforce the *Africanization* of the mission. As supply constraints became relieved during the colonial era due to a higher degree of security and technological advances in transportation and medical care, African *demand* became the prime determinant of educational development. The spontaneous development of ungraded village schools reveals that the supply of

missionary education by African converts was highly elastic. Demand, in turn, depended on African perceptions of the comparative costs and benefits at the macro level of central political leadership, as well as the community-level, where the decisions for erecting a mission school were ultimately taken.

The real “stylized fact” of African missionary history is the North–South divide in the demand for, and reception of, Christian education. Indigenous resistance against colonial rule and Christian missionaries occurred especially in areas where Islam was, or became, the main religious anchor. Their supreme industrial and military power enabled the British to preserve most of the “fertile” areas in the South: areas where British traders and Protestant missionaries had developed their stakes before the establishment of formal British authority. In many of these areas, school enrolment rates increased without any substantial investment in African schooling by British colonial governments prior to 1940. The flag followed the cross.

### Supplementary material

Supplementary material is available at *EREH* online.

### Acknowledgements

This paper has benefitted from comments by Jan Luiten van Zanden, Maarten Prak, Joerg Baten, Sasha Becker, Angus Dalrymple-Smith, Marlous van Waijenburg, Tamás Vonyó, Alexander Moradi, Denis Cogneau, James Morrison, two anonymous referees and the participants of the workshop on *Human Capital in Economic History*, Tuebingen University (28–29 August 2010), the *Social and Economic History seminar*, Utrecht University (4 November 2010), and the *Social and Economic History seminar*, University of Groningen (23 October 2011). The usual disclaimer applies.

### Funding

I am grateful to the Dutch Science Foundation (NWO) for financial support of the project: The Colonial Origins of Inequality: A Comparative Analysis of Fiscal Regimes in Asia, Africa and the New World, 1492–2000.

### References

- ABU, A. (1975). Islam versus Christianity in Sierra Leone. In E. H. BERMAN (ed), *African Reactions to Missionary Education*. New York: Teacher College Press.
- BEACH, H. P. and FAHS, CH. H. (eds), (1925). *World Missionary Atlas*. New York: Institute of Social and Religious Research.
- BENAVOT, A. and RIDDLE, P. (1988). The expansion of primary education, 1870–1940: trends and issues. *Sociology of Education* 61, pp. 191–210.
- BERMAN, E. H. (1975). Christian missions in Africa. In E. H. BERMAN (ed), *African Reactions to Missionary Education*. New York: Teacher College Press.

- BERTOCCHI, G. and CANOVA, F. (2002). Did colonization matter for growth? an empirical exploration into the historical causes of africa's underdevelopment. *European Economic Review* **46**, pp. 1851–71.
- BOAHEN, A. A. and M'BAYE GUEYE, A. (1985). African initiatives and resistance in West Africa, 1880–1914. In A. A. BOAHEN (ed), *General History of Africa VII: Africa under Colonial Domination 1880–1935*. Berkeley: University of California Press.
- BOCKSTETTE, V., CHANDA, A. and PUTTERMAN, L. (2002). States and markets: the advantage of an early start. *Journal of Economic Growth* **7**, pp. 347–69.
- BOLT, J. and BEZEMER, D. (2009). Understanding long-run african growth: colonial institutions or colonial education? *Journal of Development Studies* **45**, pp. 24–54.
- BOOTH, A. E. (2003). Education, equality and economic development in Asian-Pacific economies. In M. ANDERSSON and C. GUNNARSSON (eds), *Development and Structural Change in Asia-Pacific*. London: Routledge Curzon.
- BROWN, D. S. (2000). Democracy, colonization, and human capital in sub-Saharan Africa. *Studies in Comparative International Development* **35**, pp. 20–40.
- CALLEGO, F. A. and WOODBERRY, R. (2010). Christian missionaries and education in former African colonies: how competition mattered. *Journal of African Economies* **19**, pp. 294–329.
- COGNEAU, D. (2003). Colonisation, School and Development in Africa: An Empirical Analysis. DIAL Document de Travail DT/2003/01. DIAL.
- COGNEAU, D. and MORADI, A. (2011). Borders that divide: education and religion in Ghana and Togo since colonial times. CSAE Working Paper 2011/21. Centre for the Study of African Economies.
- CROWDER, M. (1970). Indirect rule. French and British style. In R. O. COLLINS (ed), *Problems in the History of Colonial Africa, 1860–1960*. Englewood Cliffs, NJ: Prentice-Hall.
- CURTIN, P. D. (1989). *Death by Migration: Europe's Encounter with the Tropical World in the Nineteenth Century*. Cambridge, UK: Cambridge University Press.
- DAUN, H. (2000). Primary education in sub-Saharan Africa: a moral issue, an economic matter, or both? *Comparative Education* **36**, pp. 37–53.
- DEBEAUVAIS, M. (1964). Education in former French Africa. In J. S. COLEMAN (ed), *Education and Political Development*. Princeton, NJ: Princeton University Press.
- FEINSTEIN, C. H. (1972). *National Income, Expenditure and Output of the United Kingdom, 1855–1965*. Cambridge, UK: Cambridge University Press.
- FERGUSON, N. (2002). *Empire: The Rise and Demise of the British World Order and the Lessons for Global Power*. New York: Basic Books.
- FRANKEMA, E. H. P. (2010). Raising revenue in the British Empire, 1870–1940: how “extractive” were colonial taxes? *Journal of Global History* **5**, pp. 447–77.
- FRANKEMA, E. H. P. (2011a). Colonial taxation and Government Spending in British Africa, 1880–940: maximizing revenue or minimizing effort? *Explorations in Economic History* **48**, pp. 136–49.
- FRANKEMA, E. H. P. (2011b). Industrial wage inequality in latin america in global perspective, 1900–2000. *Studies in Comparative International Development* **47**, pp. 47–74.
- FRANKEMA, E. H. P. and VAN WAIJENBURG, M. (2012). Structural impediments to African growth? New evidence from real wages in British Africa, 1880–1960. *Journal of Economic History*, forthcoming.
- GENNAIOLI, N. and RAINER, I. (2007). The modern impact of precolonial centralization in Africa. *Journal of Economic Growth* **12**, pp. 185–234.
- GRIER, R. M. (1999). Colonial legacies and economic growth. *Public Choice* **98**, pp. 317–35.
- HULLERY, E. (2011). The long term impact of European settlement within former French West Africa: Did prosperous areas fall behind?, *Journal of African Economies*, **20**, 263–311.
- IBRAHIM, H. A. (1985). African initiatives and resistance in North-East Africa. In A. A. BOAHEN (ed), *General History of Africa VII: Africa under Colonial Domination 1880–1935*. Berkeley: University of California Press.
- ILLIFE, J. (2007). *Africans: The history of a continent*. New York: Cambridge Univeristy Press.
- KILSON, M. L. (1966). *Political Change in a West African State: A Study of the Modernization Process in Sierra Leone*. Cambridge, MA: Harvard University Press.



- LA PORTA, R., LOPEZ-DE-SILANES, F., SCHLEIFER, A. and VISHNY, R. W. (1999). The quality of government. *Journal of Law, Economics and Organization* 15, pp. 222–82.
- LANDES, D. S. (1998). *The Wealth and Poverty of Nations: Why Are Some So Rich and Others So Poor?* New York: W.W. Norton.
- LEWIS, M. D. (1970). One hundred million Frenchmen: the assimilation theory in French colonial policy. In R. O. COLLINS (ed), *Problems in the History of Colonial Africa, 1860–1960*. Englewood Cliffs, NJ: Prentice-Hall.
- LINDEN, I. and LINDEN, J. (1974). *Catholics, Peasants, and Chewa Resistance in Nyasaland 1889–939*. Berkeley, CA: University of California Press.
- LLOYD, C. B., KAUFMAN, C. E. and HEWETT, P. (2000). The spread of primary schooling in sub-Saharan Africa: implications for fertility change. *Population and Development Review* 26, pp. 483–515.
- MANNING, P. (2010). African population: projections, 1851–1961. In K. ITTMANN, D. D. CORDELL and G. H. MADDOX (eds), *The Demographics of Empire: The Colonial Order and the Creation of Knowledge*. Athens, OH: Ohio University Press.
- MARISCAL, E. and SOKOLOFF, K. L. (2000). Schooling, suffrage, and inequality in the Americas, 1800–1945. In S. HABER (ed), *Political Institutions and Economic Growth in Latin America: Essays in Policy, History, and Political Economy*. Stanford, CA: Hoover Institution Press, Stanford University.
- MINGAT, A. and SUCHAUT, B. (2000). *Les systèmes éducatifs Africains. Une analyse économique comparative*. Brussels: De Boeck Université.
- MITCHELL, B. R. (2007). *International Historical Statistics: Africa, Asia and Oceania, 1750–2005*. Basingstoke: Palgrave Macmillan.
- MWANZI, H. A. (1985). African initiatives and resistance in East Africa, 1880–1914. In A. A. BOAHEN (ed), *General History of Africa VII: Africa under Colonial Domination 1880–1935*. Berkeley: University of California Press.
- NORTH, D. C. (1989). Institutions and economic growth: an historical introduction. *World Development* 17, pp. 1319–32.
- NUNN, N. (2010). Religious conversion in colonial Africa. *American Economic Review: Papers and Proceedings* 100, pp. 147–52.
- OBDEIJN, H. L. M. (1983). *The political role of catholic and protestant missions in the colonial partition of Black Africa: A Bibliographical Essay*. Leiden: Intercontinenta.
- OFCANSKY, T. P. (1996). *Uganda: Tarnished Pearl of Africa*. Boulder, CO: Westview Press.
- OLIVER, R. (1962). *The Missionary Factor in East Africa*. London: Longmans, Green and Co Ltd.
- PAKENHAM, T. (1992). *The Scramble for Africa: The White Man's Conquest of the Dark Continent from 1876–1912*. New York: Avon Books.
- REICHMUTH, S. (1993). Islamic learning and its interaction with 'western' education in Ilorin, Nigeria. In L. BRENNER (ed), *Muslim Identity and Social Change in Sub-Saharan Africa*. London: Hurst & Company.
- SPEAR, T. (1997). *Mountain Farmers: Moral Economies of Land and Agricultural Development in Arusha and Meru*. Berkeley, CA: University of California Press.
- SPERLING, D. C. (1993). Rural Madrasas of the Southern Kenya Coast, 1971–92. In L. BRENNER (ed), *Muslim Identity and Social Change in Sub-Saharan Africa*. London: Hurst & Company.
- SUBRAMANIAN, V. (1979). Consequences of christian missionary education. *Third World Quarterly* 1, pp. 129–31.
- SUTTON, F. X. (1965). Education and the making of modern nations. In J. S. COLEMAN (ed), *Education and Political Development*. Princeton: Princeton University Press.
- VANSINA, J. (2010). *Being Colonized: The Kuba Experience in Rural Congo, 1880–1960*. Madison, WI: University of Wisconsin Press.
- WINDEL, A. (2009). British colonial education in Africa: policy and practice in the era of trusteeship. *History Compass* 7, pp. 1–21.