

The Rise of Education in Africa

Sarah Ferber^{*}, Johan Fourie[†] and Felix Meier zu Selhausen[‡]

^{*} Tübingen University

[†] Stellenbosch University

[‡] Utrecht University

1. Introduction

In a world where we routinely overexploit our resources in an unsustainable way, the development of human talent has endless potential. When a person is given an education, it both improves that individual and develops the society as a whole. All humans can contribute to economic, social, and political development; therefore, educational opportunities must be provided to as many people as possible. The importance of education for all is clearly expressed in the United Nation's Sustainable Development Goal, SDG 2 – *Quality of education*.

The value of education touches upon nearly all aspects of our societies. From the point of view of economic progress, it is centred on our abilities to become more productive. This would include finding information in books and websites, making mathematical calculations, innovating and adopting new technologies, passing on our knowledge and experience to others, and so on. The basis for it is the ability to read (literacy) and count (numeracy). Education, skills, experience, character, and creativity together correspond to what the economists call 'human capital'. When combined with new technology and modern machines, this human capital makes each worker more productive. The lesson is clear: To grow richer, we need to improve education and skills.

In Africa, the history of education and the development of specialised skills in literacy and numeracy can be traced back to ancient Egypt. But although education has a long history on the continent, many African countries today struggle to offer good quality education to their citizens, and the value of the region's human capital is low overall. Considering the substantial current and future population growth, human talent is a force that could drive socio-economic development in the region.

In this chapter, we will discuss how Africans acquired new skills, in the past and in the present. We begin with a short review of the economic benefits of education and then proceed to a discussion of education in Africa today and in the past. We consider the role of Islam, Christ missionaries and colonisation, and follow the development of education in Africa during the period of independence.

2. Specialization and returns to education

For most of human history, we needed more workers when we wanted to increase production. In many industries (though not all), that is not the case anymore. Instead of using *more* workers to produce things, we use *educated* workers combined with *technology*. Educated people use their knowledge and skills, gained through formal education or learning-by-doing, to specialise. Specialisation means being able to do one particular thing very well. Today's engineers responsible for large construction projects do not have to know how to grow food or weave clothes. They are paid well for their specialised services, which allow them to afford the luxuries of our modern society: a wide variety of food, ready-made and attractive clothing, a mobile phone, a computer and a comfortable house with plenty of space for their family.

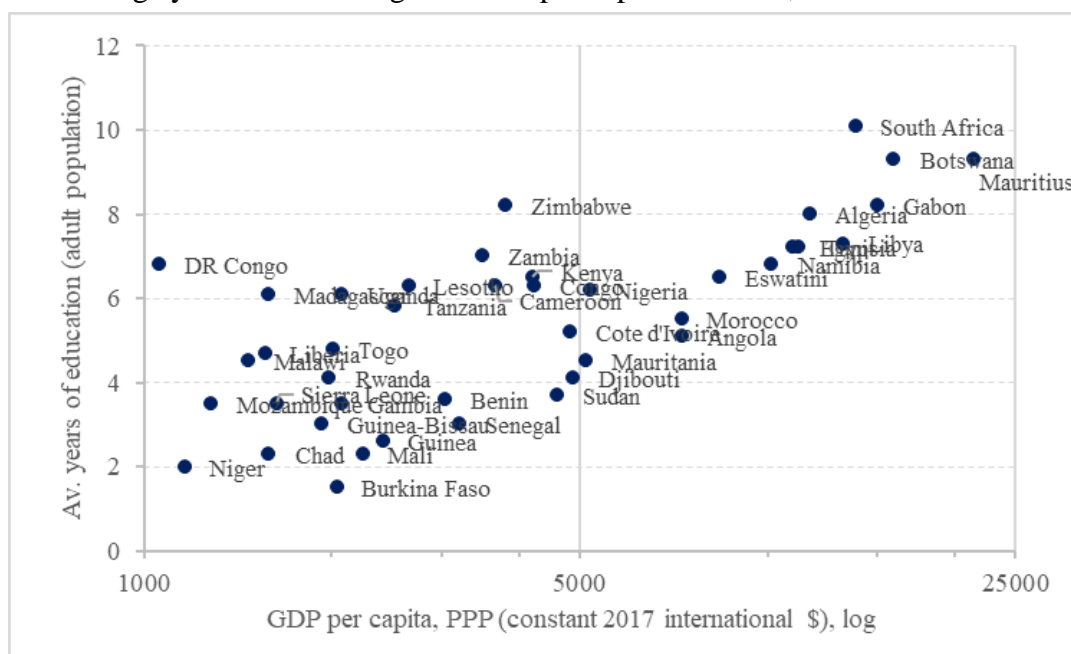
The advantages of specialisation are described in detail by the Scottish economist Adam Smith in 1776 in his seminal book *The Wealth of Nations*. The more we specialise, the more extra goods we can produce. When we produce a surplus of goods – in other words, more than we need for ourselves – we can sell them on the market and increase our income. If education is the key to deeper specialisation, then education is also the key to greater prosperity.

Educated people tend to improve the lives of everyone. An educated person can improve our existing physical capital. Take the example of Egypt's pyramids. Our engineers who plan to build a new pyramid must cut large sandstone blocks. It would cost a lot to employ thousands of workers to cut them by hand. And the job would take extremely long. So our engineer, with the help of other specialists, designs a new machine powered by fossil (coal or oil) or renewable energy (solar) to do the cutting automatically. By creating new technologies, educated people boost productivity and increase the wealth of their society. When people obtain an education, we do not just develop specialists and improve productivity and wealth; society tends to benefit as a whole. An educated society is more likely to have a democratic voting system. It is more likely to have citizens who can make informed decisions about who should govern. It is more likely to respect the rule of law. It is more likely to have media freedom. Educated citizens can force governments to be responsive

to their needs. They can ensure that the wealth that comes from economic growth benefits them and does not just end up in the pockets of government officials.

Figure 1 demonstrates this positive relationship between education and income in Africa, plotting each African country's average years of schooling of its adult population against its GDP per capita. The positive link between education and income strengthens once countries move beyond a GDP per capita threshold of around 3,000 USD. This trend does not tell us whether more education leads to more economic growth in Africa or whether more prosperous African economies simply have more resources to spend on education. Both may be true.

Figure 1: Average years of schooling and GDP per capita in Africa, 2017



Source: Barro & Lee (2018) and World Development Indicators (2023).

So the best way to create long-lasting prosperity for all citizens of a country is to provide access to education. Although women make up at least one-half of the population, they were in the past and are at present less likely to receive the same level of education as men. Often, resource-constrained parents grant fewer educational opportunities to their daughters because they prefer them to stay and help at home and on the farm. Sometimes cultural or religious beliefs about the role of women prevent them from attending school. Practical difficulties may also limit girls' school attendance, such as a lack of separate and safe toilets for girls at school or the absence of sanitary products.

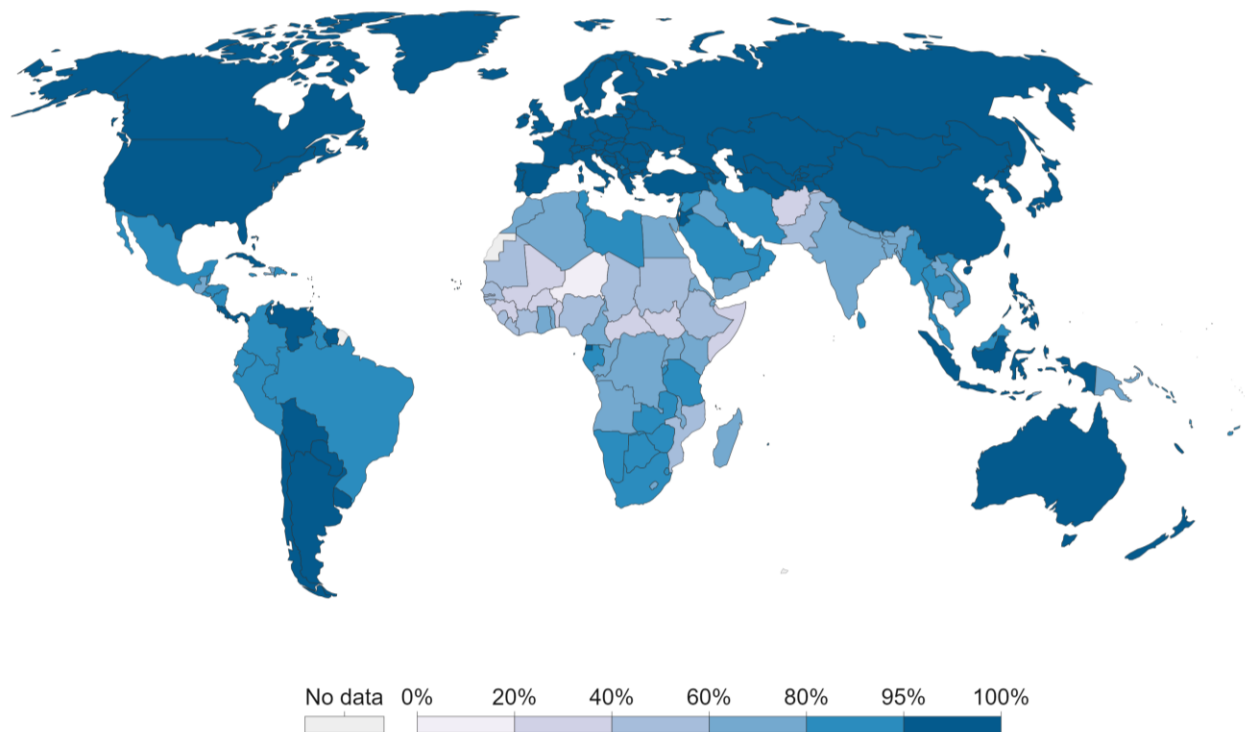
When women are discriminated against accessing education, this bears costs for the whole of society. This is because improving girls' education improves their health and future income. Also, more educated women tend to marry later and give birth to fewer and healthier children than illiterate mothers. The children of better-educated mothers are becoming more educated themselves. They have more freedom to choose a job and have a better chance of building a professional career. This is what American economist Gary Becker famously coined the 'quantity-quality trade-off' in the 1960s, in which he stated that a smaller family size allows for the allocation of more resources (e.g. school fees or buying of school uniforms and books), to each child, which increases the average level of education of a child.

Economists call these additional benefits that education provides 'positive externalities'. A good government works to provide their citizens with these benefits. One meaningful way a government can promote positive externalities is to make education freely available to the people and show them why it is essential, so they will demand it. In summary, education for all is the key to enjoying the rewards of an advanced market economy. Education is also key to building a safe, free and equal society.

3. Education in Africa today

In a global comparison, many African countries have relatively low levels of education today. Figure 2 maps how literacy is distributed globally, showing the literacy rates in 2015 of the population aged 15 years or older. Literacy – the ability to read and write – is typically used to measure basic education. It shows that compared to other regions except South Asia, sub-Saharan African populations have lower basic literacy skills. Figure 2 also portrays substantial differences in literacy *between* African countries. Some African countries score particularly low on this measure. For example, in 2018, only 31% of the population aged 15 years and older could read and write in Mali, 43% in Sierra Leone and 52% in Ethiopia. By contrast, some other African countries have more literate populations. In Namibia, 92% can read and write, in Zimbabwe 92% and in Cote d'Ivoire 90%. The average for sub-Saharan Africa's adult population is about 62%. This is much lower than the average for the world, which is 84%. Equally, there are substantial differences *within* African countries. Literacy is not shared evenly in these countries. The most significant differences are often between men and women. According to the World Bank, for example, in 2018, 71% of Nigerian men were literate, compared to 53% of Nigerian women. In Senegal, the gender gap was even bigger, with 65% of men being literate compared to 40% of women.

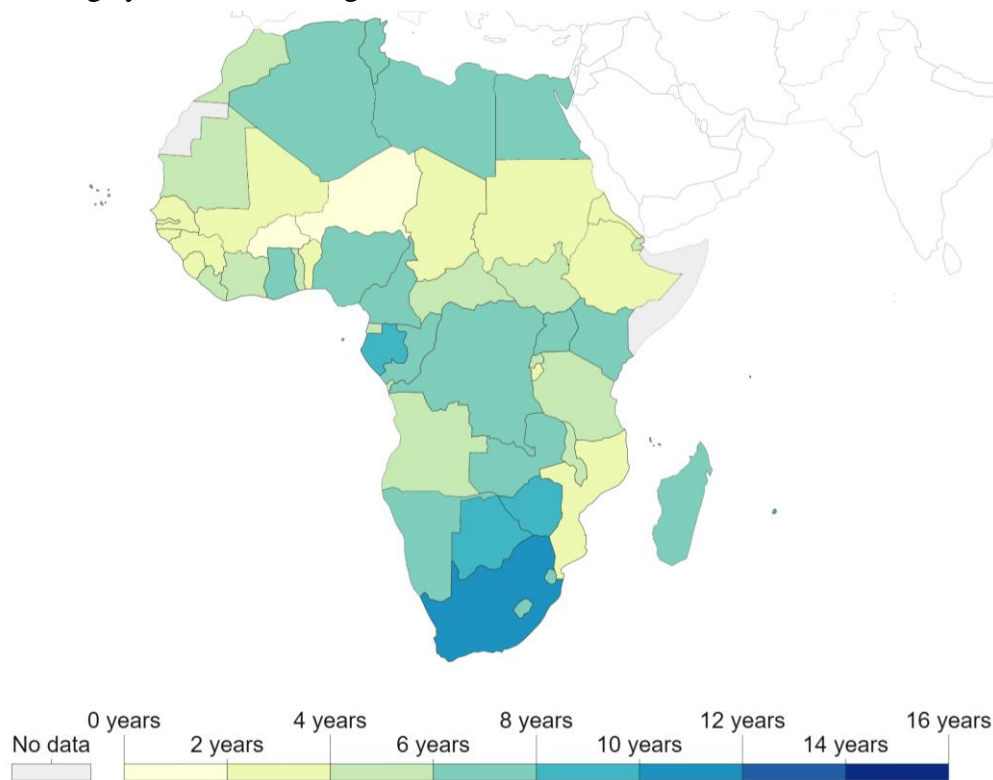
Figure 2: Global literacy rates by country, 2015



Source: Roser and Ortiz-Ospina (2016). Literacy. Retrieved from: *Our World in Data*.

Of course, education is not only about the acquisition of literacy. Education, especially secondary and tertiary education, provides people with various specialised skills that can be applied to improve their incomes and further develop the economy. Learning to read and write at school is only the first step. To build our imaginary present-day pyramid, our engineer must study mathematics and physics for several years at school and university. One way to measure this is to calculate the number of years of schooling each person has acquired over their lifetime. Figure 3 maps each African country's average years of education of adults (older than 25) in 2017. It illustrates that there is much variation within Africa, with adults in South Africa having an average of more than ten years of education, whereas in the Democratic Republic of the Congo, adults have accumulated seven years of schooling and in Burkina Faso, barely two years of education.

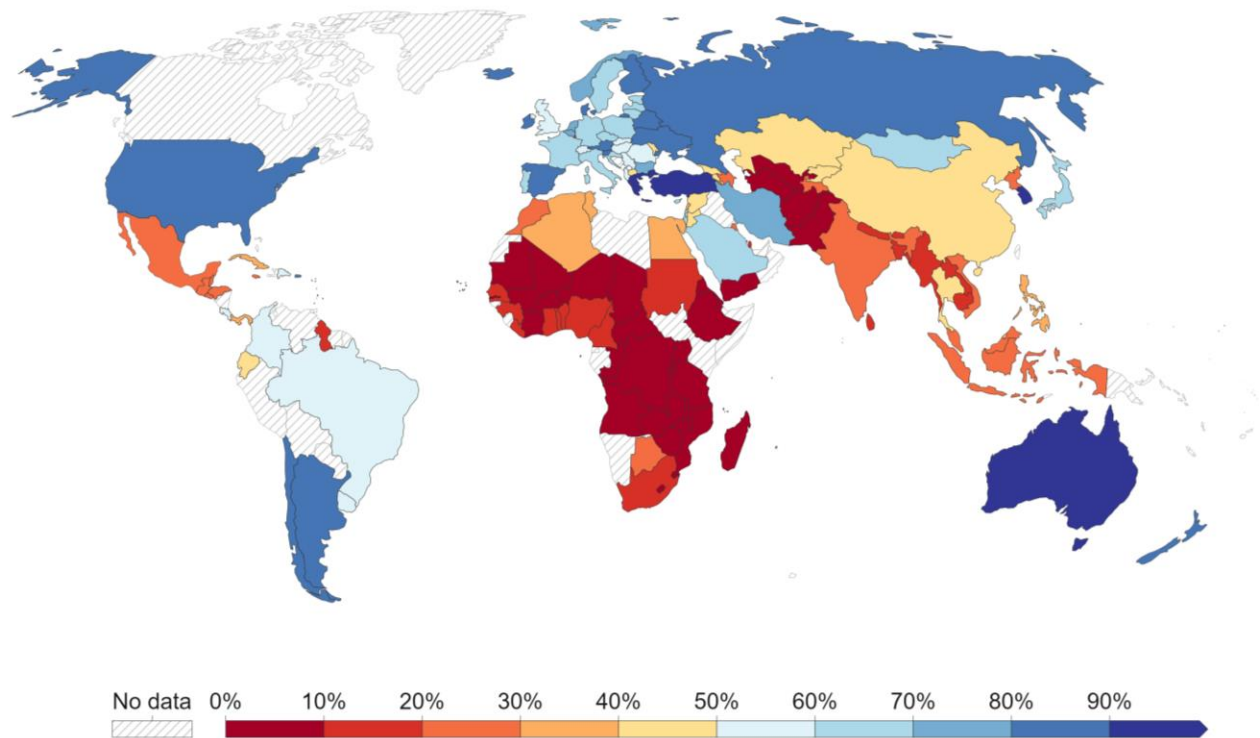
Figure 3: Average years of schooling, 2017



Source: Roser and Ortiz-Ospina (2016). Global Education. Retrieved from: *Our World in Data*.

Figure 4 shows that despite rapid expansion in African tertiary education in the past two decades, in most African countries, of those who graduated secondary school, less than 10% were enrolled in universities in 2016, compared to the global average of 34%. Another way to assess Africa's tertiary education level is to compare the quality of its universities with universities elsewhere in the world. What we see here is not a happy picture. The *Times Higher Education* newspaper's World University Rankings for 2022 rank only 4 of the top 400 universities in Africa - all four being located in South Africa.

Figure 4: Gross enrolment ratio in tertiary education, 2016



Source: Roser and Ortiz-Ospina (2016). Literacy. Retrieved from: *Our World in Data*.

In summary, African countries have lower education levels than the rest of the world. And without world-class universities, African countries cannot produce enough human talent to develop their own knowledge-based economies. What, then, are the reasons for Africa's comparatively poor performance?

4. The history of education in Africa

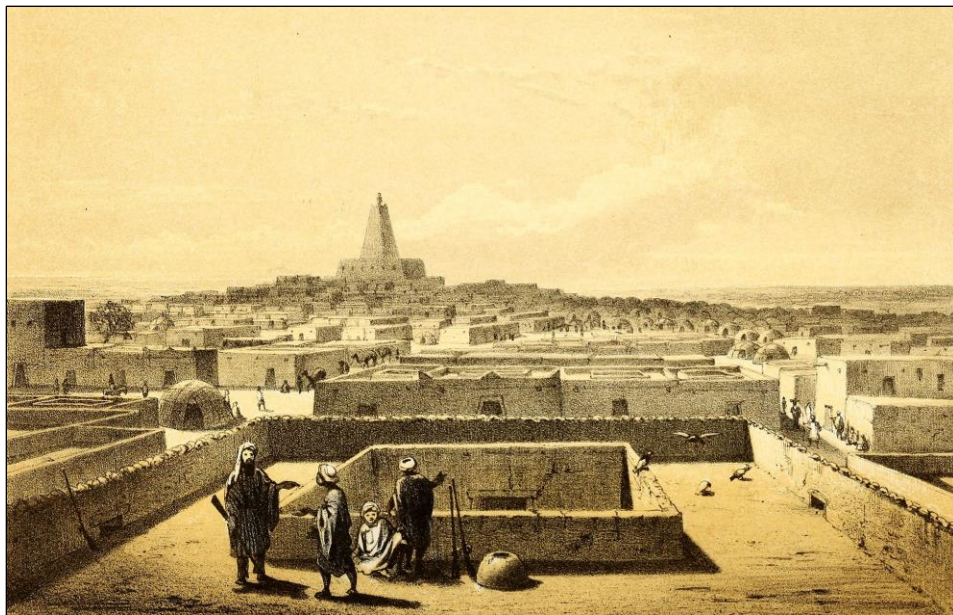
To better understand Africa's comparatively poor performance in education, we need to take a historical perspective. Why is it that African countries lag other countries when it comes to formal education? It is not that education only recently arrived in Africa. In Ancient Egypt (between 2500 and 500 BCE), men were formally taught to become scribes and administrators – people who could write and govern. But these were the exceptions. Typically, knowledge was transferred in the *informal* sphere. Children at the time acquired their skills from their parents, relatives, and their village community, who transmitted knowledge from one generation to the next in production skills in agriculture and their ecological environment, as well as social and cultural traditions. This is what economists call 'informal education'. It provided the knowledge and skills needed in the local community and served as the basis for specialisation in crafts, farming, trade and more.

However, it did not include teaching literacy and numeracy or other aspects of formal education that enabled people to incorporate new knowledge from outside to increase the productivity of existing economic activities and develop new ones.

Of course, this was how most of the world lived too. Formal education existed only in India and China and in the Mediterranean civilisations of Ancient Greece and Rome. A famous early example is the Platonic Academy of Athens, a school that was founded in 385 BC. But we should note that formal education in these countries was not for everyone either – it was mostly for the rich and powerful, as it was in Ancient Egypt.

4.1 Islamic education

The introduction of Islam in North Africa around the year 670 and parts of West and Central Africa around 1075 set off a rapid growth of formal education in these regions. Timbuktu, in modern Mali (picture shown below), became the centre of Islamic learning between the 13th and 17th centuries, especially under the rule of Askia Mohammad I circa 1500. Because of the trans-Saharan trade, trading gold, ivory, slaves and salt across the Sahara between sub-Saharan Africa and North Africa, Timbuktu's economic success attracted many scholars to the town, further strengthening the teaching of art, science and religion. With Emperor Askia Mohammad's support, thousands of manuscripts on art, medicine, philosophy, religion and science were written. About 700,000 of these manuscripts still can be found in Timbuktu's libraries today, and scholars are busy restoring, translating and digitising these valuable documents so that we can learn more about the politics, economy and culture of this early prosperous African civilisation.



Old view of Timbuktu, 1860

An interesting question is: why did formal education start in Africa only after the establishment of Islam? One answer is that in most sub-Saharan African societies, language was not written down. Skills and knowledge were passed from generation to generation informally, by story-telling, for example, or on-the-job training in the field. Cultural practices and beliefs were also conveyed through dances and rituals. And we know that hunter-gatherers in sub-Saharan Africa expressed their ideas in cave paintings for thousands of years before written language was developed (somewhere in Mesopotamia and Egypt around 3700 BC). The earliest known cave art, at Blombos on South Africa's southwest coast, dates from 80,000 years ago. But these hunter-gatherer groups – and the pastoral and agricultural groups that replaced them – did not develop or adopt written language.

The most likely reason writing did not develop in sub-Saharan Africa is that the knowledge and technology of Egypt could not reach central and southern African countries because of the climatic differences between the northern Sahel, the tropical forests of central Africa and the savannah of the south. For example, the knowledge of how to make paper from papyrus, a plant common in Egypt, was adopted by societies in the Middle East and Europe, but never by those in Southern Africa. This was because the tropics acted as a barrier to technology transfer: the many diseases in the tropics prevented the use of animals like cattle and horses and prevented, therefore, the large-scale migration of people and their ideas for much of human history.

Without writing, African societies could not develop a system of formal education like the European education system that developed during the Middle Ages (500 to 1600). Instead, most African societies relied on traditional informal education where ritual, games, singing and dancing played an important role. Boys and girls were often taught separately to help prepare them for their adult lives. There were no teachers or lecturers as we know them. Instead, all members of the community did this work, helping to educate the children until their ritual passage ceremony from childhood to adulthood.

The arrival of Islam introduced more formal models of education to North and West Africa as well as parts of the East African coast. The Muslim conquerors and traders brought with them written texts. This meant that many/certain Africans who adopted Islam and learned Arabic learned to read, write and deepen their knowledge of philosophy, religion, science, medicine and many other subjects. Now Africans could share the knowledge of great thinkers and philosophers who came before them. They could study mathematics, science and medicine by reading what generations of scholars had written on these subjects. Written language gave some access to the works of great scholars. It is important to emphasise that such education was often limited to a small male elite

and that most Africans remained illiterate. Such learning was also concentrated in certain areas with high population densities. Yet even with these important caveats, the arrival of the written word meant that Africa could now produce internationally famous scholars. Ahmad Baba al Massufi, for example, studied at Timbuktu and by the time he died in 1627 he had published more than 40 books, mostly on religious law, slavery and grammar, becoming one of Africa's greatest scholars.

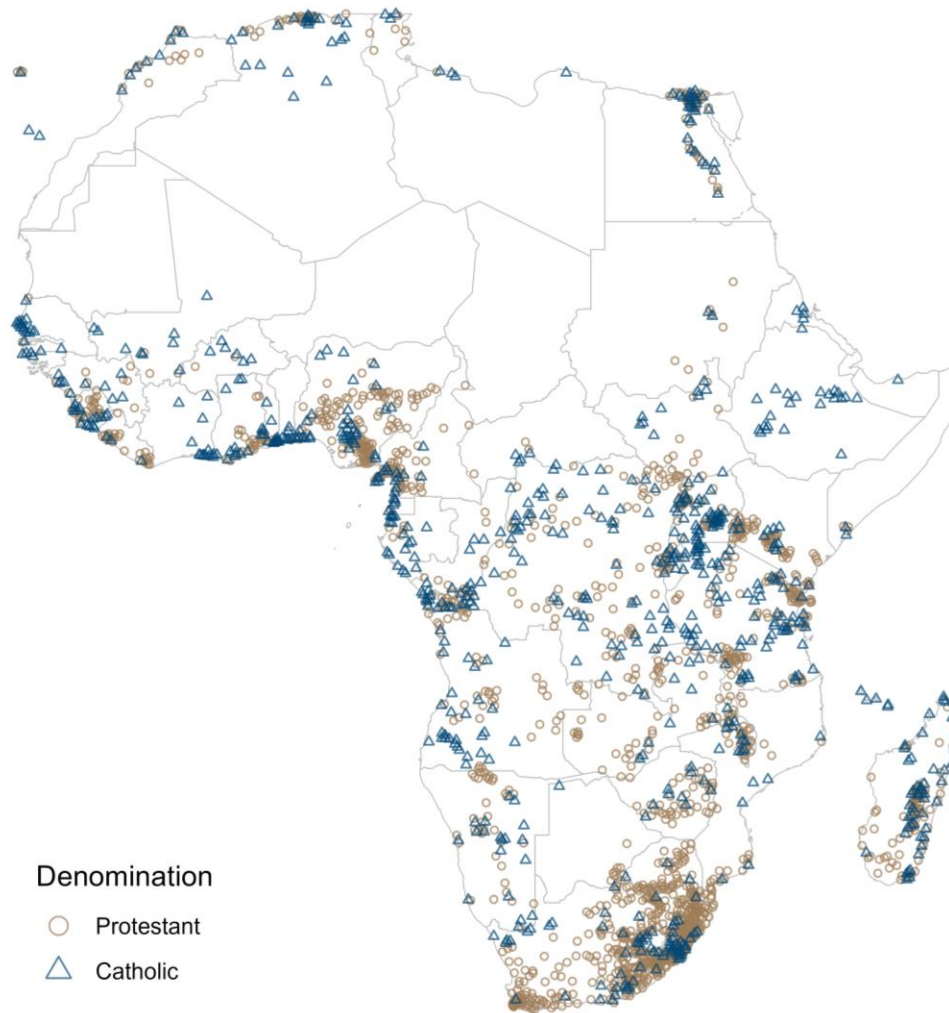
4.2 The rise of mass-education through Christian missionaries

Small groups of Europeans settled the southern tip of South Africa by the mid-17th century. They brought with them printed books and the ability to read and write. The printing press was invented in Germany by Johannes Gutenberg in around 1450. This technology allowed the mass production of books at low cost. As more people could now afford books, it triggered an increase in literacy among Europeans and the increasingly literate population was, in turn, interested in further expanding *formal* education to reach a growing part of society. Unlike informal education, *formal education* occurs in a classroom setting, is standardised by pre-defined curricula, certified degrees, and applies uniform testing methods.

Aside from the 17th-century Cape Colony, Europeans did not settle in large numbers in Africa before the discovery and availability of quinine, a drug used to treat malaria from the 1850s onward. Where Europeans tried to settle, they would often succumb to tropical diseases like malaria or yellow fever. But by the 19th century, quinine allowed African explorers – like David Livingstone – to reach African societies that had not been in contact with Europeans before. Why were these African explorers so interested to make contact, however?

The answer is Christianity. When Gutenberg invented the printing press in Germany, this new technology caused a transformation of society: it allowed new religious ideas to spread rapidly in Europe. The Bible was translated into German (from Latin) into other languages, and a new religious movement was born: Protestantism. One consequence of this was that there was competition within Christianity to spread the gospel to as many people as possible. From the mid-19th century onwards, once quinine allowed Europeans to survive and settle in Africa, it also allowed Western missionaries to establish stations to spread the word of God. Many of these early missions were initially created along the coast of West Africa. By 1910, approximately 4,600 Western and 28,000 African Protestant missionaries were evangelising on the continent. Figure 5 maps the 756 Catholic and 1,522 Protestant main mission stations across Africa by the early 1920s.

Figure 5: Main mission stations in Africa, c. 1920s



Source: Hedde-von Westernhagen & Becker (2022).

Mission stations did more than just spreading the word of God. Formal education was a key aspect of missionaries' conversion strategies, and thus, education became firmly connected to Christian missions. Without major public investments into African education by European colonial states, missions provided the bulk of education in most colonies and relieved colonial governments from financing public education. It was not just European missionaries who taught in mission schools, however. Soon, Africans converted and spread the Christian message along a chain of mission stations, with schools to provide basic education and hospitals to care for the sick.

African agency was key in the rise of mass education in Africa. After all, the lion's share of the missions was run by Africans and not European staff. Table 1 demonstrates this fact by showing the number of Western and African staff employed by the Protestant and Catholic missionary societies across sub-Saharan Africa in the early 20th century. It shows that among Protestant

missionary societies, there were 1,566 European missionaries and 2,987 unordained European mission staff active on the continent. With this relatively small number of European mission staff it would have been impossible to convert half of Africans over the 20th century to Christianity. Missionary societies quickly realised that African expertise and initiative were essential in spreading the gospel in the local vernacular. Consequently, by 1908, 1,552 ordained African missionaries and 25,000 unordained mission staff working as catechists, teachers and medical assistants, making up 85% of total Protestant and 71% of Catholic mission staff, thereby creating opportunities for upward social mobility through mission employment in their schools, churches and hospitals. Moreover, the majority (55%) of European Protestant missionaries by 1922 were women who worked as teachers in girls' schools and as hospital nurses – not men who had dominated missionary staff throughout the 19th century. The share of female missionary workers among African staff was smaller, around 6%, but equal in numbers.

Table 1: Western and African missionary staff in Africa, c. 1910

	Ordained missionaries		Unordained missionaries		Ordained and unordained staff
	Western	African	Western	African	Share of African mission staff
Protestant	1,566	1,552	2,987	24,933	85%
Catholic	2,078	94	1,307	8,196	71%

Source: Meier zu Selhausen (2019).

The education that Africans received at these mission stations had important consequences for them and their societies. Mission education created opportunities for upward social mobility into clerical, medical and vocational occupations during the colonial era. Mission schools not only taught literacy but also offered training in vocational skills, such as carpentry skills, that introduced students to the construction with new technologies, including newly imported steel tools, electrical machinery, measurement techniques, and algebra. For example, the number of the sons of chiefs who attended local mission schools in colonial Uganda indicates the strong attraction to wage work.

In the early colonial era, skilled African labour was extremely scarce and, therefore, expensive. Often colonial governments and European companies had to import skilled workers to meet their technical labour needs (e.g. car mechanics, electricians, and carpenters). Carpenter's *skill premiums*, defined as the relative price of skilled versus unskilled labour, were relatively high. Demand for local carpentry skills in the first decade of the 20th century resulted in carpenters earning 400% more than an unskilled worker in Malawi or Cote d'Ivoire and 200% more than an

unskilled worker in Nigeria or Kenya. Skill premiums in Africa started to fall over the course of the 20th century, with more and more people acquiring technical and clerical skills and the rise of mass education. By the late colonial era in the 1950s, missions in British colonial Africa had lost their monopoly on primary education to public schools run first by the colonial government and post-independence by modern African states.

4.3 Colonial differences in education

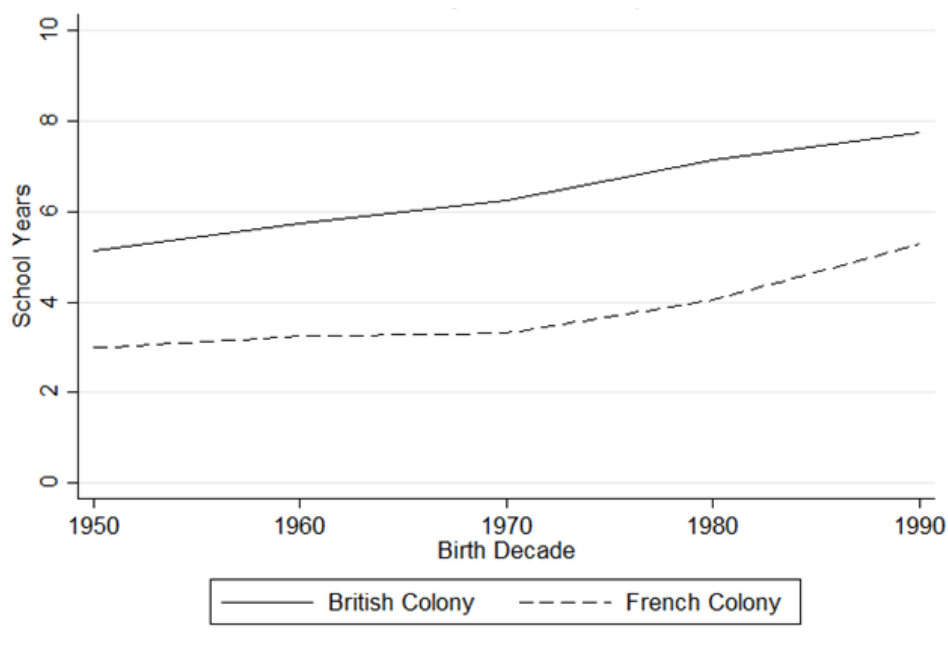
The differences between the education outcomes of African countries are often explained as the effect of the nationality of the coloniser. African countries that were colonised by the British tend to be better-performing economies today than those that were colonised by France, for example. To look at this difference, we use a dataset that combines several household surveys (USAID's Demographic and Health Surveys and UNICEF's Multiple Indicator Cluster Surveys) and censuses conducted in 42 Sub-Saharan African countries. The data is organised by birth decade, which means, for example, the average number of years of schooling for the 1950s birth decade includes all individuals born between 1950 and 1959. These people went to school at approximately the same time and hence, were exposed to similar conditions. Last, we only look at individuals between 23 and 62. Younger individuals might not have completed their schooling yet. For older individuals, we do not have enough observations across our datasets.

We can see in Figure 6 that individuals born in countries that had been colonised by the British (black line) have, on average, a higher number of school years compared to those that had been colonised by the French (dashed line). For the 1950s birth decade, individuals from former British colonies had, on average, about five years of schooling, whereas individuals from former French colonies only had about three years. While both regions increased their overall years of schooling, the difference did not change. For the 1990s birth decade, the average in former British colonies is about 8 years versus about 5 in French colonies.

Some have argued that this was because the British invested more in education than the other colonisers. But others suggest that this was because the British were more supportive of missionary education than other colonisers, who believed that education was the government's responsibility. British colonial governments 'privatised' their education. They encouraged private organisations in the form of missionary schools to provide formal education rather than providing it themselves. In this way, mission education in British colonial Africa could reach far more children than in the French territories which largely relied on government schools, even though the French colonial state may have spent more on education. We can say that countries that were formerly British

colonies are richer today not because they were under British rule but because, a century ago, the residents received an education that enabled them to become part of the market economy.

Figure 6: Average years of education in former British and French colonies per birth decade



Sources: Demographic and Health Surveys, Multiple Indicator Cluster Surveys and IPUMS. Individuals aged 23-62 at the time of survey included from 27 sub-Saharan African countries.

Independent of the nationality of the colonisers, the need for formal education in Africa was highlighted already during the colonial era. The Phelps Stokes Fund, an American foundation, convened several commissions in the 1920s to study the educational conditions and needs of Africans and made recommendations for improving access and quality. These recommendations were taken up especially after the Second World War, as European colonisers started to realise that they had to fundamentally change the social principles and legitimisation of colonial governance to maintain power.

The subsequent rapid expansion in African primary education can be seen in Table 2, which presents the average enrolment rates (another indicator to measure education) in colonial Africa in 1938 and onwards. It is interesting to note the slower post-1940 growth of enrolment rates in British Africa. In other words, the British lead in African education is mainly due to the high rate of missionary activity in the British colonies before 1940 rather than supposedly effective educational investment policies in the post-war and independence years. The pre-1940 differences in enrolment rates were important because they remained quite persistent over time which we could also observe in the graph of the previous section.

Table 2: Gross enrolment rates at primary school level in percentages of total population age 5-14 for African countries, 1938-1960

	1938	1950	1960	1938-1960 (total increase)
British colonies				
Botswana	16	22	29	13%
Gambia	3	5	7	4%
Ghana	8	19	34	26%
Kenya	12	26	33	21%
Lesotho	50	59	58	8%
Malawi	35	39	21	-15%
Mauritius	38	51	59	21%
Nigeria	8	16	25	17%
Sierra Leone	5	7	16	11%
Somalia	1	1	4	3%
Sudan	3	6	10	7%
Swaziland	24	29	41	17%
Tanzania	5	10	20	15%
Uganda	27	18	29	2%
Zambia	30	35	34	4%
Zimbabwe	33	44	48	15%
French colonies				
Benin	7	2	16	9%
Burkina Faso	1	2	5	4%
Cameroon	21	25	39	18%
Central African Rep.	2	7	19	17%
Chad	1	1	10	9%
Congo, Rep.	5	24	47	42%
Côte d'Ivoire	4	6	28	24%
Djibouti	7	9	12	5%
Gabon	5	21	29	24%
Guinea	5	3	12	7%
Madagascar	14	22	31	17%
Mali	2	3	6	4%
Mauritania	2	1	5	3%
Niger	1	1	3	2%
Senegal	6	7	16	10%
Togo	6	17	26	20%
Other colonies or independent territories				
Angola	1	1	8	7%
Guinea Bissau	1	5	15	14%
Mozambique	5	12	24	19%
Equatorial Guinea	15	20	43	28%
Congo, Dem. Rep.	23	33	36	13%
Rwanda-Burundi	7	11	24	17%
Ethiopia	1	2	4	3%
Liberia	6	11	19	13%
Namibia	15	22	28	13%

Source: Frankema (2011).

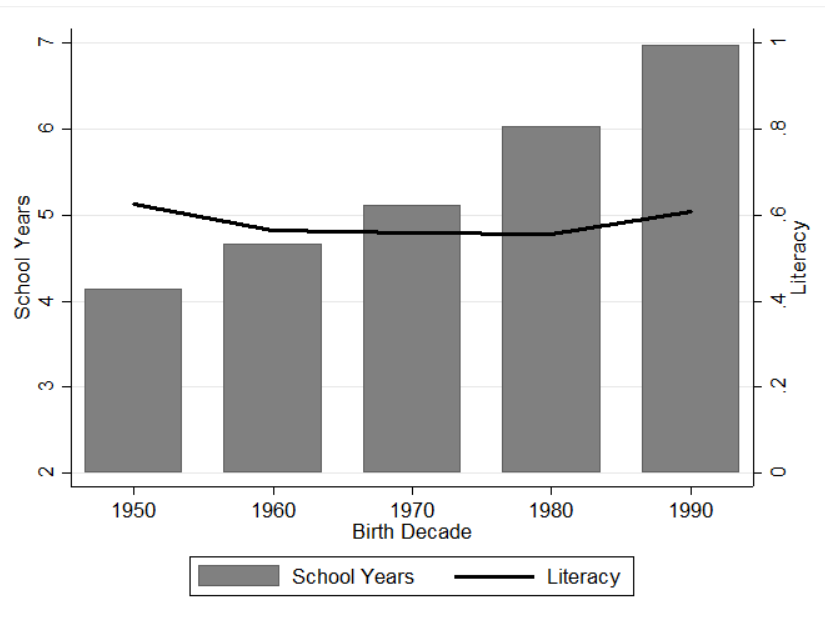
Colonial government and missionary education, as well as African parents, disproportionately favoured male over female education. Research now shows that the gap between male and female educational attainment increased during most of the colonial era (ca. 1880–1960). This had important consequences, with boys benefitting disproportionately from rising education opportunities, allowing to fill formal jobs that women did not qualify for. Although the gap was somewhat closed during independence, as the next section show, there are still large disparities between men and women when it comes to education.

4.4 Educational development post-independence

Education expanded dramatically in Africa post-independence. From 1970 to 2010, the share of children in sub-Saharan who completed primary school rose from 46% to 68% and the proportion of children completing lower secondary school increased from 22% to 40%. Modern African states invested in formal education, building new schools and providing more and better-qualified teachers. Burkina Faso is a good example: according to Michael Clemens (2004), it has “spent the last few decades bringing children into primary school at more than twice the rate achieved by today’s rich countries when they were developing. It has achieved this with an economy far less developed than the leading economies of the 1800s and less developed than the vast majority of countries after 1960.” Indeed, a revolution.

On the whole, then, *access* to education improved after independence, though the *quality* of education lagged. In Figure 7, we look at the development of school years and literacy across five birth decades using the same dataset as in the section on colonisation. The left axis refers to the years of schooling shown in bars, and the right axis to the share of literate people shown as the line. This graph includes all 42 countries in Sub-Saharan Africa for which we have data. People born in the 1950s have, on average, about four years of schooling. For the 1970s birth cohort, this number already increased above 5 and for the 1990s birth cohort above 7 years of schooling. However, the figure also displays literacy rates (black line) across birth cohorts, which have barely changed over the same time. There is a high number of pupils who have limited literacy or numeracy skills even after several years of school attendance. Thus, while the quantity of schooling has increased rapidly, its quality has not fully caught up yet. Reasons for this learning crisis include increased class sizes that offer less attention to each student and teachers’ absence and qualifications.

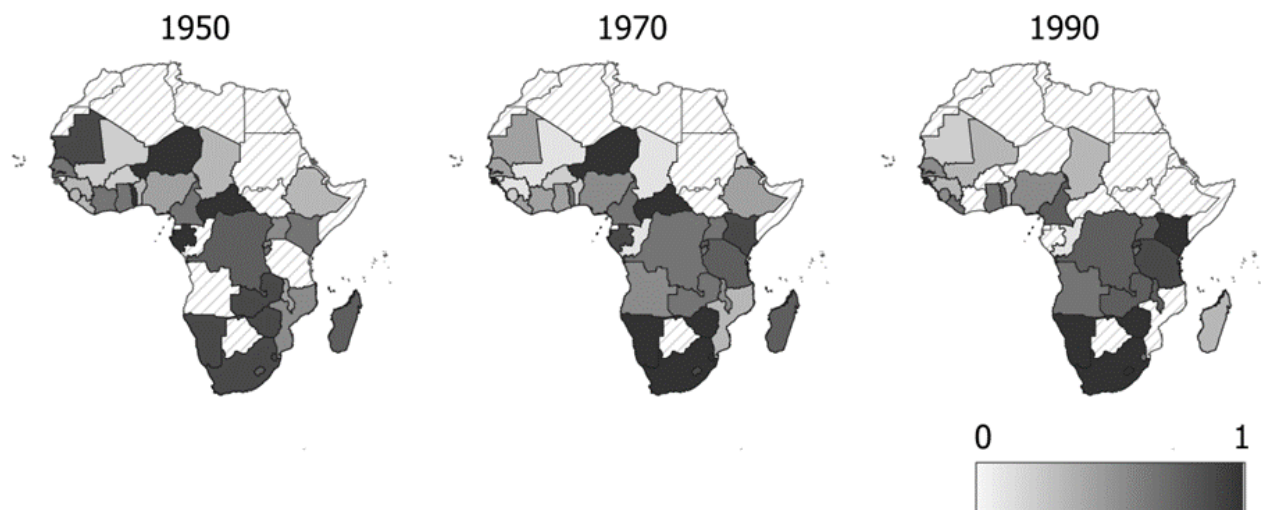
Figure 7: Average years of education and literacy in sub-Saharan Africa per birth decade



Sources: Demographic and Health Surveys, Multiple Indicator Cluster Surveys and IPUMS.

Yet, the experience of the different countries has been quite heterogeneous. Figure 8 displays the literacy rates across Sub-Saharan African countries for the 1950s, 1970s and 1990s birth decade. There are some countries which have increased the literacy rates, such as Malawi, Namibia and Lesotho, while other countries experienced a downward trend, such as Madagascar or Mauritania. In other countries, little changed. While literacy is only one educational outcome out of many important ones, the numbers show that the basic goal of literacy is not yet achieved in many countries. Hence, improving the quality of education remains one of the big challenges.

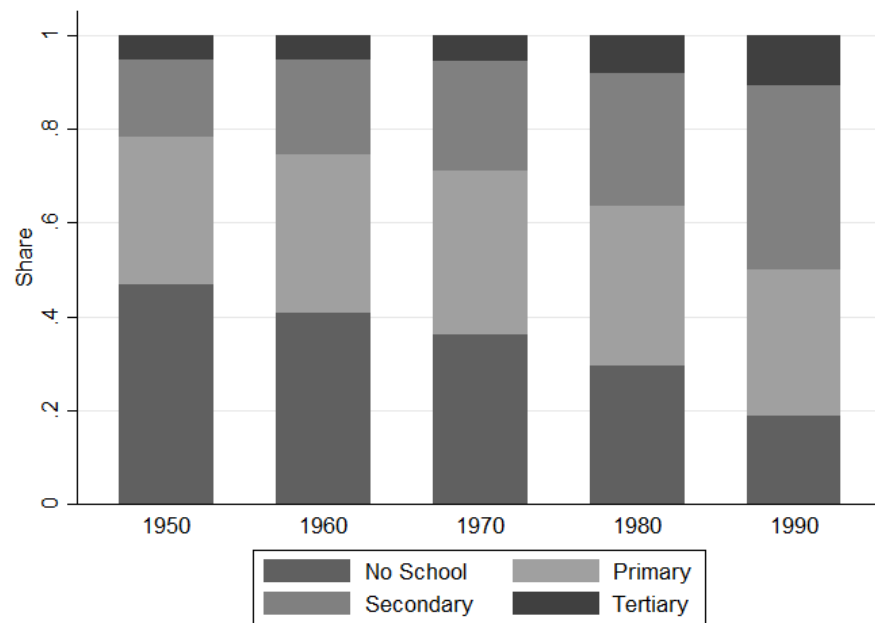
Figure 8: Mean share of the adult literate population in Africa by country per birth decade



Sources: Demographic and Health Surveys and Multiple Indicator Cluster Surveys.

The first step is to increase school enrolment. Table 2 indicated that primary enrolment increased in African countries until the 1960s, and Figure 9 shows that this trend continues – school enrolment is still on the rise in Sub-Saharan Africa. First, there is a steady decline in people who have never attended school. In the 1950s birth cohort, more than 50% of people never visited a school, but in the 1990s birth cohort, this number fell below 20%. Similarly, the share of secondary and tertiary-level graduates has increased steadily over the decades, increasing from less than 20% to almost 40%. Moreover, in the 1990s birth cohort, more than 10% have a tertiary degree.

Figure 9: Distribution of educational levels in sub-Saharan Africa per birth decade



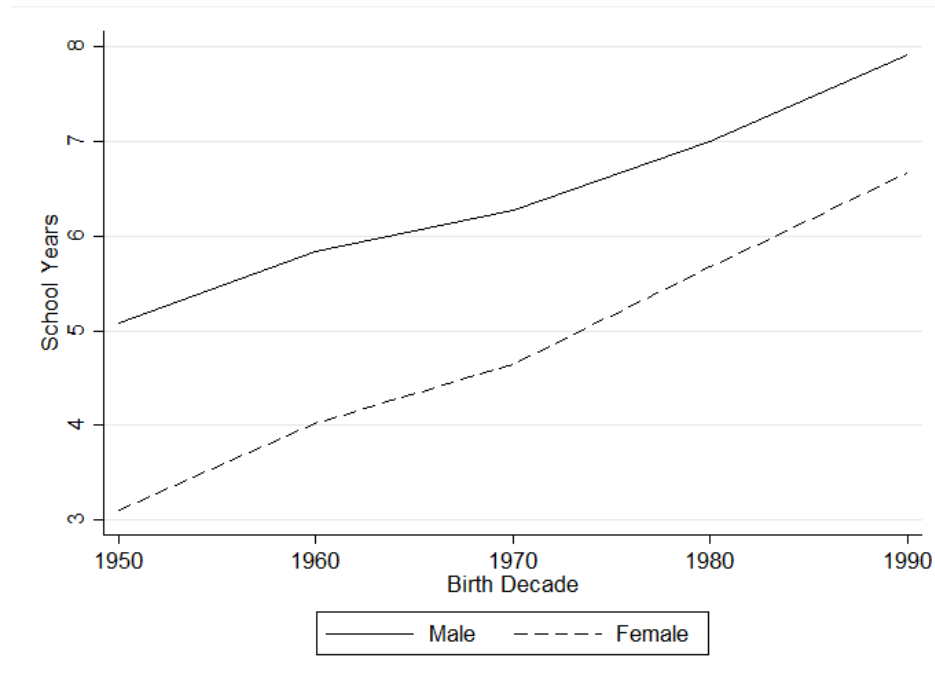
Sources: Demographic and Health Surveys, Multiple Indicator Cluster Surveys and IPUMS.

However, of those who managed to get a university qualification, many did not stay in Africa. Some went to Europe or the United States in search of higher salaries. Some of them left because of political unrest in their own countries. This ‘brain drain’ means thousands of Africa’s most brilliant scholars and entrepreneurs live outside Africa. They are not passing on their knowledge and skills to the next generation, which further reduces the quality of education in African countries.

Has the expansion of education post-independence been evenly shared between men and women? Figure 10 shows the average years of education of men (black line) and women (dashed line) born between 1950 and 1990. Today, Sub-Saharan Africa is, in terms of education, the most gender-unequal region in the world. Men born in the 1990s had, on average, 1.3 more years of education and are subsequently more likely to be literate on average. While the gap is slowly shrinking, current and future generations must ensure that girls have equal access to quality schooling. The

benefits, as explained earlier, are numerous. The low quality of education children in Africa receive remains Africa's biggest obstacle on the road to prosperity that independence should bring.

Figure 10: Gender gap in mean years of education in sub-Saharan Africa per birth decade



Sources: Demographic and Health Surveys, Multiple Indicator Cluster Surveys and IPUMS.

5. The future of education in Africa

As we have seen in this chapter, there are many reasons for African countries' comparatively lower levels of education. But there are also reasons to be optimistic about the future. Throughout history, better access to education and better quality education have gone hand in hand with better incomes. But it is hard to decide which comes first – the improvement in education or the increase in incomes. Better education helps people to get a higher income, but a higher income also helps people get a better education. The extra income means they can buy goods that help them to benefit from education, from basics such as electric lighting and better food to more advanced educational aids such as books and laptops. So improvements in education and progress in the economy reinforce each other.

The critical point is that as African societies become wealthier, we can expect more Africans to demand better education from their schools and universities. If improvement comes too slowly, they will seek better education elsewhere. This does further damage to Africa, as valuable skills are lost.

In the past, finding better education usually meant leaving Africa, but with the rise of our digitally connected world, high-quality education is just a click away. Modern communication technology is an essential tool in the quest to provide better education for African students. Mobile phones are used everywhere in Africa and offer access to the high-quality education many Africans desire. Several African firms are, for example, producing mobile phone games for children to improve their skills in mathematics or English. But the most significant advantage of better technology is access to the internet. As the libraries of Timbuktu did in the past, it gives access to a large body of knowledge previously unavailable to African students. Information about philosophy, medicine, economics, biology, engineering, statistics, history, geography, chemistry or any other subject imaginable is now at their fingertips.

Not only is this information freely accessible, but the teaching of it is increasingly becoming free too. Several courses from leading universities like Harvard and the Massachusetts Institute of Technology now provide free online courses in several subjects. Instead of enrolling at an African university, students can subscribe for free to these online courses and learn the skills necessary to partake in the advanced market economy. African tertiary education of the future may not only be provided by large universities funded by under-resourced governments. Governments (or local communities) may instead offer computer centres where students can listen to and learn from the world's leading scientists.

Study questions

1. Why is education important for countries' economic development?
2. What are the differences between formal and informal education in traditional African societies?
3. Religion, both Islam and Christianity, seems to have played an important role in the development of formal education in Africa, and therefore on economic development. Do religious organisations still matter for Africa's future development?
4. What can be done to reverse the 'brain drain'?
5. Explain the concept of skill premium.
6. Which school subjects are the most important for economic development?
7. How can African universities become internationally competitive?

Suggested readings

- Baten, Joerg, Michiel De Haas, Elisabeth Kempter and Felix Meier zu Selhausen. Educational Gender Inequality in Sub-Saharan Africa: A Long-Term Perspective. *Population and Development Review* 47, no. 3 (2021): 813-849.
- Becker, Bastian and Felix Meier zu Selhausen (2023). The Feminization of the Mission: Exploring the Protestant Origins of Gender Equality in Africa. *AEHN Working Paper*.
- Bloom, David Canning and Kevin Chan, (2006). Higher Education and Economic Development in Africa, Human Development Sector. Washington DC: World Bank.
- Boone, Peter, Ila Fazzio, Kameshwari Jandhyala, Chitra Jayanty, Gangadhar Jayanty, Simon Johnson, Vimala Ramachandrin, Filipa Silva and Zhaguo Zhan (2013). The Surprisingly Dire Situation of Children's Education in Rural West Africa: Results from the CREO Study in Guinea-Bissau'. *NBER Working Paper* 18971, National Bureau of Economic Research.
- Clemens, Michael (2004). The Long Walk to School: International Education Goals in Historical Perspective. *Center for Global Development Working Paper* 37.
- Frankema, Ewout (2012). The origins of formal education in sub-Saharan Africa: was British rule more benign? *European Review of Economics History*, 16(4), 335-355.
- Frankema, Ewout and Marlous van Waijenburg (2023). What about the race between education and technology in the Global South? Comparing skill premiums in colonial Africa and Asia. *Economic History Review*, forthcoming.
- Gallego, Francisco and Robert Woodberry, (2010). Christian Missionaries and Education in Former African Colonies: How Competition Mattered. *Journal of African Economies*. 19(3): 294-329.
- Hedde-von Westernhagen, Christine and Bastian Becker (2022). Mapping Missions: New Data for the Study of African History, *Research Data Journal for the Humanities and Social Sciences* 7(1): 1-33.
- Jedwab, Remi, Felix Meier zu Selhausen, and Alexander Moradi. The economics of missionary expansion: evidence from Africa and implications for development. *Journal of Economic Growth* 27, no. 2 (2022): 149-192.
- Meier zu Selhausen, Felix (2019). Missions, Education and Conversion in colonial Africa. In David Mitch and Gabriele Cappelli, *Globalization and the Rise of Mass Education*. London: Palgrave Macmillan, pp. 25-59.
- Meier zu Selhausen, Felix (2014). Missionaries and female empowerment in colonial Uganda: New evidence from Protestant marriage registers, 1880-1945. *Economic History of Developing Regions* 29(1): 74-112.
- Roser, Max and Esteban Ortiz-Ospina (2016). Global Education. Published online at Our World in Data. Retrieved from: <https://ourworldindata.org/global-education>.

About the authors



Sarah Ferber is a PhD student in Economics at the University of Tübingen in Germany. She completed a joint Master program at Göttingen University, and Stellenbosch University, South Africa.



Johan Fourie is Professor of Economics at Stellenbosch University in South Africa. He is the author of *Our Long Walk to Economic Freedom*.



Felix Meier zu Selhausen is Assistant Professor at the Economic and Social History Department at Utrecht University. He is co-editor of AEHN's *The History of African Development*. He has published widely on missions and education by gender in Africa.