Higher Education in Africa

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Challenges for Development, Mobility and Cooperation

Edited by

Anne Goujon, Max Haller
and Bernadette Müller Kmet

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INTRODUCTION[1]

The relevance of higher education and scientific research for economic, social and political development is beyond doubt. Without them, the industrial and political revolutions of the 18th and 19th centuries would not have happened. But also the impressive catch-up of the state-socialist countries in eastern Europe and of Japan in the 20th century, or the recent spectacular economic growth in many south-east Asian countries, were based on a massive upgrading of the educational level of their populations, including a strong expansion of the tertiary sector. Africa, and in particularly sub-Saharan Africa, is still lagging behind all other major world regions both in terms of general and higher education. While in most other countries and macro-regions of the global South, about one-third of the working-age population have attained some upper secondary and post-secondary education, this proportion is only between one-sixth and one-fourth in Sub-Saharan Africa; it is comparably high only in northern Africa and the Republic of South Africa and its small neighboring countries.

The debate about investing in higher education in sub-Saharan African countries was controversial for some time. Most researchers and international donors argued for a sequential development of schooling, prioritizing the lower levels (primary followed by secondary education) at the earlier stage of development—where a large number of African countries are—before moving on to higher education at the late stage of development as exemplified by the success stories of countries in eastern Asia (World Bank 2003; Psacharopoulos 1994, 2004; Petrakis and Stamatakis 2002). On the other hand, cross-country comparisons revealed that the presence of the right mix of skilled resources corresponding to the

[1] The editors would like to thank the following institutions and persons: The Vienna Institute of Demography (Austrian Academy of Sciences), the International Institute for Applied Systems Analysis and the University of Graz for providing extra-funding and in-kind contributions that allowed us to complete this work; Lisa Janisch for organizing efficiently language editing; Daisy Brickhill, Kathryn Platzer, Werner Richter, and Matthew Cantele for language editing; and Edith Lanser for helping with formatting in the last stage of the book production. Thanks to all. All remaining errors are ours.

need of the labor market and the economy largely explains the advancement of economic development in many settings (World Bank 2008, Un 2012). Furthermore, some researchers, while not contesting the need to invest in basic education, contended that higher education needs to be promoted as well even if it does not address large segments of the population. For instance, Bloom, Canning and Chan (2006) point out that the development of higher education could push forward change and innovation, just as much as capacity building in many of the poverty-stricken countries. It is especially key to promote faster technological catchup, in particular if many of those students in higher education graduate in science and technology—to supply the scientists, engineers and technicians that are necessary for the knowledge economy. Also, higher education provides the opportunity to acquire competences that are crucial to increase private, but also social and economic returns such as adaptability, team work, communication skills and the motivation for continuous learning. While both enrollment in higher education and the share of the productive labor force with tertiary education are still very low in most sub-Saharan African countries, some gain can be observed and is projected to continue as a result of increases in demand and increases in the school-age population.

Sub-Saharan Africa's population will most likely reach one billion in 2017 (United Nations 2015), accounting for 13 per cent of the world population. Its population is the youngest of all world regions, with 43 per cent of the population under the age of 15, 54 per cent under 20 and 63 per cent under 24. The share of the population in the age of attending higher education—set at 18–23 years—includes 11.5 per cent of the population in 2015 and will remain constant until 2035, which means, at the rapid population growth rates in this sub-region, that this population will increase by 50 per cent from its 2015 level (110 million) until 2035 (183 million), and will have doubled by 2050 (235 million).

Rapid population growth, together with the rising demand for higher education largely explains why the number of universities and colleges has been increasing very fast in sub-Saharan Africa. In 2009, a World Bank report estimated that between 1990 and 2007, the number of public universities had almost doubled (from 100 to 200) while the number of private institutions was increased twenty-fold from 24 to 468. In 2016, the ranking web of universities counts 862 universities in sub-Saharan Africa, with more than half of them being located in just four countries: Nigeria

(223), South Africa (124), Kenya (67) and Tanzania (51).[2] Brought in relation to the population in the countries, we find that 8 is the median number of universities per 1000 population aged 18-23 in sub-Saharan Africa. Some countries have a higher number of post-secondary institutions, such as Somalia, Ghana, South Africa, and Botswana. This growth shows the vividness of the tertiary sector (comprising university and non-university institutions). However, such an explosion does not go without problems which are mainly related to the quality of the education provided in those institutions. While challenges are found both at the level of public and private institutions, the lack of appropriate regulatory bodies makes it harder to control the quality of teaching in the private sector, i.e. whether all education providers meet national and international standards —this is particularly true for higher education institutions in Francophone Africa (Saint, Lao and Materu 2014)

Notwithstanding the growth in the number of institutions, sub-Saharan Africa still has the lowest tertiary gross enrollment ratio in the world—about 9 per cent—compared for instance to 31 per cent in northern Africa or south-east Asia. Most countries actually have enrollment ratios in the tertiary sector even below that figure. This is particularly noticeable in countries such as Tanzania or Niger where enrollment ratios are below 5 per cent. South Africa, Cape Verde and Botswana are the few countries with higher enrollments in the tertiary sector, with over 20 per cent, and in Mauritius no less than 40 per cent of the relevant population are enrolled in tertiary education programs. Mauritius is in fact the showcase for how education, together with a national family planning program, can contribute to reduction in fertility allowing for an economic and development boom.

This book does not pretend to be exhaustive and to cover all issues related to higher education in sub-Saharan Africa[3] but tries to go beyond the issues that are normally tackled by academic work on higher education in sub-Saharan Africa, taking the look of practitioners at some issues that might be less known. The general demographic and statistical picture is laid out in Part I where the chapter by **Anne Goujon & Jakob Eder** presents the figures regarding the evolution of population shares with different levels of educational attainment, showing the small niche occupied by higher education in most African countries in comparison

[2] Those are estimates based largely on the 2016 ranking web of universities. http://www.webometrics.info/en [21/04/2016] and searches in Wikipedia for those countries where no universities were found in the former source, i.e. Chad, Eritrea, Guinea-Bissau, Congo, Reunion and São Tomé.

[3] For those interested into a comprehensive analysis, we would recommend to read for instance the work of Teferra and Alpbach (2003).

with other world sub-regions, particularly among the working-age population. The authors also show that there are marked differences between countries, genders and sub-regions in sub-Saharan Africa; the profiles of countries regarding higher education are widely diverging. This is an indication that education follows a diffusion process where imbalances increase at first within regions to converge again later, when a certain level has been reached. **Max Haller** first outlines the development of higher education in Africa and then looks through a sociological lens at four specific structural and institutional challenges that African higher education and academic research are faced with. They include the function of higher education in the reproduction of social inequality, the linguistic diversity of sub-Saharan Africa, the dominance of European languages in the higher education system and the potential conflict between western and African values of education. He highlights the necessary improvements in the quality of education but also in the involvement of the north, and particularly of Europe in the development of higher education in Africa. Europe and sub-Saharan Africa are actually at the center of the third and last chapter in this section by **Emnet Tadesse Woldegiorgis.** He thoroughly studies two processes of regional cooperation: the Bologna process within the European Union and the African Union Higher Education Harmonization strategy. While the cooperation framework of the former is clearly been used as model for developing the latter, the articles clearly point out that the African context should be taken into consideration.

Part II of the book reports on diverse experience in higher education in several countries of the continent—Kenya, Tanzania, South Africa, Ghana and Ethiopia—and highlights the main challenges for the successful reform and expansion of higher education. In her chapter, **Bernadette Müller Kmet** looks at the differences between public and private universities in Kenya and Tanzania. She shows that private universities have been mushrooming in both countries and argues that a simplifying confrontation between public and private universities in terms of funding sources, governance, regulations, quality, and outcomes is insufficient. As a first step toward a better understanding she carries out a detailed analysis of mission statements adopted by public and private universities in Kenya and Tanzania. She finds that significant differences exist in this regard both between the countries and between universities. **Petronella Jonck** and **Reneé Minaar** take the perspective of the employers who want to recruit recent graduates from higher education in South Africa. This point of view is interesting and actually gets more and more attention by economists and education specialists as a way to evaluate the quality and

the adequacy of education in a country with regard to the needs of the labor market. The South African context has also witnessed the burgeoning of private institutions of higher education in response to the pressure from a fast-evolving labor market. The authors conclude that the key competences in the eyes of employers were interpersonal skills, personal and career management and lastly academic skills. Not all of these skills might always be taught sufficiently in institutions of higher education. **George K.T. Oduro** and **Georgina Y. Oduro** in their paper study the research activities at university level in Ghana. They examine the missing gaps that are relevant for explaining differences in academic staff involvement in research activities and the challenges associated with supporting research and managing research facilities in Ghanaian universities. They show that the academic research conducted at universities should be made more visible to the public and to the various stakeholders, particularly policy makers. The conclusion from this chapter would possibly be relevant for other countries. Another overarching topic is that of higher education financing, tackled in the chapter by **Emnet Tadesse Woldegiorgis.** He is studying the case of Ethiopia, where—like in many other eastern African countries, such as Kenya, Uganda, Tanzania or Rwanda—the government resorted to cost-sharing programs to finance higher education. The student loans accompanying these cost-sharing programs face a big challenge at the time of cost recovery as the tracking systems through employment or bank records are rarely accurate.

Part III tackles the issue of mobility in and out of Africa that was already touched upon in Part I, in the chapter on the harmonization of higher education systems in Africa. As noted also in Chapter 2 by Max Haller, the brain drain is nowadays mostly considered to be a temporary issue and the remittances coming out of migration tend to greatly contribute to the development of education and in fact to the general development of the country in question. However, the macro level hides many individual experiences. It is the merit of the chapter by **Julia Boger** to show that the outcomes of job-hunting in one's home country after graduating from a study program in Germany can differ greatly, as in the different nationality contexts considered here, such as that of Ghanaians and Cameroonians. **Måns Fellesson** and **Paula Mählck** report about the mobility and career development among PhD graduates at Eduardo Mondlane University in Mozambique which has received support from the Swedish development agencies ever since 1990. He finds actually low mobility levels among PhD graduates, implying a reduced brain drain for the country, but also less exposure of graduates to wider research networks. The last chapter in Part III also relates to Mozambique; here,

Inês Macamo Raimundo looks at the issue of students leaving Mozambique and tries to quantify the phenomenon with a prospective view.

The fourth and last part of the book looks at cooperation programs that have been in place between the North and South, but also between the South and the South. While the programs presented in Part IV cannot be generalized for the whole continent, they provide a window on the wealth of collaborative experiences that have been going on. **Paula-Louise Macphee** and **Ann Fitz-Gerald** discuss the experience of an MSc program in Security Sector Management, developed at Cranfield University in the United Kingdom, which was "exported" to Ethiopia. On the whole the export was successful though it had to face some obvious challenges in terms of compatibility with realities on the ground. The authors note that to be more widely useful, such a program requires intense monitoring and post-evaluation. Not so different is the experience exposed in the chapter by **Lorenz Probst et al**. about a three-week interdisciplinary course on organic agriculture organized jointly by four universities in Uganda, Tanzania, Kenya, Ethiopia and Vienna. The main idea of the course was to promote societal change by training the future actors of sustainable development. The authors actually show that interdisciplinary research is difficult to implement in the rather compartmentalized sectors of higher education in Africa. Another example of a South-South—or Global South—collaboration is the one reported by **Mohamed I. Fahmy Menza and Ahmad A. ElZorkani** which takes the form of a dialogue between students and teachers at the American University in Cairo and students and teachers from several other universities in Africa. This initiative clearly has an educational component in trying to foster dialogue and teaching the existence of different opinions and the tolerance that should be developed toward other opinions even when influenced by different political, cultural or religious settings. **Christina Scherer**'s chapter deals with collaboration and partnership in higher education between Europe and Africa in the framework of the Bayreuth International Graduate School of African Studies, a doctoral program aimed at students from Africa. Beyond the challenges, the author concludes positively that "European higher education collaboration with Africa is by no means a new field for old paths of development aid but a balanced collaborative endeavor."

As already mentioned, this book does not pretend to be exhaustive in its presentation of the field of higher education in sub-Saharan Africa. Its focus is rather on some general trends, on selected topics and several revealing cases. The contributions all emerged from a workshop that was

organized by the Editors of this volume in collaboration with the administrative staff of the Vienna Institute of Demography, where the meeting took place on June 19–21, 2014[4]. The workshop was not only interesting for the wealth of experience that was presented[5]—not every contribution resulted in a paper in this book—but also for the dialogue that followed the presentations when researchers or practitioners from the North and the South were able to compare their experiences, hence enacting a global dialogue. Indeed, global comparative research, collaboration and dialogue in the field of higher education appear to be important and promising avenues not only to enhance the development of higher education in sub-Saharan Africa but also to widen and enrich academic teaching and social scientific research in Europe.

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[4] Note that most data presented in the chapters correspond to the time of writing in 2014.

[5] The programme is available online: www.oeaw.ac.at/vid/events/event-details/article/higher-education-mobility-and-migration-in-and-out-of-africa/ [accessed on 30/06/2016].

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PART I:

HIGHER EDUCATION IN AFRICA: STRUCTURAL BACKGROUND, EXPANSION AND CHALLENGES

CHAPTER ONE

THE DEVELOPMENT OF HIGHER EDUCATION IN AFRICA: REGIONAL TRENDS IN A GLOBAL PERSPECTIVE

ANNE GOUJON[1] AND JAKOB EDER[2]

Abstract

Based on global harmonized data on educational attainment by age and sex estimated for the year 2010, the Wittgenstein Centre for Demography and Global Human Capital (IIASA, VID/ÖAW, WU) has reconstructed past levels of education back to 1970 and projected those levels until 2100 according to several scenarios (Lutz, Butz, and K.C. 2014). This chapter will present a quantitative analysis of several indicators to show the overall development of education in Africa, and that of higher education in particular. This is achieved by analyzing several indicators related to population shares by levels of education, mean years of schooling, the gender gap and the change across cohorts in the recent past. We will look at potential future changes and the linkages between population and development in higher education. Overall, and not surprisingly, Africa is very heterogeneous and the share of the working-age population with higher education is low. However, there has been an increase among younger cohorts and the gap between men and women has been closing in

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recent years. The projections show that fast population growth in many countries of the continent might bring about large increases in the size of the cohorts to be enrolled in post-secondary education in the future, implying substantial investments in the higher education sector.

Introduction

The development of higher education in Sub-Saharan Africa has been and is still suffering from two interlinked handicaps. In a nutshell, the situation of the higher education sector on the one hand mirrors that of other education sectors where large segments of the population in working ages still have no or low levels of education. On the other hand, because most African societies are not yet knowledge economies, but rather largely focused on the agricultural and industrial sectors, it is difficult for graduates to find employment. This is the case principally for those trained in the humanities, because the public service and the governmental sector are unable to absorb all graduates. These phenomena reinforce each other in a vicious cycle that education and other enabling factors could turn into a virtuous cycle in the future. At the same time, African countries have long since entered an education transition and "much of Africa is at the early stage of "massification" of higher education" (Teferra 2013, xv) which is caused partly by a compelling social pressure to increase enrollment in higher education, but also population growth. The purpose of this chapter is to quantitatively frame the development of the education sector in Africa during the last fifty years in comparison to other world regions. It also looks at differences between countries and concretely addresses the issues of population growth and development of higher education, as well as the influence of higher education on population growth.

This chapter focuses on human capital, defined as the stock of the adult population at different levels of education; it is the translation of schooling enrollment and completion statistics with a time lag. Since the 1950s, educational attainment in most countries has been measured using censuses at regular intervals—usually every 10 years. However, this has not always been the case, particularly in Sub-Saharan Africa. In the last 30 years, only 33 out of the 50 countries have conducted three censuses which would be considered standard—in the 1980s (in the 1985–1994 period), in the 1990s (in the 1995–2004 period) and in the 2000s (in the

2005–2014 period).[3] Even when census data were collected, that did not mean they were accessible. For instance, IPUMS,[4] a project located at the University of Minnesota dedicated to collecting and distributing census data from around the world could only collect data from five out of the 33 series of three censuses mentioned above (Burkina Faso, Kenya, Malawi, Mali, Zambia).[5] IPUMS has managed partial coverage (of one or two censuses) in a few more countries, as well as a few older African censuses of the 1970s. Furthermore, levels of educational attainment are not always available, or if they are, they may not be in sufficient detail to allow for coherent categorization according to the International Standard Classification of Education (ISCED). The lack of data not only affects information on levels of education, and as registration systems (for births and deaths, among other things) do not properly function in many countries, some data have been collected outside of the realm of censuses through several household surveys: primarily Demographic and Health Surveys (DHS), and additionally Multiple Indicator Cluster Survey (MICS), Living Standards Measurement Study (LSMS) and Health and Demographic Surveillance System (HDSS). These surveys are extremely useful for supplementing the deficient population data collection system. They also often include data on the highest level of education and the grades completed by all members of households. However, there are two main deficiencies: the first one is inherent to the type of data collection, as surveys try to be being representative without always succeeding. This is particularly true in Sub-Saharan Africa where the more remote places, ethnic/religious minorities, or poverty-stricken households living in slums are not always covered (Falkingham and Namazie 2002). These areas are, generally speaking, populated by less educated groups and hence the surveys often tend to overestimate levels of educational attainment. The same is true for the elderly population above the age of 50. Even more pertinent to this chapter, post-secondary education in DHS is aggregated into one level with no possibility of distinguishing between the different levels of educational attainment at post-secondary level: for instance, vocational education, undergraduate or graduate studies (Bauer et al. 2012).

Most of the data used in this chapter originate from back and forward projections carried out at the Wittgenstein Centre for Demography and

[3] The data on all censuses carried out in the world are available from the United Nations Statistics Division: http://unstats.un.org/unsd/demographic/sources/census/censusdates.htm [14/01/2016].
[4] Integrated Public Use Microdata Series.
[5] https://international.ipums.org/international-action/samples [14/01/2016].

Global Human Capital (WIC 2015). The back projections reconstruct the shares of the population by educational attainment from 2010 back to 1970, taking into account the hierarchical nature of education and that it is mostly acquired at young ages. Hence by knowing the structure at one point in time, one can basically reconstruct the past taking into consideration three parameters that influence the estimation: education transition at schooling ages (up to the age 34),[6] mortality differentials—as education is a strong factor of heterogeneity in mortality (Huisman et al. 2005; Hummer and Lariscy 2011)—and education differentials in the population of immigrants. The methodology for the reconstruction is available from Lutz et al. (2007) and Speringer et al. (2015) and the one for the projection, centered on expert-based modeling, from Lutz, Butz, and K.C. (2014) and K.C. et al. (2013). The end product which we will be using throughout the chapter is the age, sex and education structure (according to six education categories: no education, incomplete primary, primary completed, completed lower secondary, completed upper secondary and completed post-secondary education) for the population of 171 countries—including most countries in Africa[7]—from 1970 to 2100 (projections according to a set of seven scenarios) in 5-year steps.[8]

Mean Years of Schooling (MYS) in Africa

Overall, the population in Africa has low levels of education. The indicator of MYS[9] is biased as it encompasses both sexes, and all age groups—from young people who recently exited the school system to the elderly who left school a long time ago—in one indicator. Hence, the overall MYS shown in Figure 1.1 is quite low, below 6 years in all of Africa, which corresponds more or less to the average duration of primary education (4 to 6 years in most education systems). The indicator reveals also that the regions are quite homogeneous, with most regions being within ±1 of this average. These regions include eastern, western, middle, and northern Africa, while the outlier is the southern African region where

[6] Detailed data have shown that in developing countries school transitions, particularly those to higher levels of education, can occur until late ages but overwhelmingly do so before age 35.

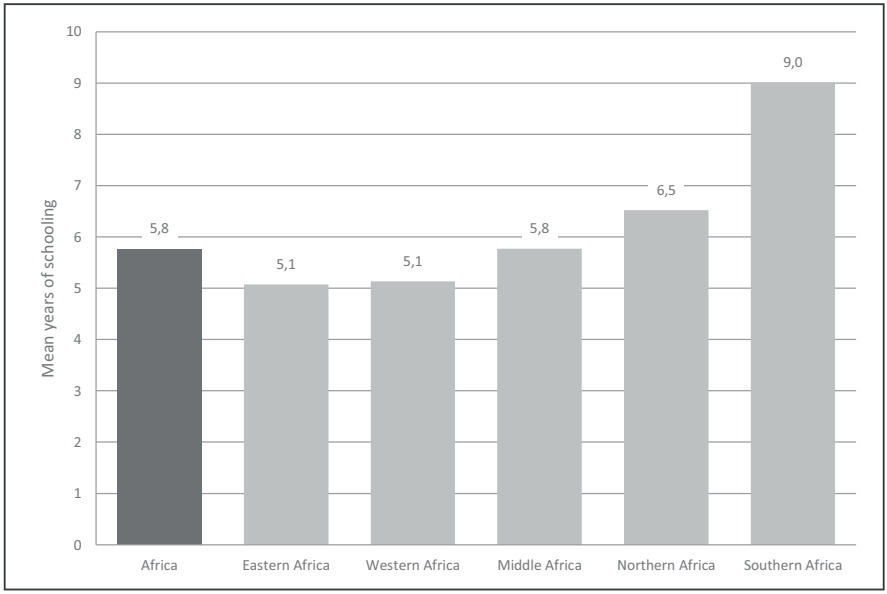
[7] The dataset is limited to countries with more than 100,000 inhabitants in 2010; data on education were not available for the following African countries: Angola, Botswana, Mayotte, Eritrea, Djibouti, Libya, Mauritania and Togo.

[8] Data are available from www.wittgensteincentre.org/dataexplorer [14/01/2016].

[9] Read Potančoková (2014) for details on MYS calculation methodology and the challenges involved.

the population over age 15 has on average 9 years of schooling which corresponds to the achievement of lower secondary education—often equivalent to compulsory education. The lowest MYS are found in eastern and western Africa which are part of Sahelian Africa, one of the poorest regions in the world with strong climatic variations that are, together with political instability, the greatest obstacles for food security and poverty reduction.

Figure 1.1: MYS of population aged 15+ in Africa and sub-regions of Africa, 2010



Source: WIC (2015)

Figure 1.2 reveals that the regional data hide the diversity of settings in the regions. The MYS of the 15+ population in Nigeria (6.5 years) in western Africa is four times higher than in Niger (1.5 years). The deviation is the same in eastern Africa where the MYS in Mozambique (2.4 years) is four times lower than that in Zimbabwe (9.7 years). While the difference is smaller in the other regions, it is still considerable in northern and middle Africa. Figure 1.2 basically tells us that regional data have little meaning in this matter.

Figure 1.2 (next page): MYS of population aged 15+, Africa, 2010
Source: WIC (2015)

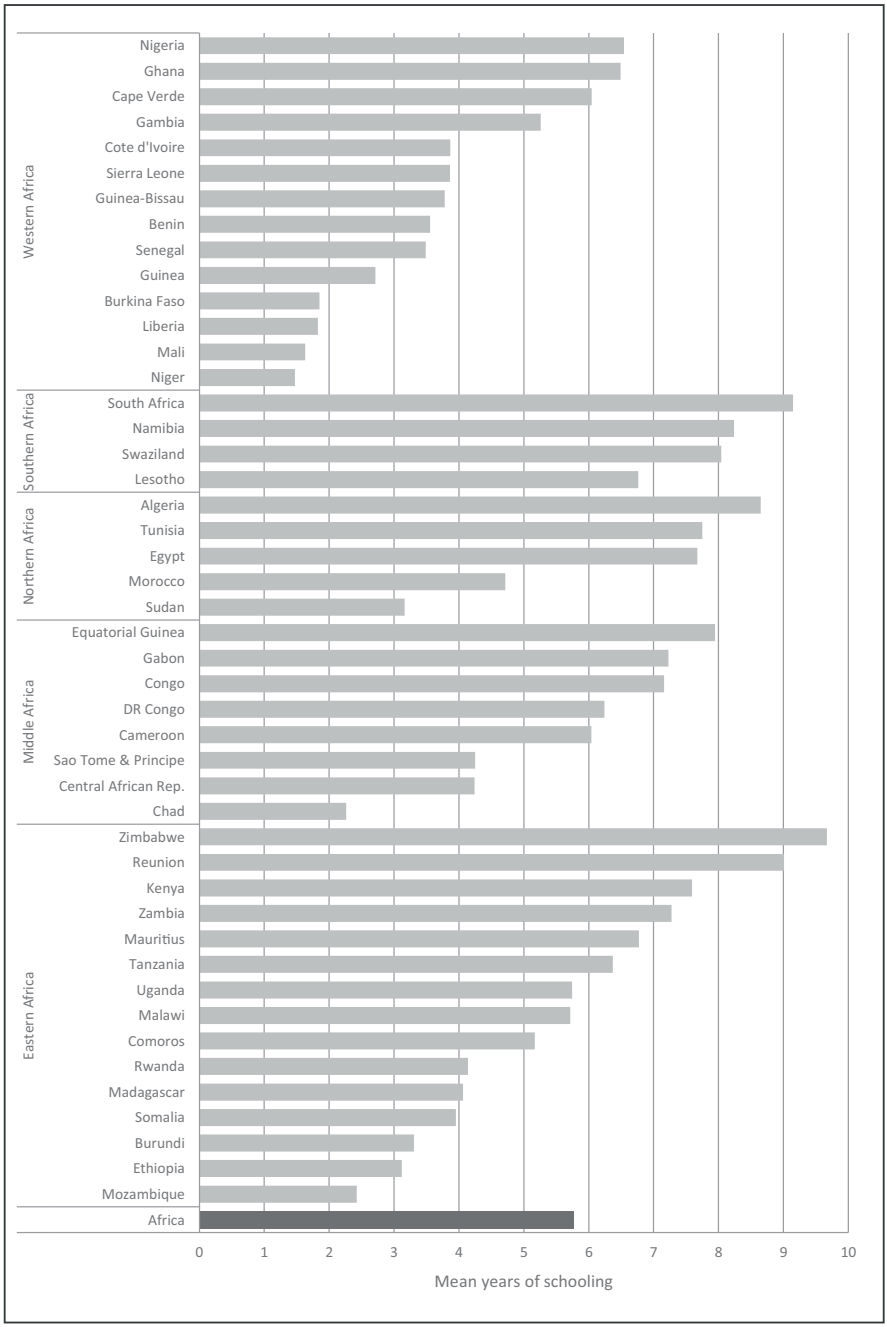
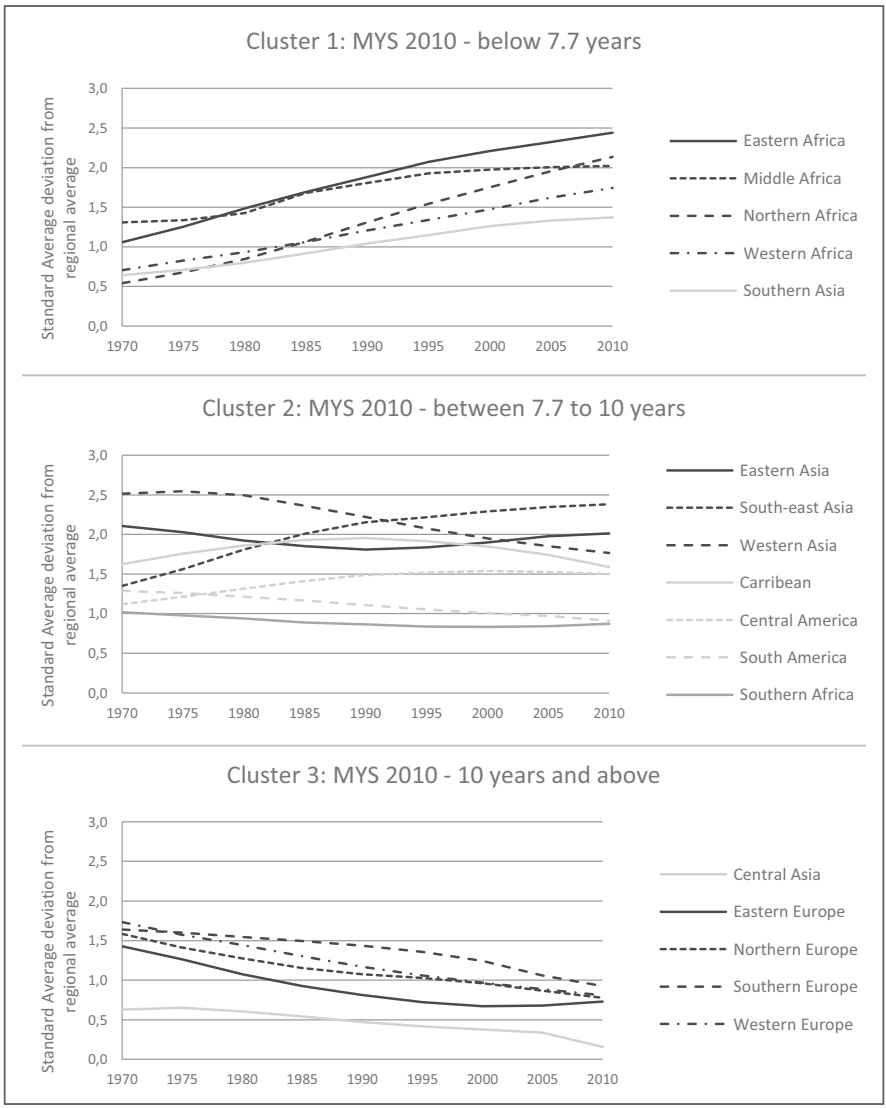

Western Africa
Nigeria
Ghana
Cape Verde
Gambia
Cote d'Ivoire
Sierra Leone
Guinea-Bissau
Benin
Senegal
Guinea
Burkina Faso
Liberia
Mali
Niger
Southern Africa
South Africa
Namibia
Swaziland
Lesotho
Northern Africa
Algeria
Tunisia
Egypt
Morocco
Sudan
Middle Africa
Equatorial Guinea
Gabon
Congo
DR Congo
Cameroon
Sao Tome & Principe
Central African Rep.
Chad
Eastern Africa
Zimbabwe
Reunion
Kenya
Zambia
Mauritius
Tanzania
Uganda
Malawi
Comoros
Rwanda
Madagascar
Somalia
Burundi
Ethiopia
Mozambique
Africa
0
1
2
3
4
5
6
7
8
9
10
Mean years of schooling

Figure 1.3: Standard average deviation in MYS in 2010 from regional average, in 3 clusters, population in age group 25-59



Source: Authors' calculations based on WIC (2015)

A different approach of looking at the same issue in a more global context is to show the patterns of regional development in terms of standard deviation of countries to the regional average for MYS in the 1970–2010 period shown in Figure 1.3. It confirms that the diffusion of education follows the same patterns as other individual characteristics such as income or health (Wils and Goujon 1998). At low levels of educational development—measured according to the criteria below 7.7 years of MYS in 2010—the standard deviation is presently increasing between countries, which is the result of different speeds of educational development towards increasing educational attainment. This cluster (1) includes all sub-regions in Africa except southern Africa, which belongs to the intermediate stage in the typology (cluster 2), with mixed patterns of deviation increasing or decreasing over the period of observation. Most Asian and Latin American sub-regions belong to this cluster (2) as well. At higher education levels—categorized as MYS above 10 years in 2010 (cluster 3)—the deviation starts declining everywhere as shown for Europe, where countries have converged towards similar levels of educational attainment and the differences between countries in the same regions are declining strongly.

As mentioned already, the MYS indicator encompasses all age segments of the population. Hence, it is not very informative similarly to all averages. For this reason in the next section we will focus on levels of educational attainment of the working-age population, which represents the potential human capital.

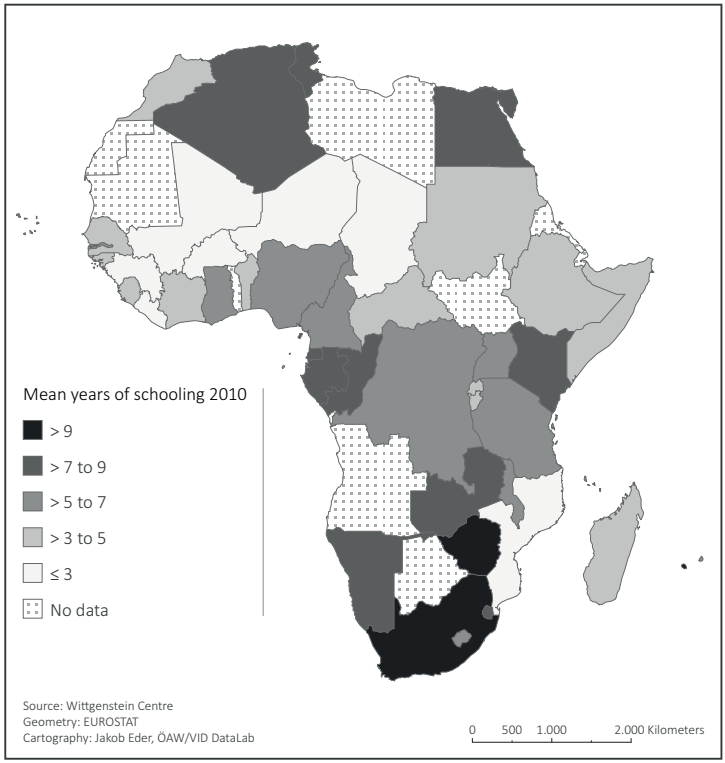
Levels of Educational Attainment of the Working-Age Population

In the following, we narrow the population down to the ages 20–64 as these individuals are potentially direct contributors to the economy. The maps in Figures 1.4a and 1.4b reveal many similarities between the MYS data and the share of the population with higher education, as countries with overall low or high levels of schooling are mostly those with low or high shares with higher education. This seems logical but it does not always occur. For instance, in India in the 1970s and 1980s dual societies coexisted: one with very low and one with very high education. This also corresponds to the case of Nigeria where the share with higher education is much larger than one would assume from the MYS. In many other countries, the maps reveal the diffusion of education, with progress to higher education happening more easily when a certain general level of education has been acquired in the population. However, this is not the case for Kenya, which shows the opposite picture of a country with quite

high MYS but a low share with higher education, a similar phenomenon can be seen in Gabon, Equatorial Guinea and in most countries in southern Africa.

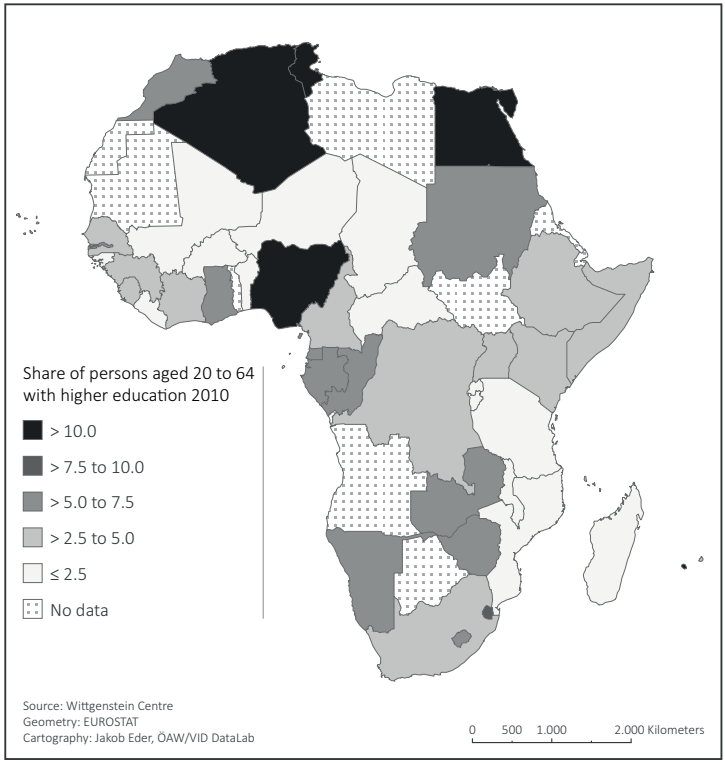
In Africa overall, and in most regions, the large majority of the working-age population has primary education or less (Table 1.1). This share is almost 80% in eastern Africa and around 70% in middle and western Africa. In southern Africa, this less educated population makes up one-third of the working-age population and in northern Africa just over half (53%). Compared with other world regions, including Asia, Africa clearly shows a trend towards low education levels beyond primary education. Only south-central Asia (including the less educated countries such as Afghanistan and Pakistan, and some states in India) exhibits similarly low educational attainment.

Figure 1.4a: MYS of the population 15+ (in years)



Source: WIC (2015)

Figure 1.4b: Share of the population 20-64 with higher education



Source: WIC (2015)

As to post-secondary education, it is below 10% in most regions of Africa with the exception of northern Africa. At country level, less than 10% of the working-age population in 48 countries have higher education and there are only seven countries where 10% or more of the population aged group 20–64 had post-secondary education in 2010, mostly in northern Africa (Algeria, Egypt and Tunisia), Reunion (an overseas department of France), Nigeria and Swaziland. In the late 1980s, of all the states of Sub-Saharan Africa, Nigeria was identified by the World Bank as the country where tertiary education could best develop in a coherent and efficient way (World Bank 1988). Amaghionyeodiwe and Osinubi (2012) showed that subsequently the country's university system did not develop as rationally as expected, with overall growth rates exceeding by far the policy guidelines set by the government, and at the expense of quality,

particularly during the military regime of the 1990s. When democracy was restored, the goals regarding higher education—to expand enrollment and improve educational quality—were constrained by the growing lack of trained lecturers and professors.

Table 1.1: Population 20-64 by levels of education, sub-regions and regions, 2010

	Level of educational attainment					
Region / Sub-region	No education	Primary incomplete	Primary	Lower secondary	Upper secondary	Post-secondary
Africa	34%	13%	17%	13%	17%	6%
Eastern Africa	32%	21%	24%	11%	10%	3%
Middle Africa	21%	21%	21%	22%	12%	4%
Southern Africa	6%	13%	13%	32%	31%	5%
Western Africa	45%	8%	15%	9%	16%	8%
Northern Africa	36%	7%	10%	12%	25%	11%
Asia	17%	5%	20%	26%	21%	12%
Eastern Asia	4%	0%	21%	42%	19%	13%
South-central Asia	34%	8%	15%	12%	21%	10%
South-eastern Asia	6%	11%	29%	18%	23%	13%
Western Asia	8%	7%	27%	13%	26%	18%
Latin America [a]	6%	13%	21%	18%	26%	15%
Northern America	1%	0%	3%	6%	51%	39%
Europe	1%	1%	6%	17%	52%	23%
Oceania	2%	3%	10%	15%	40%	31%
World	15%	6%	17%	21%	26%	14%

[a] Including the Caribbean
Source: WIC (2015)

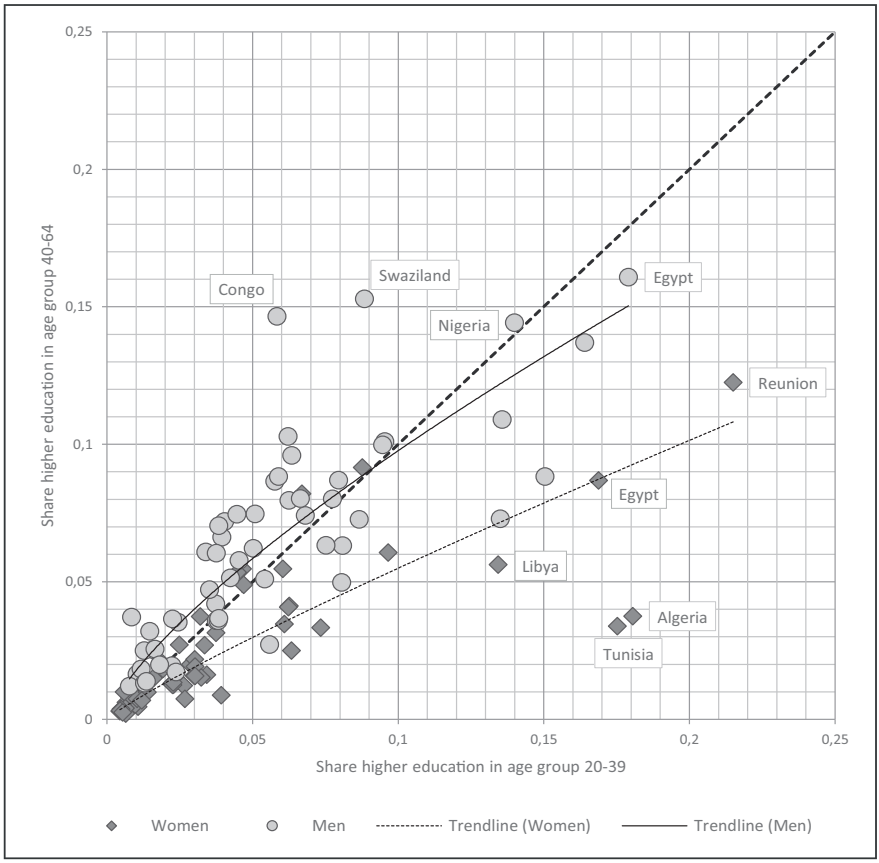
In order to disentangle the earlier and most recent changes, in the next section we will compare the share with higher education in the young and old working-age populations—dividing them arbitrarily into 20–39 and 40–64 years old. Men and women are represented separately in Figure 1.5. Comparing the two age groups leads to surprising results. First of all, while in a large majority of African countries younger cohorts are more educated than older cohorts, this is not the case everywhere and in 16 countries, the share of the population with higher education is lower among the 20–39 than among the 40–64 year olds. Figure 1.5 reveals that this is mostly the case among men. While the younger generation of women of working age seems to be more educated than the older one with only a few exceptions,[10] the opposite is true for men in a majority of countries: younger cohorts seem to have had less access to higher education than older ones.[11]

This worsening of conditions for men is not unique, and has been found in other settings: in OECD countries—DiPrete and Buchmann (2013) show convincingly that the reversal of the gender gap in college enrollment and university degree completion had already occurred by the 1980s in many countries. This was also the case in Latin America, however it has been much less documented for Africa. One explanation could be that, like in Europe, discouraged male students withdraw from education to enter the job market because of disillusionment regarding employment prospects and the monetary returns of higher education. As shown by Fortin et al. in the United States (2015), men tend to have career plans for occupations early on in their school life, which often do not require advanced degrees. Moreover, several reports show that in Africa, the young who do have some education are more likely to be unemployed. In Africa, unemployment rates tend to be higher among university graduates than the uneducated or less educated, and in middle-income compared to low-income countries. However, unemployment rates also affect more women than men and are particularly high in northern African countries where actually the increase between the two cohorts was the strongest for men (AfDB et al. 2012). The mismatch between qualification and employment opportunities is therefore part of the explanation but not the only reason.

[10] In Namibia, South Africa, Gabon and Congo (sorted from high to low shares in post-secondary education for the age group 20–39), there was a higher share of women with higher education among older cohorts compared to younger ones.

[11] In Mayotte, Djibouti, Eritrea, Burundi, Lesotho, Chad, Sudan, Morocco, Gambia, Egypt, Libya, Reunion, Ethiopia, Cote d'Ivoire, Tunisia, Algeria (sorted from high to low), there was a higher share of men with higher education among the younger cohorts compared to the older ones.

Figure 1.5: Share of men and women with higher education, 20–39 and 40–64 age groups, 2010, all African countries



Note: Both trend lines are based on power regression models.
Source: WIC (2015)

While gender gaps in education were frequent in the past, they are now more likely to occur at the lowest levels of educational attainment, which are bottlenecks when levels of education are low. At higher education levels, the gender gaps tend to be less present. Measured by the share of the population aged 25–29 with post-secondary education, women were lagging 20 years behind men in 1990, meaning that the share of women with higher education in 1990 was equivalent to that of men in 1970