

FEASIBILITY STUDY 2019

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Supporting Education in Africa: Opportunities & Challenges for an Impact Investor

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Introduction

Access, quality and equity of education systems in developing countries, and in Africa in particular, remain problematic despite the renewed commitment of the United Nations in 2015 with the Sustainable Development Goals (SDGs) 4 "Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all" and 5 "Achieve gender equality and empower all women and girls". Despite continent-wide progresses over the past ten years, the situation of the African education sector remains alarming in terms of access to education, especially for girls and rural populations, as well as in terms of the quality of learning, and this from pre-primary to higher education. Since governments have only limited resources to deal with these different problems, the private sector plays an increasingly important role in the current landscape. The mobilization of private sector regarding the education challenges opens the way for impact investors to support this dynamic and assist private providers in establishing responsible and sustainable models of private education in Africa. Nevertheless, it seems that impact investors are not very active in this sector and, to our knowledge, there is no impact fund dedicated to the education sector with a pan-African scope.

Investisseurs & Partenaires (I&P), an impact investment group dedicated to African Small and Mediums Entreprises, is planning to launch an impact fund dedicated to the education and training sector on the African continent. The government of Monaco decided to fund the launching phase of this new fund, including the conduct of the present feasibility study. The Foundation for International Development Studies and Research (FERDI) has joined the project in order to coordinate and supervise the production of this feasibility study.

This document presents the results of the feasibility study that began in September 2018 and ended in May 2019. The main purpose of this study is to identify the opportunities and the challenges to creating an impact vehicle dedicated to education in the African context, taking into account the prerogatives of the public sector, whose essential mission is to guarantee the acquisition of a universal knowledge base. The study aims to help I&P at defining the investment strategy (types of businesses, instruments, risk profile, geographic scope etc) and the impact strategy (goals, indicators, education cycles etc) and at emphasizing key opportunities and risks in their implementation.

The study consists of five parts. Part 1 examines the existing literature in order to present the debate on the private sector participation in education and to identify "good practices" in education that could eventually be developed and fostered by the private sector. Part 2 assesses the educational challenges and needs in Africa through an in-depth analysis of the education systems of five countries: Burkina Faso, Ivory Coast, Ghana, Madagascar and Morocco. Part 3 provides key findings regarding the dynamics of private education providers in the different education cycles, and proposes a segmentation of education businesses, that helps identifying

different strategies to invest in the education sector. It also analyses the economic models of a sample of carefully chosen private businesses in the education sector. Part 4 gives a comprehensive overview of the private investment landscape funding education businesses in Africa, and provides information about their motivations and their mode of operation. Finally, Part 5 concludes, providing key recommendations on how private sector initiatives can contribute to address the needs and challenges of education in Africa, and how impact investments may improve their economic and impact performance.

The Global Impact Interest Network defines impact investments as “investments made with the intention to generate positive, measurable social and environmental impact alongside a financial return.”¹ But what does it mean impact investment in education? What kind of impact I&P is looking for? A possibility is to look at impact alongside four different dimensions of educational impacts: **access, equity, quality and relevance**.

Improving access means increasing the number of children that enrol, or, in other words, to increase the time children spend at school. According to Glewee and Muralidharan (2015), access to education can be improved by building new schools, by increasing the number of days (or of hours per day) schools are open, or removing barriers to enrol to existing schools.

Improving access is extremely important when it concerns vulnerable population. **Improving equity** means increasing access to education for the more in-need populations, including individuals from low-income households, ethnic minorities, disabled people, individuals with chronic health problems, people living in remote locations, but also girls, who still have lower enrollment rates, especially in post-primary education, in many African countries.

As well evidenced by the World Development Report on education published in 2018 by the World Bank, “schooling is not the same as learning”: many children are enrolled in schools but with poor educational outcomes. Learning, measured through the percentage of students who score above a minimum proficiency level, is often quite low in many African counties (World Bank, 2018). This can be explained by the poor quality of education. **Improving education quality** entails increasing the number of children/youths that perform well to the learning assessment tests.

Another aspect closely related to quality is the **relevance** of learning. Many training programs provide skills that are not relevant for the labour market. Adequacy between the skills learned at schools and the ones required from the labour market is an important characteristic for ensuring the external efficiency of education institutions. Improving relevance for the labour market means improving the employability into the labour market.

To understand what impact investing may look like in education, we start from I&P’s track-record in the sector. I&P’s past investment in education were (i) investments with expected but modest profitability, (ii) with an impact on (at last one) of the following aspects: (equitable) access to

¹ <https://thegiin.org/impact-investing/>

education, quality education and relevance of learning. Another dimension that emerged in the discussion about what impact investing should do in education is the necessity to support education projects that are complementary and useful to local education systems. The legitimacy imperative appears then as the last component of impact investment in education (iii). These three conditions combined seem necessary to approach the sector as an impact investor with internal validity (economic and impact performance) and external validity (legitimacy to education stakeholders).

With this in mind, in the first part of our study, we explored the economic literature in order to identify policies or interventions that are showed to be effective in improving the four education outcomes we defined above. We refer to them as “good practices”. The ultimate goal is to highlight effective interventions for which a role of the private sector could be considered. The literature review, presented in part 1, is based on the analyses of a number of studies that have been produced in the last years with the aim of identifying best practices in the education sectors, which often rely on experimental and quasi-experimental methods. We identified six main themes to which we consecrate one section each: (i) innovating pedagogy and strengthening learning, (ii) early childhood development (ECD), (iii) resources and credit constraints, (iv) information programs and management strengthen programs, (v) vocational education and training; (vi) higher education.

We also present in the first part of the study some arguments that can help understand the politically-sensible debate on the private sector participation in education. Private schools are often told offering some benefits with respect to public schools, for example in terms of proximity, innovation, lower teachers’ absenteeism, alignment with parents’ preferences (World Bank, 2018). Moreover, the competition between private and public schools could boost quality of both. However, the private school option is usually accessible to only middle- or high-income families. Private school expansion might also determine – in the long term - a double track system and thus undermining the quality and attractiveness of the public service. All these arguments need to be carefully considered before investing in private education. We also present the different forms and mechanism of interaction between the state and the private sector in education (i.e. public-private partnerships, independency, under contract schools...) and discuss their implications for the quality of the education system.

In parallel to the desk review for parts 1 of the study, we realized field missions in a sample of five African countries, in order to clarify the main needs and challenges of the African education sector. Countries have been chosen to represent the different situations that prevail in African countries. We selected a large economy of francophone West Africa (Cote d'Ivoire), an English-speaking country (Ghana), a Sahelian country (Burkina Faso), a North African country (Morocco), and a francophone fragile country from the Indian Ocean (Madagascar). Countries where I&P has already realized some investments and priority intervention countries for the government of Monaco were privileged, as well as francophone countries, for which less information is usually available as far as private investment in education is concerned.

During our field missions, we realized more than 100 interviews with a broad set of education stakeholders. We did many interviews with public sector actors, including Ministers, General Secretaries of Education ministries, other high-level officers working in all cycles of education, from pre-primary to higher education and vocational training. We also met representatives of international organizations engaged in education, international and local NGOs working in the field and teacher unions' representatives. All these meetings allowed us to identify the main strategic orientations of governments and international players and to get access to the most recent data and documents. We also examined the local contexts of education regulation, in particular the regulation of education institutions (e.g. accreditation issues, quality control procedures) and the regulation of education investments (e.g. registration, control, status of foreign investors).

We interviewed a wide range of private education institutions, since we were interested in understanding the role of the private sector in each education cycle (i.e. percentage of total population enrolled, dynamics, key challenges of participation, partnership with the public sector if existing, etc...). We also met several enterprises involved in **ancillary** education services (e.g. education technology, in-service teacher training, publishing, supplementary education), in order to determine the existing condition of this market and to identify the main constraints and opportunities in each of the sample countries. Needless to say, all these interviews were combined with an in-depth documental analysis. The results of the five field missions are presented in part 2 of the study, where we consecrate one section to each country we analysed.

General remarks and considerations, made thanks to the five country in-depth analysis, are then presented in part 3: the first section illustrates the opportunities and challenges of private education provision in all cycles (and illustrated by the sample countries' examples); the second section builds a new typology of education business, through four families of private schools. We observed that institutions mainly differ among them on (i) the amount of tuition fees they charge, (ii) the use of innovation (both amount and type of innovation) and on (iii) their growth strategy. These three main criteria allowed us to distinguish between "premium schools", "dynamic schools", "neighbourhood schools" and "standardized schools". We also take into account additional segmentation criteria, including the exposure to public resources, the infrastructure management strategy and the certification policy, in order to further differentiate institutions belonging to the same category. In our view, this typology allows an original segmentation of education businesses, which helps the study to suggest different strategies to invest in this sector. We thus give specific indications on methods and models of interventions for each of the education business category, and by cycle of education when possible. At the end of part 3, we use the proposed typology to select four different private education providers in order to realize a detailed analysis of their economic model and impact potential. Finally, we do the same on two ancillary services: an enterprise in the ed-tech sector and an organization proposing in-service teachers training.

In the fourth part of the study, a comprehensive mapping of investments made in African private education from 2012 to 2018 is introduced. We extensively used existing data and reports (e.g.

Caerus Report), that provide quality information on track records and trends in the African education investment markets, but mainly focus on Anglophone Africa. In our work, we did an effort to find as much as information as possible on Francophone Africa, in order to counterbalance the lack of sources for this region.

Finally, the last part of the study concludes, proposing a series of recommendations to help I&P defining the parameters of the investment and impact strategy of the future education impact fund. The objective of this part is to provide both theoretical and practical justifications for the positioning of the impact vehicle in certain countries and sub-sectors. It also makes considerations about the constraints and opportunities related to different types of investments and impact perspectives.

Part 1.

Supporting education: insights from the academic literature

with the collaboration of Audrey-Anne de Ubeda

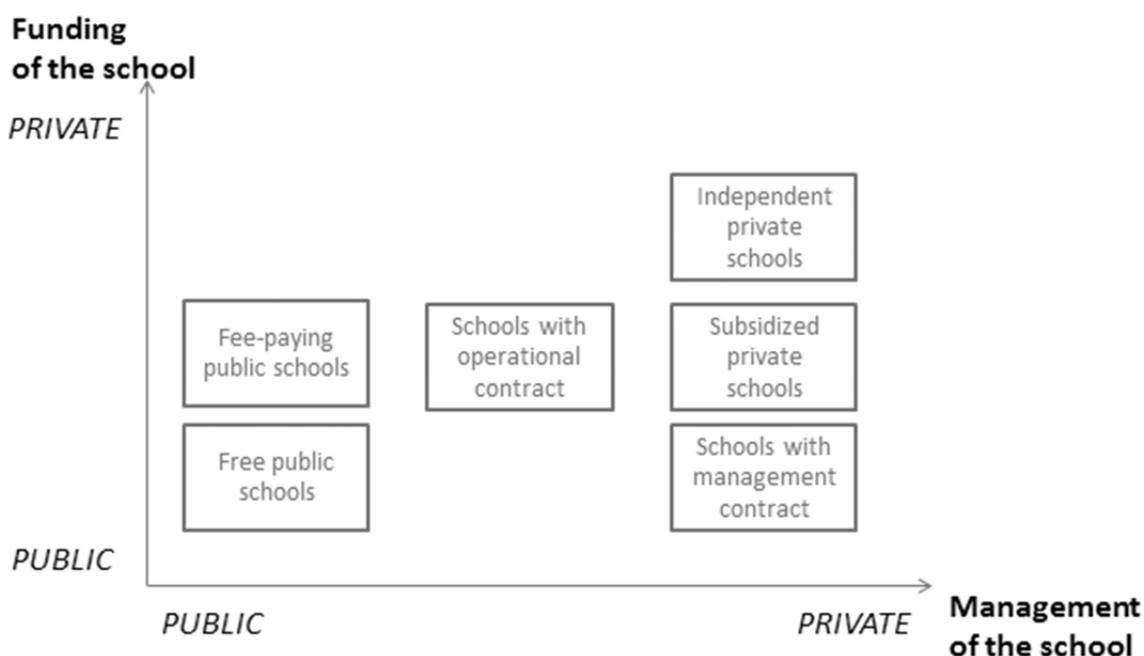
▶ Private Sector participation in Education: the state of the debate

1. Definitions and Statistics

According to the definition provided by UNESCO, private schools are “controlled and managed by any type of private entity, a non-government organisation, such as a church, a trade union or a private institution, associations or businesses” (Mounmé and Saudemont, 2015, p. 8). While a school is considered as public if it is controlled and managed by the State or if the representatives of the State are in majority on the board of directors of the establishment (Kitaev, 2007).

D’Aglepierre (2013) observes that neither public nor private institutions need to be seen as a homogeneous group since much heterogeneity exist within the two groups. Figure 1.1. below proposes a way to illustrate the different types of institutions according to two criteria: who is in charge of management (the state or a private) and which is the source of funding.

Figure 1.1: The different types of public and private partnerships in education



Source: adapted from D’Aglepierre (2013)

Besides public schools (that can be completely free or requiring the payment of a fee) and financially autonomous private schools, there are other possible types of schools, for which a form of public-private partnership is in place². Subsidized private schools contract with the government that pays for assuring a certain number of seats to specific students (usually the ones that cannot be accepted in public schools). Private managed public schools are typically in two forms: (i) management contract model, where a private provider manages a public school (i.e. infrastructure is public and the staff is part of the public sector), (ii) operational contract model, that is similar to the previous one, except that private manager “is responsible for all aspects of the operation of the service, including the employment of staff” (LaRocque, 2008, p. 2).

Across the world, the percentage of pupils attending a private school increased steadily since the beginning of the century. In 2017, 17 per cent of pupils were attending private primary schools and 26.5 per cent were attending a private secondary school against 10 and 18.4 per cent in 2002. Concerning MENA and SSA, 14 per cent of pupils enrolled a private primary school and 9 per cent a secondary private school in 2017. Percentages are higher, standing at 14 per cent and 20 per cent respectively if we look at SSA only³. Nevertheless, we can notice that SSA countries register a lower enrolment rate in private primary and secondary school with respect to the world average. Enrolment in private schools is higher in East, West and Central Africa and lower in North and South Africa (D’Aiglepiere, 2013). Private schools in African countries are usually more concentrated in urban areas and they are quite heterogeneous in terms of quality, with religious institutions often be known to be the best⁴ (D’Aiglepiere, 2013).

2. Determinants of the private share

James’s cross-sectional study on 50 developed and developing countries, dating back to 1993, identified the main factors that determine the public-private mix of educational services in a country: cultural – and more specifically religious – heterogeneity, (ii) the existence of important public subsidies for private schools, (iii) public expenditure in education. James (1993) shows that the more a state spends on public education, the lower is the percentage of private education providers in the country. She also argues that the particularly low expenditure on secondary education in developing countries can explain why this is the cycle where private providers are more developed.

² There is not a clear definition of public-private partnership in education. We follow here Tilak (2016), who write that “under PPP, public sector agencies (central, state, or local) join with private sector entities (companies, foundations, non-governmental organisations, academic institutions or citizens) and enter into a ‘business’ relationship to attain a commonly shared goal that also achieves objectives of the individual partners.” (p. 3)

³ UNESCO data from: <https://data.worldbank.org>

⁴ We do not discuss here the issue of the quality of private schools when compared to public schools. This issue, that is briefly mentioned in section 4 below, is still debated in the literature and empirical evidence for African countries is very limited.

D'Aiglepiere (2011) uses data on 120 countries on the period 1997-2007 in order to analyse the differences in the public-private composition of education systems. His results confirm that religious fragmentation is associated with the development of private schools and that per-student public spending is negatively correlated with it. Public spending in education is used by the author as a proxy of the quality of public education: the idea is that the more the State spends per pupil, the higher is public education quality, so the lower will be the demand for private education. D'Aiglepiere (2013) also shows how a legal system of socialist origin is more often associated with lower development of the private offer. The latter result suggests that country-specific historical factors have an important role in explaining why the private education sector develops more or less. Some countries can put in place legislative barriers to the spread of private schools while others can conversely facilitate this process⁵ (D'Aiglepiere, 2013).

Why households should spend on private education if it is more expensive than the public one? D'Aiglepiere (2013) identifies two main reasons: (i) either they do not have alternatives because there is an excess demand for education in public schools, so the private ones are seen as substitutes; (ii) or households ask for private education because they are not satisfied with the content or the quality of public schools, thus they ask for variety.

D'Aiglepiere (2011) observes that the largest number of children out of the public system is not systematically correlated to the development of more private education. He thus argues that private education does not seem to compensate for the failure of public education in terms of access to education and that private and public education seem to be substitutes rather than complementary.

It is important to argue here that both James (1993) and D'Aiglepiere (2011) focus on primary and secondary education. The different pattern could emerge for tertiary education, a cycle that is not included in compulsory education⁶.

3. Advantages and Risks related to the development of a strong private sector

Debates on the benefits and risk of developing private education are always sensible. On the positive side, some authors argue that private schools in developing countries have often grown because the State failed to provide universal basic education (see for example Harma, 2015). In this view, private providers could thus help to reach the goal of increasing access to education. Today, this is particularly true for post-primary education in Africa. While enormous effort has been done in the past decades in order to increase access to primary education in almost all African countries, enrolment rate in secondary schools is still low in many of them and highly correlated to per capita

⁵ For example, while governments have encouraged and accompanied with regulation the development of the community schools in Mali, the opposite occurred in Cameroon where they have been closed or integrated in the public system (Martin, 2003).

⁶ For a discussion of the development of private tertiary education see section 7 below.

GDP. The public sector alone could hardly manage to guarantee access to all potential secondary school age children. Similar arguments can be advanced for tertiary and pre-primary education.

Some studies also show that parents prefer to send their kids to private schools because they feel that quality is better and the staff is more accountable (Glewwe and Muralidharan, 2015). The development of private education could thus increase diversification in education supply and contribute to increasing quality through competition. The idea that competition in education brings higher quality dates back to Friedman (1962), who argued that parents' choices would determine good quality schools to succeed and bad-quality ones to close down. This framework considers education as a consumption good, the education market as a competitive one, and parents as clients who search for the best quality as possible⁷. In such a competitive framework, all schools (either public and private) should improve their quality (Harma, 2015). Lubienski (2006) wonders if these competitive incentives exist and examine the education sector in several countries⁸. He concludes that schools do not behave as expected: they rather seem to act as in a monopolistic competition, where all offer the same kind of service, that is based on traditional teaching practices, at similar prices (Harma, 2015). Moreover, Lubienski (2006) observes that public policies are more effective than the competition in order to provide diversification and innovation in education.

The main issues raised by those who are concerned about the spread of private schools is about equity in access. According to Toolay and Longfield (2016), private schools tend to serve middle and high-income populations as well as low-income communities in some contexts but they typically fail to include the most marginalized and poorest households⁹. Their development could thus induce an economic stratification of the education system, with poor children going to public schools and middle and upper-class children going to private schools (Glewwe and Muralidharan, 2015). Private education supporters reply to the issue of equity in access with the idea of spreading the vouchers' models where public funds allow all pupils, especially those from low-revenues households, attending private schools (Glewwe and Muralidharan, 2015).

Another concern about private schools is that one enhanced, among others, by Epple and Romano (1998), who elaborates a cream-skimming model, where private schools attract the wealthiest and the best students (in terms of cognitive abilities) while public schools are residuals, thus taking the poorest and less able ones. Introducing vouchers in that system determines high-ability poor students being enrolled in private schools, with an individual gain, but also induces a negative effect on public schools students' achievement because of the worsening composition of their peer group. Some empirical evidence of a cream-skimming effect is available for Chile, where Hsieh and

⁷ Also, parents must be able to identify a low-quality school.

⁸ Chile, New Zealand, UK and US.

⁹ Harma (2015) reports findings from field studies in Ghana, India, Nigeria, Pakistan and Kenya. In all contexts, poorest and more marginalised children are excluded from private schools, even from low-cost private schools. Lively debates are still on going about the so-called low-cost private schools, in particular about their quality and their ability to reach the poorest. We briefly present this debate in box 2 in the section consecrated to the Ghana case study.

Urquiola (2003) show that the voucher program induced the best pupils moving from public to private school.

Valid arguments exist for and against the development of a private education sector in African countries. While the support of private providers seem to be essential for many countries in order to strengthen the generalization of basic education and to widen access to upper secondary and tertiary education, governments need to be aware of the potential risks engendered by the existence of private education providers, and need to understand what policies can be undertaken in order to reduce those negative effects.

Good Practices in Education: a literature review

1. Introduction

This section is consecrated to what we define in our study the “good practices” in education, with the ultimate goal of identifying effective intervention areas where a role of the private sector, and in particular a role of an impact investor, could be considered.

In recent years, several studies have been produced with the objective of evaluating policies and interventions aimed at improving education outcome. Demand-side and supply-side interventions have been evaluated, often using experimental or quasi-experimental methods (i.e. randomized controlled trials, the difference in differences regressions, discontinuity designs), that are generally considered higher quality studies since they do not suffer from omitted variable bias (Glewwe and Muralidharan 2015).

In this part of the study, we try to identify with the help of the literature, the characteristics of well-designed interventions that proved to be effective in improving access, quality, equity or relevance of education. We focus in particular on five main subjects that we believe is particularly important for our study: (i) innovating pedagogy and strengthening learning, (ii) early childhood development (ECD), (iii) resources and credit constraints, (iv) i.e. information programs and management strengthen programs, (v) vocational education and training; (vi) higher education. We consecrate a section to each subject.

These subjects have been selected either because particularly important for learning outcomes or for expanding access to education – this is, for example, the case of the initiatives promoting innovative pedagogy or credit constraint alleviation systems - either because of particular interest for an impact investor – as it is the case for the interventions in the field of higher and vocational education¹⁰.

In all sections, we provide arguments to justify the relevance of the subject, we illustrate related policies and interventions that can be put in place and then present evidence on their impact when it exists.

¹⁰ We do not review here the papers that analyse the differences in student test scores according to the quality of educational traditional inputs, such as infrastructures or books. Most of this literature found little to no impact (Glewwe and Muralidharan, 2015).

2. Innovating pedagogy and strengthening effective learning at school

There is an agreement in the recent literature on education economics about the need to focus on pedagogy in order to boost learning (see among others Glewwe and Muralidharan, 2015; Conn, 2017; Evans and Popova, 2015; WB, 2018). While access to education has increased dramatically around the world in the last decades, much of this education is still of low quality. Low learning outcomes are reported in Latin America, Africa and elsewhere. According to World Bank (2018), in Kenya, Tanzania and Uganda, when grade 3 students were asked to read a sentence such as « The name of the dog is Puppy », three-quarters did not understand what it said. Similarly, three-quarters of 3rd-grade students in rural India could not solve a two-digit subtraction.

Evidence suggests that schooling is not learning. « Additional years of schooling have little impact on economic growth in the absence of learning, which is a function of education quality » (Evans and Popova, 2015, pg. 2, quoting Hanushek and Woessman, 2007). Enrolling in school does not guarantee that children acquire the human capital that their schooling should provide and reach the goals set out in the official curriculum (Glewwe and Muralidharan, 2015). Hanushek and Woessmann (2015) have shown that students in most developing countries learn much less than students learn in OECD countries (at the same age and in the same grade). This is why SDG 4 includes targets to ensure that children are not only in the classroom but also learning (UNESCO, 2018) and encourages the development of indicators to measure learning outcomes (such as ASER in India or Uwezo in East Africa). The « technology of instruction » (Glewwe and Muralidharan, 2015) is a critical determinant of learning outcomes and yet has remained unchanged for decades.

This section presents research outputs concerning initiatives aimed at innovating pedagogy and strengthening effective learning at school. A crucial challenge for empirical research on this subject is that of credible causal identification (Glewwe and Muralidharan, 2015). Several reviews (both meta-analyses and narrative reviews) of hundreds of studies seeking to improve student learning, based both on published journal articles, reports or unpublished working papers, have been carried out. These reviews lead to inconsistent results and different interpretations of the research literature but each conclusion is supported by evidence from papers establishing a counterfactual. As Evans and Popova (2015) point out in their survey of surveys, each review recommends different categories of intervention and identifying what works and what does is not a simple task. Given the myriad of existing studies, characterizing narrow intervention types may be more useful than focusing on the effectiveness of a given category. Saying that computer intervention is most effective may be less useful and less accurate than saying that computer-assisted learning programs which are tailored to each student's level of knowledge, tied to the curriculum, and that provide teachers with training on how to integrate the technology into their instruction are most effective (Evans and Popova 2015). Despite differing conclusions, all reviews seem to agree on at least four categories of interventions deemed most effective: (i) interventions aimed at adapting teaching at student's learning; (ii) those using technologies to facilitate students

learning at their own pace; (iii) those aimed at improving teachers' skills and motivation and (iv) those adapting curricula to learners.

2.1. Teaching at the right level and remedial classes

As highlighted by Glewwe and Muralidharan (2015), teaching effectively may be particularly challenging in many developing country contexts because of the higher variation, relative to developed countries, in the initial preparation of children when they enter school. This proved to be true especially in the last decades with the massive increase in access to primary schooling and millions of first-generation students' entry into the school system. How to teach a classroom where students have very different skill levels? How to meet individual learning needs of heterogeneous children population?

Many private supplementary (one-on-one or small-group) tutoring programs appeared in the 2000s especially in Asia¹¹ and have spread globally since then (Bray, 2009, Mori et al., 2010, Bray et al., 2012). Also called "shadow education", these tutoring programs in academic subjects are provided for a fee and take place outside standard school hours. Jukus in Japan and Hagwons in South Korea are probably the most well-known and have been a major point of public controversy since the 1960s (Roesgaard, 2006, Seth, 2002). Although this kind of programs can promote personal academic development and contribute to human capital, they may also increase social inequalities and create inefficiencies in education systems. Parents are sometimes investing in tutoring classes even for top students, in order to increase their chances of succeeding in very competitive educational environments. Based on the success of these programs (Nath, 2008, Hamid et al., 2009, Liu, 2012), more and more NGOs started delivering tutoring classes, often for free, and sometimes their method has even been institutionalized. Remedial education offers the possibility to focus on students who are lagging behind and teaching at the appropriate level, aligned with their skill level. It can be implemented as a standalone program either in school hours or outside of school hours, as part of a more comprehensive education program or even be a component of a country's curriculum guidelines.

Numerous RCTs have shown that addressing student's learning gaps can lead to significant learning gains and be much more effective than following a standardized curriculum. The Indian NGO Pratham created an evidence-backed educational approach called Teaching at the Right Level (TaRL). TaRL helps children developing basic reading and mathematics skills. The approach works by dividing children (generally in Grades 3 to 5) into groups based on learning needs rather than age or grade, dedicating time to basic skills rather than focusing solely on the curriculum and regularly assessing student performance, rather than relying only on end-of-year examinations.

¹¹ South Asia also has long traditions of private tutoring.

An experimental evaluation of Pratham's remedial instruction program in Mumbai and Vadodara carried out by Banerjee et al. (2007) shows that, when taught at a level corresponding to their proficiency, students improve their tests scores. Similarly, Banerjee et al. (2010) show that remedial instruction program implemented by youth volunteers who were provided with a short training and held in after school reading camps for a few months is effective at improving learning outcomes. Multiple RCTs conducted in India on TaRL show similar results (see Banerjee et al., 2016, Lakshminarayana et al., 2013).

A few more examples of teacher-led adaptive instruction others than TaRLs are interesting as well. Piper and Karda (2011) evaluate the Early grade reading assessment (EGRA) program in Liberia, an intervention-based reading instruction program focused on changing teacher pedagogy. Teachers were provided frequent school-based pedagogic support, resource materials and books. Parents and communities were informed of student performances. Using differences-in-differences analyses, they show that students achievement increased for every section of the EGRA. Moreover, Duflo et al. (2011) evaluate a program that assigned students to classes based on initial achievement in Kenya, so that teachers can focus instruction at the level of the students' learning. Tracking allows teachers to better tailor their instruction level. According to Duflo, students who are lagging behind are the most likely to benefit from tracking.

To sum up, pedagogical reforms that match teaching to student's learning seem to be very effective in boosting learning, even if compared to other interventions (Kremer et al., 2013). Conn (2014), in her meta-analysis of rigorous impact evaluations focusing only on studies in Sub-Saharan Africa, finds that pedagogical interventions are the category of interventions more effective than any other type of interventions combined. She finds that studies that employ adaptive instruction and teacher coaching techniques are particularly effective and have significant positive effects on student literacy scores (the pooled effect size associated with adaptive instruction is equal to 0.42 standard deviation while that of programs with non-adaptive instruction is about one-quarter that, only 0.12 standard deviation). However, as discussed below (see Teacher training section), while this approach is extremely effective when implemented with community volunteers outside of school, it might be more difficult to scale-up a program that could be implemented within public schools.

2.2. Using technology to facilitate students learning at their own pace

Some programs have experimented computer-assisted learning (CAL) and show mixed results in accelerating skills' acquisition. Among the many remedial education and TaRL initiatives launched recently, Conn (2014) finds that CAL programs, which adapt to students' learning levels, have the largest impact on student performance. These computer programs include exercises focusing on basic skills required by the official curricula. For example, Banerjee et al. (2007) find that math scores increased by 0,47 standard deviation in India, after two years of implementation of an extremely cost-effective CAL program that uses a math software to allows children in grade 4 to learn at their own pace. The program consisted of two hours (during class

time and after school) of shared computer time per week. McEwan (2014) also agrees that this kind of program has a greater impact than any other kinds of intervention and McEwan (2012) finds that interventions involving computers or instructional technology, carried out in conjunction with teachers training have the largest effects in terms of students' learning. However, in a recent evidence-based review, Escueta et al. (2017) find that providing students with access to technology yields largely mixed results. Giving a child a computer may have limited impacts on learning outcomes, but improves computer proficiency and other cognitive outcomes. Cristia et al. (2012) evaluated Peru's one Laptop per child program and concluded that it was ineffective in improving academic achievement or cognitive skills.

These results can be reconciled by acknowledging that CAL programs are effective only if they are well implemented and if they change students' daily learning experience at school.

Technology distribution needs to be supervised by parents or teachers or accompanied by student training. In the same way, computers cannot replace home study (Malamud and Pop Eleches, 2011) or instruction during school hours (He et al., 2008). Linden (2008) compares two versions of a CAL program launched in India (a pull-out version and an out-of-school time version) and shows that these programs are most effective when they are a complement to classroom instruction and not a substitute.

2.3. Improving teachers' skills and motivation

Glewwe et al. (2014) highlight the **impact of teacher subject knowledge as well as teachers presence on student learning. According to most reviews of studies, teacher training is the category of interventions producing the largest effects on learning after pedagogical interventions that match teaching to students' learning.** Teacher training interventions seem to be effective in enhancing students' learning only if they provide direct guidance on how and what to teach if they are implemented through a structured program and if they are tailored to the skill levels of teachers (Murnane and Ganimian, 2014). An example of a program that was effective in improving child literacy is the one evaluated by He et al. (2009) in India, where storybooks, flashcards and a child library were provided to the schools, and teachers received instructions specifying the activities in which these had to be used and when.

Literature shows that repeated teacher training are more effective than one-time in-service training. Conn (2014) finds, for instance, that long-term teacher mentoring or in-school teacher coaching produce a 0.25 standard deviation effect on student learning. In the same vein, Sailors et al. (2010) evaluate the Read, Educate and Develop (READ) program in South Africa, providing demonstration lessons by mentors, monthly coaching and monitoring visits followed by one-on-one reflection session, as well as after-school workshops for both teachers and school administrators. They find significant impacts on reading skills.

Teacher's motivation and efforts also appear determining factors for students' learning, provided that teachers have basic skills. A number of interventions have tried to increase

teachers' effort offering incentives to teachers or hiring teachers on renewable contracts. Some interventions have offered cash rewards to teachers based on the number of days they attended school. Duflo et al. (2012) show that a teacher incentive program in the rural villages of Rajasthan, India, reduced absenteeism by more than 20% and improved students test scores by 0.17 SDs. Some interventions (see Muralidharan and Sundararaman, 2011) also offered teachers cash depending on their students' tests scores, which seems to increase student achievements.

The literature offers also critical insights in terms of teacher management and retention for both public and private institutions. To increase teacher effort, some countries are trying to reduce the number of public school teachers and are hiring additional teachers on fixed-term contracts. Indeed, the difficulty of providing quality education is compounded by teacher absenteeism and lack of accountability to local officials due to their protected status as civil servants and state government employees (Banerjee et al., 2007). Researchers evaluated programs involving hiring contract teachers, usually locally by NGOs or village governments on a contract basis. They suggest that this structure creates greater accountability for the contract teachers since the hiring, firing, and renewal decisions are not bound by government service rules. It, however, creates employment insecurity. Evans and Popova's meta-analysis also points out that accountability-boosting interventions, including teacher performance incentives and contract teachers, are effective in student learning. McEvan (2015) estimates that student and teacher performance incentives have a meaningful effect on learning, as employing contract or volunteer teachers. It means that programs relying on contracted local teachers rather than volunteers have the best chances to improve learning outcomes. Similarly, Duflo et al. (2011 and 2012) show that supplementing civil-service teachers with locally hired teachers on short-term contracts in Kenya led to improvements in test scores.

Finally, it might be difficult to obtain the same positive results as Pratham's TaRL's in public school programs. Banerjee et al. (2016) designed large-scale experiments in India to test two new scale-up models, in order to develop a model that could be implemented within the government school system. They find that the Pratham pedagogy can be implemented by village-level volunteers without formal teacher training and by existing government teachers after they received a short training on how to implement the method. However, when the program is implemented in government schools and during the normal school year, teachers tend to revert back to the traditional curriculum and school organization. Changing permanently their work methodology and implementing new curriculums during school hours might be a challenge since teachers are reluctant to change their own teaching methods and are focused on completing the syllabus prescribed in the textbook¹².

¹² Similar results were found by Kiessel et al. (2015) that evaluated the Teacher Community Assistant Initiative (TCAI) in Ghana. Under this initiative, the provision of targeted after-school lessons by community assistants caused a largest increases (6.2%) in learning than the training provided by civil-service teachers (4%).

2.4. Adapting curricula to learners

Several papers point out that curricula and textbooks have often been designed a long time ago by and for highly educated elites and do not suit the current state of education systems in Africa.

Textbooks and curricula may reflect a period of time when there was no expectation of universal primary education and thus has not been adapted to the entry into the school system of millions of first-generation learners in developing countries. Glewwe and Muralidharan (2015) underline that “since teachers continue to follow the textbook as the default mode of instruction (...) it is not surprising that they are effectively “teaching to the top” of the distribution and that a large number of children are in the class but not learning because the lessons are too advanced for them” (p.52). Esther Duflo also put the stress on the “tyranny of the curriculum” during a recent conference at the Paris School of Economics¹³. In India, as in most countries, curriculum completion is prescribed by the law, it has to be completed no matter what children can effectively do. Teachers, therefore, tend to focus on well-prepared pupils able to complete it.

The distribution of textbooks does not necessarily improve learning. A couple of studies from subsaharan Africa have examined the impact of textbooks distribution on students’ learning outcomes. Glewwe et al. (2009) examine a textbook distribution program in Kenya and Sabarwal et al. (2014) study a similar program in Sierra Leone. While in both cases textbooks do not seem to increase students’ time in school, they also do not seem to increase student learning, which is more surprising. As it turned out in Sierra Leone, most of the textbooks never reached the classrooms and were kept in storage by school administrators who were unsure whether more books would be provided in the future, which explains why the study finds no effect. In Kenya, Glewwe et al. (2009) found that the textbooks provided by the government were too difficult to read for most students (except for the top 20%). These results suggest that textbooks could have a positive impact on learning outcomes if they were at the appropriate level, which would mean reviewing and revising the curriculum.

Programs that provide active learning through a relevant curriculum also seem to achieve better results. Programs using problem-solving and general reasoning skills seem to be more efficient than a curriculum that only encourages memorization and a passive approach to learning (Kellaghan et al. 2009, Harlen 2007). For example, the Reflect program in Bangladesh or Pakistan (Duffy et al. 2008) use real texts from the local environment and focuses on learner’s own literacy objectives, motivation and skills, and the Foundation for the Application and Teaching of the Sciences program in Colombia integrates the needs of rural life and livelihoods into the secondary school curriculum (Wagner 2014). The Escuela Nueva program, launched in Colombia in 1975 and expanded to many countries in Latin America, provides teachers with training on how to develop curriculum based on these local rural needs. Studies show this program led to a significant increase in third-grade mathematics and Spanish scores compared to traditional programs. Since then,

¹³ Esther Duflo and Elizabeth Spelke “How to educate the world” Paris School of Economics, June 26, 2018: <https://www.parisschoolofeconomics.eu/IMG/pdf/how-to-educate-the-world-presentation.pdf>

programs focusing on local needs have been developed in Mali, Chad, Burkina Faso and Senegal (Diagne and Sall 2009, Lind 2008 and McEwan and Benveniste 2001).

3. Early Childhood Development

“The early child period is considered to be the most important developmental phase throughout the lifespan. Healthy early child development (ECD)—which includes the physical, social/emotional, and language/cognitive domains of development, each equally important—strongly influences well-being, obesity/stunting, mental health, heart disease, competence in literacy and numeracy, criminality, and economic participation throughout life. What happens to the child in the early years is critical for the child’s developmental trajectory and life course”¹⁴.

Early Childhood Development (ECD) interventions are proved to have positive and strong effects for the cognitive development and the long-term skill acquisition of children, at the very high benefit-cost ratio. In the low and middle-income countries, nearly 250 million children younger than 5 years are at risk of not meeting their developmental potential because of poverty. Sub-Saharan Africa has the highest prevalence of children at risk: 66 per cent of children were at risk of not reaching their developmental potential because of poverty and stunting in 2010 (Black et al., 2017). In order to address this situation, improve the human capital investment and meet Sustainable Development Goals, multilateral agencies, policy makers, and non-governmental organization set a number of Early Childhood Development (ECD) programs (for children from 0 to 6 years old). Especially since research in neuroscience, psychology, and economics prove that nutrition and cognitive stimulation early in life are critical for long-term skill development¹⁵ and have positive effects on adult wage earning and competence (Shonkoff and Phillips, 2000). ECD programs have been shown to be effective in improving school readiness and education outcomes, improving mental and physical health and reducing high-risk behaviours in the short term (Martinez et al., 2013). In the long term, ECD investments yield productive and socially well-adjusted adults who contribute to their country’s economic growth and help break the intergenerational cycle of poverty. Furthermore, Heckman (2008a) prove that the longer society waits to intervene in the cycle of a disadvantaged child, the more costly it is to remediate the disadvantage. This kind of intervention has a high benefit-cost ratio and a higher rate of return for each dollar invested than interventions on older children and adults (Heckman 2008b). Therefore, falling to invest in early childhood is costly and difficult to compensate for later in life.

In home-based activities, ECD program typically advice parents on how to raise their children and increase the level and quality of interaction with them. Indeed, inadequate cultural practices that limit communication between parents and children, and home environments with

¹⁴ Source: World Health Organization, https://www.who.int/social_determinants/themes/earlychilddevelopment/en/

¹⁵ The earliest years of the child’s life are crucial for providing children the opportunity to reach their full potential in life. Shonkoff and Philips (2000) show that in this period synapses develop rapidly to form the basis of cognitive and emotional functioning for the rest of life.

few books and toys, may all contribute to inadequate physical and cognitive growth, particularly in the early periods of physical and brain development. Parents have to be aware that low-cost activities, such as storytelling, singing, and playing with household objects, expose young children to experiences that promote early development. It is thus critical for parents to verbally interact with children since their earliest year of life because the capacity of a child to absorb language and to differentiate between sounds peaks at around nine months of age, well before the child can actually talk (Council for Early Child Development, 2010).

ECD programs can also include the construction or the improvement of day-care centres, where caregivers help children to develop and improve their motor, cognitive, language, socio-emotional, and self-regulation skills¹⁶. Enrolment in day-care centres has increased substantially since 2000, especially in Latin America.

ECD programs may also be centred on health and nutrition issues (e.g. improving food intake for pregnant woman or infants, or interventions to eliminate iodine deficiency) or may take the form of social protection programs that are designed to reduce poverty and to provide opportunities to improve child development by reducing violence exposure and maltreatment on children. To reach this goal, interventions are usually focused on parent education in order to change attitudes and norms that encourage violence. Child protection laws are necessary to accompany those programs (Martinez et al. 2013).

The evidence on the overall impact of early childhood interventions exists, but most studies are based on US experiences. In order to evaluate ECD programs, researchers have focused on both the structural and process dimensions of quality. Berlinski and Schady (2015) define structural dimension of quality as to “the presence (or absence) of resources that can facilitate the interactions that should take place in a learning environment (aspects related to infrastructure, sanitation, educators, curriculum)”. One of the first evaluation concerns the Perry Preschool Program, which provided, from 1962 to 1967, a high-quality preschool education to three and four-year-old African-American children living in poverty and assessed to be at high risk of school failure. Children participating in the program showed higher cognitive test scores in the short term, but not in the long term. However, positive effects were observed in the long term with respect to other outcomes, like earnings, educational attainment or crime rates (Behrman et al. 2004). The Perry Preschool Program, inspired many other controlled experiments, in particular, the Abecedarian Program, which was conducted in 1972 in northern California. Children in the experimental group received full-time high quality educational intervention in a childcare setting from infancy through age 5. These activities focused on social, emotional, and cognitive areas of development but gave particular emphasis to language. The results of the evaluation show that at age 4, children who received the Abecedarian intervention had cognitive scores that were 0.74 standard deviations higher than those in the control group. The effects of the program decreased with time, but program beneficiaries still outperformed the non-beneficiaries control group by 0.37

¹⁶ With day-care centres, we refer to facilities devoted to pre-school children, aged 0 to 6. We thus include kindergarten.

standard deviations on standardized test score at age 15 (Campbell et al. 2002). Starting from these small pilot programs, the United States then started the process of universalizing preschool education with programs like Head Start, that started in 1965 and is still in place¹⁷.

Some evidence exists on the impact of ECD in developing countries, especially in Latin America, where there has been an impressive growth of childcare centres. After 36 years of civil strife, the government of Guatemala embarked on an ambitious construction program that increased the number of pre-primary schools from about 5,300 to 11,500 between 1998 and 2005. Bastos et al. (2017) evaluated the medium-term impact of this large scale expansion of pre-primary education. They find a positive effect on school progression (expected grade for a given age) and they show larger effects for communities with higher levels of schooling among adults. They do not find differential effects of preprimary attendance by gender, percentage of the indigenous population, or chronic malnutrition.

In Argentina, Berlinski et al. (2006) investigated the effect of this large expansion of universal pre-primary education on subsequent school performance. Their results show that attending pre-primary school had a positive effect on subsequent third grade standardized Spanish and Mathematics test scores. They also found that the gains from preschool education were bigger for the students living in more disadvantaged municipalities because the home environment is more supportive of child development in richer households, where children benefit from better nutrition and better brain stimulation. With this respect, authors conclude that separating children aged 3 to 5 from their mothers seem to increase their cognitive abilities only if they are placed in high-quality centres and especially for those coming from low-income families.

In 2007, the Colombian government began the Hogares Comunitarios program, which is a program of constructing large centres serving between 150 and 300 children each, where children were regrouped by age. Bernal et al. (2014) evaluated this program, reporting poor results. Indeed, while some progress were observed in the quality of the infrastructures, process quality, as measured by international scales¹⁸ did not improve – and was sometimes lower - in the new centres with respect to the traditional ones. One possible explanation is that policymakers paid more attention to the structural dimension rather than to the process dimensions of quality because it is easier to measure.

These results are in line with those of Murnane and Ganimian (2014) who argue that the process dimension of quality is more important than the structural dimension. Indeed, they

¹⁷ The idea behind Head Start is to provide preschool children from low-income households with a high quality program that is able to assure them emotional, social and health support. Several authors have evaluated the Head Start program, finding a strong initial impact on cognitive skills that reduces over time (Gibbs et al. (2013), Bitler et al. (2014), Kline et Walters (2016)). However, Kline and Walters (2016) and Carneiro and Ginja (2014) argue that even that initial impact can have long run impact on earnings.

¹⁸ Process dimension quality is evaluated using the following international scales: FCCERS (the Family Child Care Environment Rating Scale), ITERS (the Infant and Toddlers Environment Rating Scale), and ECERS (the Early Childhood Environment Rating Scale).

review 115 well designed impact evaluations of educational interventions in over 30 lower and middle-income countries and conclude that learning outcomes were not consistently improved by better materials, classroom technology, flexible education funding grants, or smaller class sizes unless the day-to-day interactions of children and teachers are more important. Kremer, Brannem and Glennerster (2013) confirm these results.

A few ECD programs were evaluated in Sub-Saharan Africa and also show positive evidence in fostering children cognitive and behavioural autonomy. Among those, Martinez et al. (2013) evaluated an ECD program run in 2008 by the Mozambique government. It included a nutrition component, a preschool component and a parent support component. Results show consistent improvements in cognitive and problem-solving abilities of children, improvements in fine-motor skills and in socio-emotional and behavioural outcomes. Children are found to be better prepared for school and outperform their peers on these dimensions¹⁹. Bietenbeck et al. (2017) study the effects of preschool attendance on children's school progression and cognitive skills in Kenya and Tanzania. Their investigation focuses on two main outcomes: the highest grade of school completed and a cognitive test score, which summarizes a child's performance on the standardized literacy and numeracy tests. The results for the highest grade of school completed show that in both Kenya and Tanzania, children often enrol in preschool late and only proceed to primary school once they finished it. Once in school, they progress through grades faster and at ages 13-16 have completed about one and a half more months of schooling than their same-aged peers who did not attend preschool. The results for cognitive test scores similarly show that children who went to preschool outperform their peers in the long run²⁰.

To summarize, studies show that ECD is a priority area of intervention which has a high benefit-cost ratio and a higher rate of return than interventions on older children and adults (Heckman 2008b). Impact evaluations show that ECD can have long-term effects on cognitive skills overall, but special attention must be paid to the quality of the programs for the success of projects. Belinsky and Schady (2015) show, for example, that in Latin America, the general quality of day-care centre is very low and they are mainly used from higher educated families. These two factors combined imply that they do not seem to contribute a lot to child development.

Engle et al. (2007) well summarizes the characteristics of an effective EDC interventions: (i) it integrates more than one aspect (e.g. health, nutrition, social development), (ii) it focuses on disadvantaged children, (iii) it is sufficiently long-lasting and intense, (iv) it employs well-trained

¹⁹ Quite interestingly, the impact of the program on children's reported health are mixed. On one hand, authors observe a (non-significant) reduction in diarrhea and skin problems, which may be linked to the program's emphasis on hand washing and self-care. On the other hand, children who attend preschool are more likely to report being sick, and in particular to have had a cough, which may simply reflect the increased exposure to colds from being in close proximity to other children.

²⁰ In Kenya, children who attend preschool have a small advantage over their peers during the early ages, and this advantage grows to a sizable 0.1 SD for the two later age groups. In contrast, in Tanzania, children with pre-primary education outperform their peers by 0.26 SD already early on, but this difference decreases to 0.22 SD for the oldest age group of 13-16 year-old children.

staff, (v) it mainly targets kids under 3, (vi) it requires a staff's direct interaction with children, not only with parents.

4. Alleviating resources and credit constraints

One of the main barriers to investment in human capital is the price of education. In many developing countries, children and their family have to pay fees to attend public schools²¹. More than 60 % of low-income countries charge secondary school tuition, compared to only 6% in high-income countries (Galiani et al., 2013). Strengthening equity at school is often associated with policies that aim to reduce the costs of education for low-revenue families and/or marginalized social groups, which are more likely to be credit constrained and caught in intergenerational poverty traps. According to Banerjee et al. (2013), “a reduction in the price of obtaining an education both raises the rate of return for each additional year of education and makes education more affordable for households facing credit or other constraints” (p. 13). This section analyses the effects of these different types of policies, which can take several forms: conditional or unconditional cash transfer programs, fees elimination or reduction, merit or not-based scholarships, credit-based interventions, vouchers, child sponsorship programs.

4.1. Cash transfer programs

Conditional cash transfers

The debate over whether cash transfer programs aimed at increasing school enrollment, attendance and test score should include conditions has been at the forefront of recent policy discussions. Most of the cash transfers programs that have been implemented in the last decades are in the form of conditional cash transfers (CCT). The first large-scale CCT program, *Progresa*, was launched in 1997 in Mexico and provided monthly education scholarships to poor families (monthly cash payments to the mothers of children in grades 3-9, selected in rural localities). The transfer was conditioned to the fact that children were going to school at least 85 per cent of the time and did not repeat a grade more than twice. The amount of the stipend depended on the grade and gender (larger for higher grades and for girls). Several studies have evaluated the Mexican program. Schultz (2004) finds a significant positive impact on enrollment rates, by about 10% on average (almost 15% for girls). He estimates that *Progresa* increased schooling by 0,66 year. Attanasio et al. (2011) confirm this positive effect and show that the program impact increases with age. Based on a counterfactual policy experiment, Todd and Wolpin (2006) conclude that increasing the stipend for highest grade levels would “significantly increase the proportion of children who complete at least 9 years of education”. Other studies confirm these results (see among others Behrman et al., 2007; Bobonis and Finan, 2009).

²¹ In most cases, the payment of school fees is more common in secondary schools than in primary schools.

After *Progresa*, CCT programs appeared in Latin America and elsewhere in the late 1990s, early 2000s and over 30 countries have launched this kind of programs since then. Multiple studies and randomized trials on the impacts of CCT on schooling have been carried out, especially in Brazil (*Bolsa Escola*, the largest program, reaching over 12 million families, see Glewwe et al., 2012), in Colombia (*Familias en Accion* program, see Attanasio et al., 2010), in Ecuador (*Bono de Desarrollo Humano* program, see Schady et al., 2006), in Cambodia (see Filmer and Schady, 2009) in Pakistan (Female Secondary School Stipend, see Chadhury et al., 2006), in Tanzania (Evans, 2014) or in Morocco (Benhassine et al., 2014). All of them find positive effects of CCT programs on school enrollment and attendance but the impact on students' performance and test scores are less conclusive. Doubts remain about the ability of these programs to lead to a long-term increase in learning outcomes.

It is also interesting to note that the increase in schooling does not depend on the amount of cash transferred to the family (Baird, 2011) and that small changes in the CCT program design can boost its effectiveness, as for example the timing of payments or incentives for student achievement (Barrera-Osorio et al., 2008).

Unconditional cash transfers

Unconditional transfers programs do not depend on students' or families' behaviour. These initiatives aim at strengthening equity at school simply by reducing the cost of schooling. The rationale of UCT can be thus assimilated to other policies aimed at alleviating credit constraint such as the reduction or elimination of school fees, child sponsorship and not merit-based scholarships, that are discussed in the next section.

In a recent study, Kilburn et al. (2017) analyze the impact of a UCT program launched by the government of Malawi in 2006 called the Social Cash Transfer Program (SCTP)²². SCTP provides significant cash transfers to poor households. The authors use household surveys to see if the cash transfer program has an impact on child education. The resulting model indicates that "the schooling impacts after one year of the SCTP can be directly related to the additional investment in child education made by parents" (Kilburn et al., 2017). Education expenditures rose by 13 per cent. These results suggest that these programs can improve schooling outcomes within a short amount of time, even without an explicit condition. In the same vein, de Groot et al. (2015) use a quasi-experimental evaluation to estimate the impact of LEAP, the Ghanaian government's unconditional cash transfer program on school outcomes, finding strong impacts on school participation.

Baird et al. (2013) compare the effectiveness of CCT and UCT programs in a systematic review. They find that both types of programs improve school enrollment and attendance compared to no cash transfer program (see also Fiszbein and Schady, 2009). They also show that CCT programs always have larger effects compared to UCT programs and that these effects depend on the intensity of

²² While Malawi provides free primary education, obligatory expenses such as uniforms or school supplies need to be bought by families and secondary school remains prohibitive for low-revenue and ultra-poor families.

the conditionality. Baird et al. (2011) evaluate a program targeted at adolescent girls in Malawi featuring two distinct interventions (UCT and CCT) and confirm that the CCT arm has larger effects on dropout rates and tests scores than the UCT arm. Moreover, the impact seems to persist after the end of cash payments. Benhassine et al. (2014) find interesting results of the Moroccan *Tayssir* Program: a small cash transfer is given to all households living in poor rural communities without any condition, but with the transfer being explicitly labelled as supporting education, has almost the same effects in terms of attendance of a transfer conditioned upon attendance.

Other ways to transfer cash: school fees elimination, non-merit scholarships and child sponsorship programs

Several developing countries have gradually eliminated school fees, even in secondary school. This policy is aimed at reducing the households' credit constraint. Barrera-Osorio et al. (2007) evaluate the *Gratuidad* fee reduction program launched in 2004 by the municipal government of Bogota in Colombia, where municipalities are in charge of regulating the fees charged by public schools. The program uses the proxy-mean SISBEN index to identify the most vulnerable households and provides varying levels of fee reductions to children in the bottom two of six SISBEN categories. The authors use a regression discontinuity design that exploits the discrete changes in school fee reductions around the cutoff scores for these two categories and find a significant positive impact of enrolment in primary and high school grades, especially for at-risk students. Even though the *Gratuidad* program has a positive impact, Barrera-Osorio (2007) warn against possible negative effects of this kind of policies. In countries such as Kenya or Malawi, massive increases in enrollment induced by similar programs have proved to be difficult to sustain over time. It might have "strained school systems and reduced educational quality" (Barrera-Osorio, 2007, p.2).

Another study examines a targeted fee-elimination program in South Africa launched in 2007 (Borkum, 2012). The program was targeted at the two poorest quintiles of schools based on a community poverty score, that is 40 per cent of public school students. Borkum (2012) finds a positive impact of the abolition of fees on school enrollment, especially in earlier secondary grades and despite the fact that the initial fees were relatively low. The author finds little effect near the cutoff for fee elimination, for wealthier families.

A few non-merit based scholarships programs have been studied and show positive results in promoting access to, and completion of education. Yi et al. (2014) evaluate a program offering financial scholarships to pay for upper secondary school to poor students in China, with no other condition than being admitted to upper secondary school. This program increased by 7.9 per cent the rate of entry into upper secondary for grade 9 students (and by 3 per cent for grade 7 students). Duflo et al. (2017) also evaluate a program offering school scholarships awarded by lottery. The program targets Ghanaian students who were admitted to a specific secondary school but could not immediately enrol, in most cases due to lack of funds. Scholarship winners were 26 percentage points (55%) more likely to complete secondary school, obtained 1,26 more years of

secondary education and scored an average of 0.15 standard deviations greater on reading and math test.

Finally, child sponsorship programs are another way to directly help credit constrained households to pay for education expenditures. In those programs, individual sponsors in developed countries sponsor children in developing countries (by paying for their school supplies, school fees, uniforms, tutoring, etc) until the end of secondary school. These programs seem to have a positive impact on schooling. Wydick et al. (2013) evaluate the Compassion International program, the world's third largest child sponsorship program, in six countries including Uganda and Kenya, and find an increase in schooling by 1 to 1,5 years as well as an increase in the probability of getting a white-collar job. These programs raise children's self-expectations for future vocations, educational expectations and self-esteem (see for example Ross and Wydick, 2011 in Kenya, Glewwe and Wydick, 2013 in Indonesia).

4.2. Performance-based incentives

The literature shows moderate but positive effects of performance-based incentives on school attendance and learning. In many education systems, students who perform well receive free or subsidized access to the next level of education (Kremer et al. 2009). Much less research has been done on performance-based incentives and the few studies on the impact of financial incentives based on academic performance in developing countries show less evidence than the policies presented above.

One of the main studies dealing with this kind of programs is a randomized experiment of a merit scholarship program in western Kenya carried out by Kremer et al. (2009). The program focuses on Kenyan girls with good academic results. If they scored in the top 15 per cent on district-wide exams, they received a merit-based scholarship (worth around 20 dollars). This program enlists children motivation to improve education outcome. They find an increase in attendance in the year prior to the final awards (3,2 per cent), a one-quarter decrease in absenteeism and an increase in test score results, particularly for students with little to no chance of winning the scholarship. The authors do not identify the mechanism behind these results but stress the importance of teacher effort and peer effects. A follow-up of this study examined the educational outcomes of the same girls 5 years after the original program started. Friedman et al. (2011) find that the program increased enrollment in secondary school (8.6 percentage point increase), current enrollment in any school (7.9 percentage point increase) but find no impact on grades completed.

Behrman et al. (2015) evaluate the impact of three programs (the Aligning Learning Incentives, or ALI program) offering performance-based financial incentives to children and teachers in Mexico and designed to promote mathematics achievement. The first program focuses on students only and provides individual incentives for performance, whereas the second program targets teachers only and the third one gives both individual and group incentives to school administrators,

students and teachers. They find mixed positive results, especially an increase in math scores but no impact on dropout. The latter program has larger impacts than the two others.

Several other studies focus on student incentives (i.e. Kremer et al., 2009 in Kenya; Levitt et al., 2010 and Fryer, 2010 in the US), finding only small effects on both school participation and learning. In a more recent study, Blimpo (2014) evaluates a program in Benin offering three types of scholarships or incentives: i) scholarships based on individual-level performance with respect to a set goal, with no limit on a number of \$10 scholarships offered, ii) scholarships based on average performance for teams of four students (also with a set goal and unlimited number of \$40 scholarships), iii) a tournament in which 84 teams of four students competed for a large prize (\$640 per team) given only to the top three teams. Blimpo finds that all three types of incentives had similar impacts, increasing grade 10 test scores by 0.24 to 0.28 standard deviations. Li et al. (2014) focus on a program also based on a tournament in China and find that combining student incentives with peer tutoring increased the test scores of the weaker students by 0.27 standard deviation which suggest that student incentives on their own may not be effective unless combined with pedagogical support.

4.3. Credit-based interventions (i.e. tuition loans)

Credit-constrained households tend to underinvest in children's education. Some evidence shows that giving tuition loans to students in the lowest quintiles and score above a cutoff is effective in increasing college enrollment. The little research literature that exists on the subject concerns higher education, mostly in the United States, and will be treated in the Higher Education section below.

4.4. Voucher programs

Similarly to scholarships or cash transfers, voucher programs aim at reducing the cost of education and improving schooling outcomes. In order to give parents more choice over where they send their children to school, they receive a voucher, backed by public funding, to spend on a school place in either the public or private sector. The objective of a voucher program is to "extend the financial support from the government to these other education providers and thus give all parents, regardless of income, the opportunity to choose the school that best suits their preferences" (World Bank²³). Two types of voucher programs can be distinguished: targeted and universal. Although there is little research on the impact of educational vouchers specifically targeted at the poorest students, school vouchers targeting only disadvantaged students might enhance more equal access to school. While the academic controversy over school vouchers has raged in the United States, the subject is even more relevant in developing countries, where private enrollment is much higher than in industrialized nations.

²³ <http://blogs.worldbank.org/education/how-do-school-vouchers-help-improve-education-systems>

Voucher programs have been implemented in several developing countries, such as Côte d'Ivoire, Bangladesh and Latin America countries (Gauri, 2003). Little research has been done on the effects of these programs in developing countries and there are only two studies that show rigorous methodology and evaluate the impact on access to education (Morgan et al. 2012).

The first, by Angrist et al. (2002), evaluates one of the largest voucher program, the *Programa de Ampliacion de Cobertura de la Educacion Secundaria (PACES)*, launched in Colombia in 1991. Children living in poor neighbourhoods, attending public primary school and accepted to a private secondary school participating in the PACES program received vouchers by lottery covering more than half of the cost of private school. The program ran until 1997 and covered more than 125 000 children in 216 municipalities. Angrist et al. (2002) use a quasi-experimental research design to evaluate the impact of this restricted school vouchers program on test scores, school choices and duration of schooling. They find that three years after the lotteries, "winners were about 10 percentage points more likely to have finished 8th grade primarily because they were less likely to repeat grades, and scored 0,2 standard deviations higher on achievement tests". They also find that these effects are larger on girls. In a follow-up study, Angrist et al. (2006) estimate long-term outcomes of the program, seven years after the distribution of the vouchers. They find that vouchers winners are 6 percentage points more likely to have graduated from secondary school than voucher losers and that students who attended private school learned more than those who did not (Angrist et al., 2006).

The second is the one by Kim et al (1999) that evaluates a Pakistan program, where subsidies were directly given to some private schools located in poor urban areas of Quetta, based on the number of girls enrolled. They observed a 33-percentage points increase in girl enrollment and a lower increase of boy enrollment as well.

It is also worth to mention that the best-know universal voucher program was launched in Chile in 1980, as part of the transfer of school management from the central government to municipalities. Most of schooling in Chile is still voucher-financed (Hsieh and Urquiola 2003), but there are no randomized trials on this unrestricted program and research carried out on the system leads to unclear results (finding both small, large or no effect). McEwan et al. (2008) show that affluent households have higher enrolment in private schools in Chile, which would mean that the voucher program could increase social segregation.

Since a secondary objective for the introduction of voucher systems is to increase the competition between public and private schools with the idea that competition boosts school performance (West, 1997), studies focusing on vouchers often compare the education outcomes attained in public and private schools. Glewee and Muralidharan (2015) observe that those studies seem to indicate that private schools are more cost effective and productive, since they manage to provide the same learning outcomes at lower costs, but they are not able to offer higher quality education as measured by test scores. Authors thus add that "from a policy perspective an important open question is to understand how public and privately managed schools would perform in a setting

where the value of the voucher was set equal to the per-student spending in public schools” (Glewwe and Muralidharan, 2015, p.73).

5. Information programs and management strengthening programs

Other interesting initiatives such as information programs and management capacity programs have been implemented and evaluated recently. Best practices in these research areas are included in this section.

5.1. Information programs

Information programs are initiatives designed to provide information to children and/or parents either about returns to education, about student’s results and attendance, or about how to take advantage of financing opportunities (Glewwe et al., 2015). Information interventions are particularly promising because they cost little (World Bank, 2018; J-Pal, 2013) but such initiatives seem to have mixed results.

The first kind of information programs is those who provide information to children and parents on returns to education, in order to increase investment in education. One of the main reasons why parents do not invest more in their children’s education and why disadvantaged backgrounds receive less schooling is that parents might underestimate the potential returns to education. They often lack crucial information needed to make the right long-run investment decisions regarding their children’s human capital (Gallego et al., 2018). One of the major studies, the first of this type, analyzing the impact of information sharing on children’s time in school took place in the Dominican Republic. Jensen (2010) found that providing information on returns to education to boys in grade 8 (i.e. the last year of compulsory school) determined an increase by 0.20 in the number of years of school completed four years after the intervention. Effects were weakest for the poorest households, facing more credit constraints, and particularly strong for the least poor households.

In Madagascar, Nguyen (2009) showed that simply providing information on the returns to education through class teachers led to improved students’ achievements. The author also finds that asking a person from a poor background to share her success story had an impact on poor children’s test scores. Despite a low effect size, providing information on the returns to schooling in Madagascar was one of the first most cost-effective education interventions evaluated using an RCT (Kremer et al. 2013).

Very recently, Avitabile et al. (2018) provided 10th-grade students in Mexico with information about among other things the average earning associated with different educational attainments and found a positive and significant impact on standardized tests scores and self-reported measures of effort. They also find a positive, but not statistically significant effect on the probability of taking a university entrance exam and of obtaining a high score in this exam. One of the latest studies of

this kind (Gallego et al., 2018) evaluates two innovative information campaigns in Peru: a telenovela-style video series about the social value of education, real earnings information and options for financing higher education, and an app-based survey using infographics and interactive activities. They find an increase in students' and parents' perceptions of the financial benefits to education, and a decrease in dropout rates.

Although the studies presented above suggest the existence of positive effects of providing information on returns to education, several other studies found little to no effect. Loyalka et al. (2013) carried out an intervention in rural Chinese provinces, where students in grade 7 were provided with information on earnings associated with different levels of education and found no significant effect on the dropout rate, test scores or children's plans to go to high school. Authors also found that counselling interventions (i.e. helping students identify their career interests) determined an increase in dropout rate by 1.7 percentage points. This could be probably explained by the fact that some students could have understood that was too difficult for them to pursue with high school and to follow the career they had in mind and thus preferred to opt for immediate entry in the labour market.

The second type of information programs provides parents with information on children's results and attendance, in order to improve communication between parents and pupils. In a low-income region of Chile, Berlinski et al. (2016) test whether sending data on student outcomes to parents via high-frequency text messages improve schooling outcomes. This program narrowed parent-school information gaps and had a positive impact on students. The authors find a significant increase in math grades, attendance and a decrease in bad behaviour. These results suggest that poor communication between parents and schools may be a barrier to better schooling outcomes and that simple programs using low-cost technology could reduce it. Conversely, in Kenya, providing parents with information on their children's literacy levels and suggesting strategies to improve their scores did not have any positive effect (Lieberman et al., 2014).

Information programs can also provide information on education funding. In Chile, a study (Dinkelman et al., 2014) found that exposure of children to information about how to finance higher education raised enrollment in college preparatory secondary schools and primary school attendance, with gains concentrated among medium to high-grade students. However, providing this information to parents had no effects.

Finally, information programs can also be a way to improve transparency and school governance. Education systems in developing countries are often centrally managed in a top-down structure, with the low commitment of communities and local actors. Recently, several capacity building programs have been launched in African countries with the objective to empower communities to take charge of their schools. Interventions that try to increase school and system-level accountability include both information-related interventions and intervention that involve school-based or district-based management. Both Reinikka and Svensson (2011) and

Bjorkman (2006) examined a government program in Uganda where a newspaper campaign was launched in order to bring attention to the amount of funding that local schools should receive. The idea was that more informed parents would have better monitored local officers with a consequent reduction in the capture of funds. This, in turn, would have determined positive effects in school quality. Both studies found indeed that this information campaign had a large impact on student performances²⁴. The information campaign promoted in India, and evaluated by Pandey (2009), responded to the same rationale: meetings in villages were organized in order to disseminate information on the communities' responsibility in schools' management²⁵. Authors found small positive impacts on learning outcomes and on teachers' effort. Overall, there is little evidence that this kind of campaigns have sizeable effects on students' performances (Glewwe and Muralidharan 2015).

5.2. School-based management programs

"Poor management and governance often undermine schooling quality. Although effective school leadership does not raise student learning directly, it does so indirectly by improving teaching quality and ensuring effective use of resources. [...] Ineffective school leadership means school principals are not actively involved in helping teachers solve problems, do not provide instructional advice, and do not set goals that prioritize learning" (World Bank, 2018, pg. 11).

Management capacity programs for schools are becoming very popular, although the empirical evidence on their success is mixed and still limited. Management capacity programmes can improve teachers' commitment (by making them more accountable to the community) and then children performances.

Lassibille et al. (2010) carried out an RCT on AGEMAD, a Malagasy program that aimed at "make explicit the functional responsibilities of teachers, school directors, and district and sub-district administrative staff through a coherent and detailed manual of operations" (p.2) in public primary schools. The interventions improved school attendance and reduced grade repetition, but gains in learning were not statistically significant. Two difference-in-difference studies evaluate school-based management programs in Mexico: Santibanez et al. (2014) find that the PEC-FIDE program²⁶ had no general impact on students' test scores or time in school, while Gertler et al. (2012) find no impact of the AGE program²⁷ on dropout rates.

On the other hand, several programs give school committees real responsibilities over their schools and seem to have more effects. Barr et al. (2012) implement a combined lab and field experiment in

²⁴ However, Hubbard (2007) questions whether the entirety of the impacts estimated in these studies can be attributed to the newspaper campaign alone, as the information campaign was part of a broader education and fiscal reform strategy (including universal primary education).

²⁵ In India, communities control several public services, and schools among others, and this in order to improve accountability. In some cases, communities can also hire contract teachers (Pandey et al., 2009).

²⁶ Programa Escuelas de Calidad - Fortalecimiento e Inversión Directa a las Escuelas (PEC-FIDE)

²⁷ Apoyo a la Gestión Escolar (AGE)

100 Ugandan primary schools and find that programs that engage school management committees in the creation of a school monitoring plan have a positive impact on pupil test scores as well as pupils and teacher absenteeism. They suggest that community-based monitoring of public services might provide a possible solution to accountability programs when state oversight is limited.

Similarly, Duflo et al. (2012) examine a program under which Kenyan Parent-Teacher Associations were funded to hire an additional teacher on an annual contract renewable conditional on performance. They find positive results for this school-based management program in which school management committees were given hiring responsibilities. Scores of students taught by these teachers increased. They show that training school management committees in their governance responsibilities are an effective complement to the contract teacher intervention and that schools that received the complementary training were less prone to local capture. But still, in Kenya, Bold et al. (2013) replicate this intervention and find that strong effects of short-term contracts produced in controlled experimental settings are lost in weak public institutions, meaning that when NGO implementation produces a positive effect on test scores, government implantation yields zero effect. The study suggests that the stark contrast in success between the implementation by the government and NGOs can be explained by implementation constraints and political economy forces put in motion as the program went to scale.

In Gambia, Blimpo et al. (2011) examine the impact of school-based management training, the *Whole School Development* program on students' achievements. The WSD program provided a grant and comprehensive school management-training program to principals, teachers, and representatives of the community. The results were highly moderated by adult literacy rates and suggest that in villages with high literacy, the WSD program may yield gains on student's learning outcomes, but could have a negative effect in villages where literacy is low. Varying degrees of community capacity could explain these discrepancies.

Finally, some studies aim understanding if there are differences in productivity between public and private-managed schools.²⁸ If it was the case, it would be interesting to understand what factors drive this result and public-private partnership arrangements could be seen as a way to strengthen public school management. Crawford (2017) finds no differences on average in management quality between government and private school in Uganda. Hanushek et al. (2013) and Contreras (2015) show that changes towards more school autonomy generally lead to worse performance in low-income countries whereas it leads to better performance in high-income countries. In Liberia, the state recently delegated the management of the public school to private contracts. Romero et al. (2017) find that, after one year, thanks to new management and extra resources, students learning increased by 60% compared to standard public schools. The program

²⁸ On the differences of educational performances between private and public schools, an interesting study by Sekhri and Rubinstein (2011) find that it is the sorting of better students into public colleges, rather than better value added, that drives higher exit exam scores for public over private college graduates in India.

also increased teachers' quality of instruction and attendance rate. However, contracts authorized the largest operator to push excess pupils and under-performing teachers into other government schools, this could thus bias the results. Moreover, costs were very high, in terms of government staffing and private subsidies, thus the policy does not seem to be sustainable in the long run.

6. Vocational education and training

Within the next 15 years, some 375 million young people (15-24 years old) will become of working age in Africa, equivalent to the current population of Canada and the United States combined. By 2050, nearly one in three young people will be living in sub-Saharan Africa. Currently, the incidence of unemployment among youth in the region is lower than several other regions of the world (10.8% in 2017). But youths are more likely to work in the informal labour market which offers low-quality jobs with limited socio-economic security, training opportunities and working conditions. In fact, the region faces one of the highest rates of informality outside the agricultural sector, ranging from 34 per cent in South Africa to 90.6 per cent in Benin. According to ILO (2018), "investing in youth education, closing gender gaps in both labour markets and education, promoting efficient school-to-work transitions and creating decent jobs will be necessary to reap the dividends of the demographic shift in the region" (p.14). To address youth unemployment and underemployment, donor organizations and national governments have, over the years, promoted expansion of technical and vocational education and training (TVET) in schools and out of schools.

However, TVET systems in African countries present many problems, that are well summarized by Tukundane et al. (2015) in a study that examines four TVET programs in Uganda²⁹. Authors report the following main weaknesses: (i) negative social perception about vocational training or education (i.e. most students view it as a "second class" or a "poor cousin" of general education); (ii) gender disparity (i.e. boys are predominant); (iii) teacher-centered teaching methods; (iv) lack of practical and industrial experience of teachers; (v) inadequate equipment and facilities; (vi) weak links to the local labor market (except for apprenticeship); (vii) lack or poor post-training support.

UNESCO defines TVET as "a comprehensive term referring to those aspects of the educational process involving, in addition to general education, the study of technologies and related sciences, and the acquisition of practical skills, attitudes, understanding and knowledge relating to occupants in various sectors of economic and social life"³⁰. Tripney et al. (2013) propose a typology of TVET programs, that we report in box 1.1. below, that distinguishes between technical education, vocational education, vocational training, on-the-job training and apprenticeship.

²⁹ These are four different programs, two vocational education schools, a non-formal church based skill training center and an apprenticeship training in a garage.

³⁰ <https://unevoc.unesco.org/go.php?q=TVETipedia+glossary+A-Z&id=475>

Box 1.1. A typology for TVET

Technical education: theoretical vocational preparation of students for jobs involving applied science and modern technology; [...] it emphasizes the understanding of basic principles of science and mathematics and their practical applications; usually delivered at upper-secondary and lower-tertiary levels [...].

Vocational education: organized activities designed to bring about learning as preparation for jobs in designated (manual or practical) trades or occupations [...].

Vocational training: prepares learners for jobs that are related to a specific trade or occupation; but, compared to vocational education, is better linked to the labour market and employment development system [...].

On-the-job training: workplace-based training that uses real jobs as a basis for instruction and for practical purposes.

Apprenticeship training: combines on-the-job training for a highly skilled craft or trade (from someone who is already a skilled leader in the field) with academic/ theoretical instruction; ranges from informal work-based 'learning-by-doing' to formally structured programmes sponsored by large industrial firms".

Source: Tripney et al (2013), pp. 15-16

6.1. Technical and Vocational Education

Despite the interest of governments in Technical and Vocational Education, it remains a complex and controversial topic because it can create a divided society in terms of education and the benefits associated with it. Indeed, school systems in almost all African countries lead to two paths: general education, which prepares students to continue in higher grades, and vocational education, that allows direct access to the labour market, providing students with specific skills. Since in many African countries, access to (secondary) general education is restricted to performing students (due to the requirement of primary education certificate), this implies that vocational education is often attended from students that have been crowded out from the general system

The arguments in support of general education are that it creates 'general human capital' seen to carry the advantage of flexibility and portability over one's life and from one job to another and to some extent from one country to another. In this regard, many view general education as a more suitable type of education that is capable of responding to economic and labour force changes in society. Supporters of Technical and Vocational Education, conversely, assert that it produces 'specific human capital' that can make the worker more suitable for a given job and thus more productive (Tilak, 2002; Oketch 2007). This argument relies on the assumptions that: (i) not everyone can be trained for top-level jobs, thus vocational education offer chances to academically less able students who cannot advance through the school system; (ii) vocational education equips

youths with skills that are demanded in labour market. This last assumption is quite strong since employers often complain about a mismatch between skills acquired through vocational education and the ones required by employees.

Unfortunately, few evaluations have been realized on technical and vocational education programs. Tripney et al. (2013) review 26 studies that were published between 2000 and 2011 and assessed the impact of TVET programs addressed to youths aged 15 to 24 in low and middle-income countries. Authors only include in the review studies using experimental and quasi-experimental methods. This determines they are constrained to include in their sample mainly vocational training and on the job training (only one vocational education program and two technical education programs are included), and mostly based in Latin American countries³¹.

To assess the effectiveness of formal TVET education systems in Africa, Oketch (2014) analyzed the case of three countries, Kenya and Ghana and Botswana. The case of Ghana and Kenya are quite interesting because they tried to introduce vocational education since basic school. The idea was to integrate vocational education and general education as early as possible in order to improve the negative perceptions associated to TVET and to give students the opportunity to acquire pre-employment vocational skills, besides general education. According to Oketch (2014), both countries failed in their attempt to ameliorate TVET quality and perception, and this because they proposed vocational education to too young kids and because of the too strong 'vocalisation' of programs (meaning the devotion of too many hours per week to vocational education). Botswana model differs from the others African countries because it opted for a 'pre-vocationalisation rather than vocationalisation of school programs: no more than five hours per week were of vocational education are proposed in secondary schools and the students can select only one practical subject. The idea is to provide general education first and training for employment afterwards.

6.2. Vocational training and on the job training

World Bank and its client governments invested nearly U.S. \$1 billion per year between 2002 and 2012 on skills training programs around the world (Blattman and Ralston, 2015). Usually, the World Bank funded programs combine vocational training and on the job training. They are offered to unemployed workers or to low-income or at risk youths. They typically offer a 3 months classroom training plus two or three months of job training in the form of an internship. McKenzie (2017) reviews nine high-quality studies that analyse the impact of these programs and observes that only two of them had a significant impact on employment (2-3 per cent increase) and two of them on earnings (17 per cent increase). Moreover, Mc Kenzie (2017) warns that care must be taken to general equilibrium effects: it is not clear if these programs generate new employment or simply determine a shift in who gets the jobs. From a cost-benefit perspective, these programs are so

³¹ Although authors acknowledge that their results are hard to generalize, what they observe is that sample intervention has only small (and hard to detect) effects on employment and income. They do not observe heterogeneity of impact across the different type of programs.

expensive that Blattman and Ralstom (2015) state that «it is hard to find a skill training program that passes a simple cost-benefit test », even though the ones provided by privates are slightly more efficient. Finally, training programs are often deceiving because expectations of both participant and policymakers are very high.

McKenzie (2017) also examines the impact of lower cost initiatives focalized on employability and job search, like providing information on job vacancies and job seekers, organizing job fairs, financing transport to allow people to find a job further away from home. He observes that only one out of the ten initiatives he examined shows a significant impact on employment, but at least they cost far less than the vocational training programs.

The deceiving effects of this type of vocational training programs induces McKenzie (2017) to suggest international players that want to contribute addressing youth unemployment, to put more efforts in: (i) helping firms overcoming the constraints they face in growing and creating more jobs and in (ii) helping workers to “overcome sectoral and spatial mismatches” that arise when individuals is stuck in the occupations for which demand is scarce or in geographical areas where there is not enough demand.

Another type of programmes deals with training on soft skills. Soft skills can be defined as “skills that are cross-cutting across jobs and sectors and relate to personal competences (confidence, discipline, self-management) and social competences (teamwork, communication, emotional intelligence)”³². Campos et al. (2017) conducted a randomized control trial in Lome, Togo, in order to test the effectiveness of a training program that teaches “a mindset of self-starting behavior, innovation, identifying and exploiting new opportunities, goal-setting, planning and feedback cycles, and overcoming obstacles” (p. 2). They assigned small enterprises owners to a control group (n = 500), a traditional leading business training program focused on accounting, marketing, human resource and financial management, or a personal initiative training program. Results show that personal initiative training had a significant and large impact on profits and sales, while the traditional training did not.

To sum up, there is relatively poor evidence to demonstrate the effectiveness of vocational and training education in general and our academic review tends to show mixed results and modest effects. The few existing studies and anecdotal evidence show that technical and vocational education face important challenges to demonstrate their impact and cost-effectiveness, including in African countries. Most of these problems are related to the high cost of this kind of education, that makes difficult for state and non-state actors to provide high-quality services. Also, the debate on the opportunity to vocational education (and eventually how much) or not is still open. Concerning vocational and on-the-job training, more evidence exists and it generally indicates that most programs have positive but very modest effects on employment and wages, while they are very expensive. Whatever is the content or the type of the program, to be (at

³² <https://unevoc.unesco.org/go.php?q=TVETipedia+Glossary+A-Z&id=602>

least modestly) successful it needs to be relevant to the labour market, preferably demand driven and involving the private sector (Hirshleifer et al., 2016; Hendra et al., 2016). Also, the quality of the programs has to be high, as well as the quality of equipment, implying that sufficient funds need to be guaranteed to the system. Focusing on quality could contribute to overcoming the negative perception suffered by TVET.

7. Higher education

This section presents some evidence on the impact of tertiary education (TE) on economic development – with a specific focus on African countries and analyses the available literature on the interventions that have been put in place in order to improve the functioning of TE systems³³.

7.1. A renewed emphasis on higher education as a development tool

During the 1980s and the 1990s, there was an international consensus on the urgent development of the primary and secondary education in Africa, while the relevance of tertiary education was neglected (Brock-Utne 2003). Since the late 1990s, political and academic voices started calling for the revitalization of African higher education sector (i.e. Castell, 1991; World Bank; 2002; Sawyerr, 2004). Higher education thus started to be seen as a significant player in facilitating Africa's development process development (Juma et al., 2005; Castell, 2009).

Several studies, indeed, indicated that investment in higher education and GDP were positively related in African countries (i.e. Bloom et al., 2006; Kamara et al., 2007; World Bank, 2009) and that higher education had broad benefits for individuals and societies (i.e. Bloom et al., 2014; Colclough et al., 2009; Fasih et al., 2012; McMahon, 2009; Moretti, 2004; Oketch et al., 2014; McCowan et al., 2016; Teal, 2011). Research also evidenced that knowledge was the single most important engine of growth and the driving force of economic performance in OECD countries (Marginson et al. 2007). Consequently, countries with an expanded system of higher education and higher levels of investment in R&D activities were seen as having a higher potential to grow faster in a globalized knowledge economy (Varghese, 2013). While there is a significant lack of research on the impact of tertiary education on development, as observed by Oketch et al. (2014), in one of the broadest studies focusing on returns to education in Africa, Barouni et al. (2014) show that returns to higher education are larger than returns to primary education. The rate of return from higher education seems, however, to decline as the proportion of the population with higher education increases, as evidenced by Heckman (2008).

Since the beginning of the new century, tertiary education in Africa has undergone an unprecedented transformation that led to an impressive expansion in terms of both numbers and diversity of institutions, academic programs, growth in enrollments and also the development of quality assurance frameworks and institutional governance. But with few resources, inadequate

³³ In this section we use tertiary education and higher education as synonyms.

capacity and a history of neglect, the sector has been struggling over the years to respond to the increasing demand (Mohamedbhai, 2003). In recognition of both the increasing demand for higher education along with its perceived benefits, Sustainable Development Goals agreed by world leaders in September 2015 included a specific target for achieving equitable access to higher education. Target 4.3 of SD4 aims, by 2030, to “ensure equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university” (UN, 2015). Key questions that arise from the setting of this target are, amongst others, whether current patterns of public spending on education are likely to support, or inhibit, its achievement and how to improve the quality, broaden access to higher education and reduce inequalities.

7.2. A wider but unequal access

Quality, equity and efficiency are three fundamental measures of the effectiveness of a higher education system. The higher education sector in many high-income countries has seen a rapid expansion (Schofer and Meyer, 2005; Marginson and Van der Wende, 2007; Keeling, 2006). Most of the time, these systems have grown from an elite access phase to a mass access phase and, more recently, to a universal access phase (Trow, 1973, 2007). However, massification has not generally led to equitable access. Students from disadvantaged backgrounds are often less likely to be prepared for higher education (Ilie et al., 2016). In some countries even if they have the chance to enter higher education, they have a lower chance of completing it (Altbach et al., 2009). The inequalities in access to higher education are sometimes due to inequalities in attainment in primary and secondary schooling (such as in England, as shown by Jerrim and Vignoles, 2015). Anyway, since students at the tertiary level most often come from affluent families, subsidizing higher education is less equitable than subsidizing primary education (Shimeles, 2016).

Concerning sub-Saharan Africa, most countries are still in the elite access phase. Although some countries registered a massive increase in HE supply (e.g. Kenya), on average only around 1-in-10 young people today have access to higher education (UNESCO Institute for Statistics, 2015). Progress has been faster in South Asia, although still significantly lower than in richer countries, reaching around 1-in-5 young people on average. Expansion of enrollments has been driven by economic priorities (Connell 2015), technological change, globalization and increased international competition. However, gender and socioeconomic inequalities in accessing higher education are very high (Odhiambo, 2014) and inequitable access to higher education remains a global problem (Ilie et al., 2016; Marginson, 2016; Salmi et al., 2014; McCowan, 2016). For most countries in sub-Saharan Africa, any expansion that has occurred has almost entirely benefited the well-off, with the poorest young people still extremely unlikely to gain access to higher education. A rich young person is three-to-five times more likely to attend higher education than a poor young person (Ilie et al., 2016). Even in South Asian countries with higher enrolment rates overall, such as Bangladesh, Nepal and Pakistan, only around 5% of the poorest half of young people gain access to higher education.

Carnoy et al. (2013), Salmi et al. (2014) and Chien et al. (2016) show that growth has not been equitable and call for policies combining financial assistance with measures to overcome non-financial obstacles. Illie et al. (2016) affirm that any measures aimed at attaining the SDG goal need to tackle inequalities in access within a system-wide approach, focusing on the level of education at which inequalities initially manifests (i.e. often at primary or secondary level), alongside higher education. As mentioned by Oketch et al. (2014), all levels of education are interdependent and must be addressed holistically.

We now turn to address the interventions that aim to address the problem of unequal access to tertiary education, in particular credit based interventions (i.e. loans, grants, vouchers) and affirmative action policies. In the last section, we briefly discuss the issue of the lack of resources for expanding the higher education system, a problem that is shared by most developed countries. We wonder how a private actor could eventually intervene to alleviate this constraint.

7.3. Credit based intervention

As in secondary education, the basic model of investments in human capital implies that households that are credit constrained will underinvest in their children's education. The research on this subject is sparse. A lack of systematic evidence on who benefits and who can afford to pay for higher education gave rise to an unresolved debate about the more suitable level of state subsidies and about private contribution. The literature debates about the appropriateness of strategies such as student loans, graduate taxes and vouchers in countries that are struggling to expand their higher education systems and where public spending in higher education is disproportionately benefiting the well-off students (Colclough, 1990; Johnstone and Marcucci, 2010; Oketch, 2016; Salmi and Hauptman, 2006; Woodhall, 2007; World Bank, 2010). The appropriateness of these programs in poorer countries would need "careful consideration, including with respect to how this affects the quality of higher education and who gains access to what type of provision" (Ilie et al., 2018, p. 20). Jerrim and Vignoles (2015) indicate that it would be better to finance programs aimed to boost school performance at high school rather than reducing the cost of higher education because earlier school attainment is the main factor explaining inequality in higher education access.

A few studies tried to estimate the impact of access to student loans on higher education enrollment rates and provide evidence that individuals are credit constrained in their decisions to pursue higher education. Solis (2011) studies two programs in Chile that give tuition loans to students who score above a cutoff in the national college admissions test and are in the four lowest income quintiles, using a regression discontinuity design. He finds that access to loans induces a 21-percentage point increase in college enrollment. The impact is largest among the poorest students and qualification for tuition loans eliminates the enrollment gap between the highest and the lowest income quintiles. Gurgand et al. (2011) also use a regression discontinuity design to analyze the impact of a credit score threshold for university loans, provided by Eduloan, a private company supported by international donors, on South African students' enrollment. This

program targets employees who are looking to improve their skills (applicants must be employed). The authors find that access to loans increased enrollment by around 25 percentage points and that the impact was particularly large for the lowest income quartile³⁴. Finally, in a conditional cash transfer program, that obliged to save a part of the transfer until the next enrollment season, Barrera-Osorio et al. (2011) find a large effect on enrollment and re-enrollment rates. The idea here is that this forced saving acts as a substitute for credit (Banerjee et al. 2013)

7.4. Affirmative policies and selection rules

In most developing countries, places in tertiary education institutes are insufficient with respect to the increasing demand and they are then rationed, using sometimes-complex rules. Affirmative policies are often put in place in order to guarantee education access to disadvantages categories. Those policies were born in the United States, where they are often at the centre of vigorous policy debates, but they are also common throughout the developing world. They are often in the form of a quota system, where a certain number of places are reserved to disadvantaged groups. While the underlying social objectives of this kind of policies are rarely criticized, there is an intense debate over the actual impact of such preferences systems on educational performance and labour outcomes. Banerjee et al. (2013) observe that several countries have launched affirmative action policies targeting disadvantaged groups, whether as a tool to increase access to higher education for indigenous students (e.g. in India, Brasil or Chile) or to expand access for women (e.g. in sub-Saharan Africa).

Studies on African countries are rare, but several studies focus on India's highly regulated tertiary education system and its quota system for historically disadvantaged groups to analyze the effects of affirmative action in this sector. Under the Indian policy regime, the oldest affirmative action policy in the world (Banerjee et al., 2013), a proportion of admissions slots at state-run universities are reserved for each disadvantaged group (scheduled tribes, scheduled castes, other backward castes). Bertrand et al. (2010) examine an affirmative action program for "lower-caste" groups in engineering colleges in India. They find that the program successfully targets the financially disadvantaged, since the average parental income among students admitted thanks to the quotas equals to around 60-70% of that of displaced students. However, they underline the fact that targeting by caste may lead to the exclusion of other disadvantaged students. Interestingly, they find that this targeting based on the caste reduced the number of females entering engineering colleges, which could reflect the greater gender inequality in educational attainment in India's lower castes. Robles et al. (2012) study the impact of strict quotas for scheduled tribes and scheduled castes in an Indian elite engineering institution. Like Bertrand et al. (2010), authors find evidence of successful targeting, meaning that target minority students are poorer than the

³⁴ . Kaufman (2012) tries to find an alternative explanation to differences in college enrollment between poor and rich students. He highlights the impact of differences in information set about career opportunities and student's subjective expectations of earnings.

average non-minority displaced students. However, they find evidence that minority students do not catch up, and fall behind their same-major peers.

7.5. Resources constraints in expanding the higher education system: the role of private providers

Since participating in higher education tend to increase individuals' earnings and induce growth that benefits the entire society, there is an intense debate about who should bear the responsibility for the investment in higher education. This debate is common across the world (Oketch, 2016). As summarized by Ilie et al. (2018), three sets of arguments are put forward to justify the allocation of public resources to higher education: i) education is a right (McCowan, 2012), ii) education contributes to society through economic growth and poverty reduction (see above), iii) public spending is supposed to be equitable. On this last argument, Ilie et al. (2018) highlight that although public spending is supposed to be equitable, inequalities in public spending widen as the level of education increases. But as the pressure to expand free primary education continues, most African governments have not invested much to reform higher education to meet the needs of the emerging modern sector (Shimeles, 2016) and they are faced with an intractable tension between the demands of quality, equity and funding (Unterhalter and Carpentier, 2010). Most developing countries have resource constraints and limited capacity to expand their higher education systems and are thus far from achieving the new sustainable development target of equal access to higher education by 2030. Moreover, higher education in Africa suffers from institutional rigidities that make it difficult for colleges and universities to adjust their curriculum and strategies to be more responsive to changes in global knowledge and labour market demands (Devarajan et al., 2011).

In response to this mismatch between demand and supply, private universities are growing steadily, including in sub-Saharan Africa (Oketch, 2009; Teferra and Altbachl, 2004; Tilak, 2014), as a solution to the challenge of expansion. The private sector has stepped in to fill this educational void, and the number of privately run colleges and higher education institutions has mushroomed in many developing countries. Authors such as McMahon agree that in some cases, private funding is needed but a sensible balance is necessary and points out that "little analysis has been done on the degree of privatization that is economically efficient. If control of higher education is to be fully relinquished to private markets, then there needs to be an analysis of the extent to which there may be market failure leading to distortions" (McMahon 2009, p.2). Moreover, some studies show that private university expansion can result in inequalities of access for students (Morley and Lugg, 2009; McCowan 2004).

Hybrid forms of privatization are emerging, like in East Africa, with dual track approaches combining government-sponsored places with privately funded places within the same institution. These could reduce pressures on government expenditures, but this sometimes occurs at the detriment of quality (Wangenge-Ouma, 2007, 2010).

Distance education is another strategy some governments pursue in order to face budget constraints, but this also raises quality issues (Schendel and McCowan, 2016). Another popular strategy for ensuring quality in the face of funding constraints is the concentration of funds in a few flagship institutions, often supported by philanthropic foundations and international donors. The problem of these projects is that they tend to funnel public funding away from regional universities, negatively affecting both the quality of more peripheral institutions and equity across the system (Schendel et al. 2016).

To sum up, this section showed how the rapid increase in the relevance of higher education for individual and social wellbeing in African countries has to face with the problems of low financial resources and unequal access. Policies based on loans and grants seem to be effective in improving access to poor youths, while affirmative action policies seem to be successful at targeting disadvantaged students. Public-private partnerships appear as a way to face the funding constraint most countries face, at least in the short term.

Conclusion

In this conclusive section, we try to draw some conclusions from the review of the literature under the perspective of an impact investor. In other terms, once identified the most effective interventions we wonder if an impact investor could have a role in supporting initiatives inspired by them.

The most effective interventions in order to boost learning appear to be the ones related to pedagogy. The idea is simple here: people and methods are more important for learning than infrastructure and equipment. An impact investor that is aware of this could support initiatives that focus on innovative pedagogies, like the ones based on teaching at each learner's level, or that propose a smart use of education technology in order to individualise learning. Well-designed teachers in-service training programs, based on specific methodologies and spread over a sufficient period of time, could be also sustained.

While our literature review stressed the primordial importance of investing in children from an earlier age, it also points out that only quality initiatives are beneficial for young kids. It is not sufficient to guarantee them a place in a pre-school, it is necessary that the quality of the service provided by the preschool is high in order to increase learning outcomes. An impact investor could then support early childhood initiatives that are centred on quality, professionalism, and pedagogical methods that are appropriate for the young age of the kids.

An interesting area of intervention relates to information programmes. The positive – although often moderate – effects of several information campaigns, suggest that initiatives helping the information diffusion (e.g. on performances, attendance, return to education, labour market opportunities,...) could be sustained in order to enlarge access to education and to improve learning outcomes. The main advantage of this kind of intervention is their low cost, that makes them being easily cost-effective. The development of technologies diffusing information through mobiles or counselling services proposed to secondary school students is an example of that kind of interventions an impact investor could support, providing they rely on a sustainable economic model.

The development of technologies helping officers to better manage the schools and more, in general, the entire education system is another possible field where technology can be useful and where an impact investor could have a role. We learned from our review that well-designed initiatives aimed at strengthening management capacity (e.g. management software of students' and teachers' absenteeism) could have an effect in improving learning. Technologies solutions equipped with adaptive learning can also improve student learning provided that these solutions are used as a complement of traditional education and that teachers are well trained to manage these innovative tools. Moreover, an impact investor could support management-training programs for officers, school directors, teachers or school committees, and which may rely on a technological component.

Equity in access to education is a major challenge in all developing countries, and it is particularly important for secondary and tertiary education. One of the main reasons for which poor people do not access to education, and even less to quality education, is the financial constraint. We presented in the previous section several forms of effective programs that can contribute alleviating this constraint, cash transfers and loans among others. While cash transfers programs are typically implemented by governments, impact investors can be interested in supporting initiatives promoting loans, in particular to higher education students, as well as scholarships as a component of their strategy.

Concerning higher education, our review showed how private funds and private providers are often necessary when the public sector is not able to allocate enough funds to the sector. Evidence suggests that it is important to pay attention to the eventual distortions and market failures that the strong presence of the private actors could produce. Also, there is the risk that public funds are diverted from public to private establishments or, that public funds are reduced because of the presence of private providers. An impact investor that aims to enter the sector should thus (i) assure as far as possible equity in access and (ii) act in accordance with the national strategy.

Finally, we pointed out how expensive is in general vocational education. Cost-benefit analysis showed that short World Bank-style vocational training programs, mainly targeted to unemployed and out-of-school youths - are not efficient. In addition, vocational education programs integrated into the school system, usually accessible to pupils with a lower secondary diploma, are expensive in terms of equipment, while it is extremely difficult both for governments and for private providers to adapt the offer to the changing needs of the labour market. An impact investor could thus help to find alternative and more effective ways to train people to relevant skill and to sustain employability³⁵. The difficulties encountered by public systems and donors' initiatives show that supporting existing private sector capacity in TVET might help to achieve more impact as well as effectiveness.

³⁵ The work I&P already does in supporting small and medium enterprises is a way to indirectly do it because when enterprises are stronger and formal they recruit more and offer better working conditions.

Part 2

The Education Challenges in Five African Countries

**Burkina Faso, Côte d'Ivoire, Ghana,
Madagascar, Morocco**

► Education challenges in Burkina Faso

1. Introduction

Burkina Faso has achieved considerable progress in promoting access to basic education since 2000. In a context of poverty, vulnerability, and more recently, insecurity, the country is progressively generalizing primary education, although there are still 2 million children out of school. Important achievements in infrastructures and teacher training improve the internal efficiency of the basic system, but too slowly. The long term effects on adult literacy are already sensible.

Encouraged by market opportunity but also by public support, the private sector expansion has contributed to the enrolment growth in all education cycles. In 2014, one out of five students was enrolled in a private institution. In the pre-primary, technical and tertiary education, the private sector is a major player to increase and improve the available supply of education.

A political momentum was built to better include and regulate these private providers in the system and strong efforts are given to formalize and normalize the schools which do not comply with the minimum regulatory rules. Some types of private schools (such as the Madrasa Schools) remain mainly out of this regulatory framework.

There is a tremendous education quality challenge in Burkina Faso, at all education cycles. National and international tests show that a majority of Burkinabe students do not meet the minimum levels of required knowledge or skills, although they do better than many of their neighbours. Stronger initial and continuous teacher training policies, complemented by investment in education inputs, seem necessary to move forward.

The TVET system suffers from long-lasting under-investment from public authorities and private providers. In this field, the government's goals are substantial, but their fulfilment will much depend on the capacity of private providers to deploy more capital and innovation.

In Higher education, regulatory policies are being set up to improve the general level of higher education institutions. The role of private providers to invest in and implement quality and relevant training is particularly essential, in a context where education technologies and innovation are quite missing.

2. General organization of the national education system

The education system is based on a 3-6-4-3 formal structure, as presented in Table 2.1. Pre-primary education is called "*enseignement préscolaire formel*" and starts at 4. It does not belong to the basic education mandatory cycle. Primary education is a 6 year system which ends with the *Certificat d'Etude Primaire* (CEP) exam. Secondary education is divided between lower secondary school in

the one hand (and also called post-primary education), and upper secondary schools (or high schools) on the other hand. Post-primary education consists of grades 7-10 and ends with the *Brevet d'Etudes du premier cycle* (BEPC) exam. Secondary education at the upper level consists of grades 11-13 and ends with the Baccalaureate. Compulsory education lasts 10 years, from age 6 to age 17, meaning from 1st grade to 10th grade (primary and post primary education). From primary to tertiary education, the academic year begins in October and ends in June. The TVET system in Burkina Faso is composed of short-term and long-term technical education (secondary education) and vocation training (tertiary education). According to Unesco UIS data, the education structure has not evolved since at least 2000, but reforms were taken since 2008 to consolidate the basic education continuum.

Table 2.1. Education cycles and entrance age in Burkina Faso

School Level	Duration (years)	Entrance Age
Pre-primary	3	4
Primary	6	7
Lower Secondary	4	13
Upper Secondary	3	17

Source: UIS Data

The Governance of the education system is structured as follows. The Ministère de l'Education Nationale et de l'Alphabétisation (MENA) oversees the education system from pre-primary to secondary education and is also in charge of technical education. The Ministère de l'Enseignement Supérieur, de la Recherche Scientifique et de l'Innovation (MESRSI) is in charge of higher education and research. The Ministère de la Jeunesse, de la formation et de l'insertion professionnelle (MJPEJ) is in charge of vocational training and youth employment and economic inclusion.

3. General Analysis

3.1. Access to education and demographic trends

Burkina Faso is fully engaged in its demographic transition, with average population growth at nearly 3% and a total population of 19 million people (as of 2017, according to UIS³⁶). Around 45% of the population is below 14, which represents more than 8 million children, and 70% of the population is below 25 (RESEN, 2017).

The whole education system welcomes nearly 10 million children and youth, including 3.3 million in primary schools and 3.1 million in secondary institutions. Between 2015 and 2020, 500,000 more children will be primary school-aged, for an enrolled population of 3.8 million children in 2020.

³⁶ UNESCO Institute of Statistics: <http://uis.unesco.org/en/home>

580,000 more children will be in the age to attend secondary education, for a total population of 3,7 million in 2020 (RESEN 2017).

The tertiary system accounts for around 1,8 million youth. However, there are also a significant number of pupils and students who are not in schools. UIS estimates that there are 746,000 out-of-school children at the primary education level (including 51% of girls) and around 860,000 out-of-school youth in secondary education (including 47% of young women).

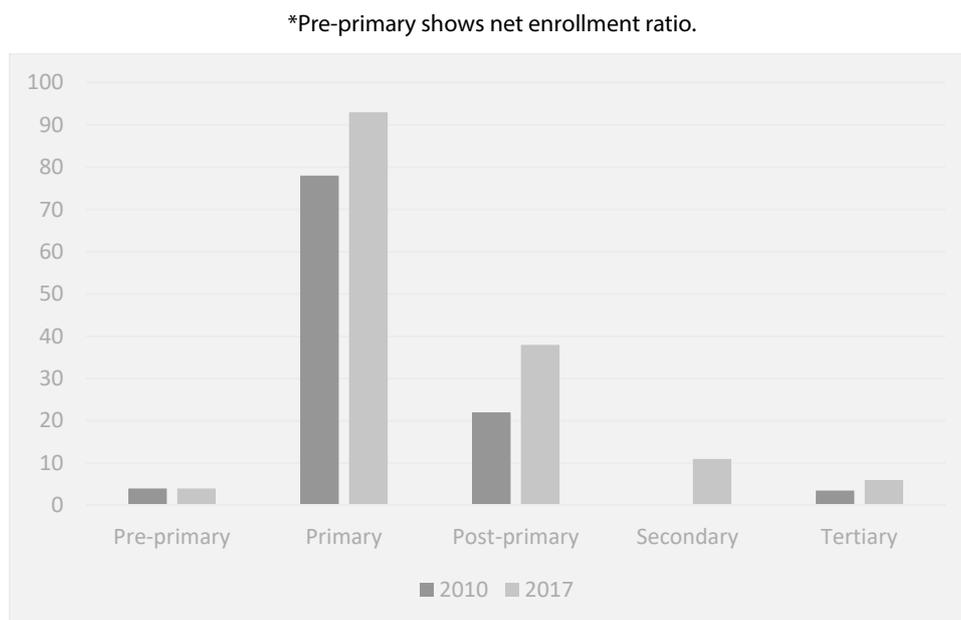
Table 2.2. Gross and Net Enrolment Ratios in Education in 2017

Access to education	Gross enrolment ratio	Net enrolment ratio
	2017	2017
Pre-primary	N/A	4%
Primary	93%	76%
Secondary	38%	29%
Tertiary	6%	N/A

Source: UIS Data

Access to education is improving in Burkina Faso, with a gap between the enrolment growth in basic education and in other education cycles. As shown by Figure 2.1, almost all education cycles show an increase in enrolment ratio, excepting pre-primary education standing 4% far below the regional average of 17% (PSE, 2013). The most significant enrolment growth occurred at the secondary level (+16 points) as well as in primary education (+15 points). Universal access to primary education is not yet an achievement. A look at net enrolment also shows that access to the first year of primary/secondary cycles balances the access expansion argument: the NER stands below 30% in secondary education. This trend unsurprisingly aligns with public and donors' strategy over the period to foster access to basic education, following the orientations of the MDGs then SDGs. In this regard, the stagnation observed in pre-primary education and the limited growth in higher education enrolment enhance that public investments have been more limited in these cycles. In higher education too, the steady expansion gives large scope for additional enrolment. There were 428 students for 100,000 inhabitants in 2013 against 235 students in 2007 (RESEN 2017). In TVET, there has been a decrease in the gross enrolment rate: 3.4% in 2014 against 7% in 2007, and the number of registered students for 100,000 inhabitants dropped from 172 in 2007 to 158 in 2014 (RESEN 2017).

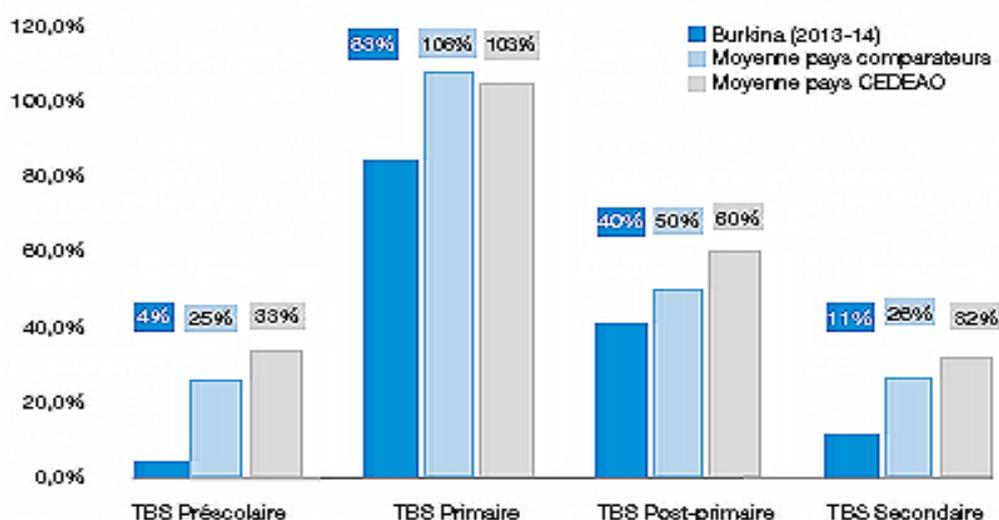
Figure 2.1. Gross enrollment ratios by education cycle in 2010 and 2017



Source: UIS Data

Comparing the coverage performance to similar countries and to ECOWAS region, access to school in Burkina Faso is lower at all levels. Figure 2.2. shows that gross enrolment rates to pre-primary, basic education and secondary education are significantly lower in Burkina Faso than in comparable countries. Compared to the average of comparable countries, the number of students per 100,000 inhabitants in Burkina Faso is twice weaker in the TVET sector and 50% lower in the generalist track (RESEN 2017). Thus, in terms of coverage in basic education, Burkina Faso is one the least performing country of the region, with Niger, Mali and Côte d'Ivoire.

Figure 2.2. School coverage in Burkina Faso, compared to similar countries

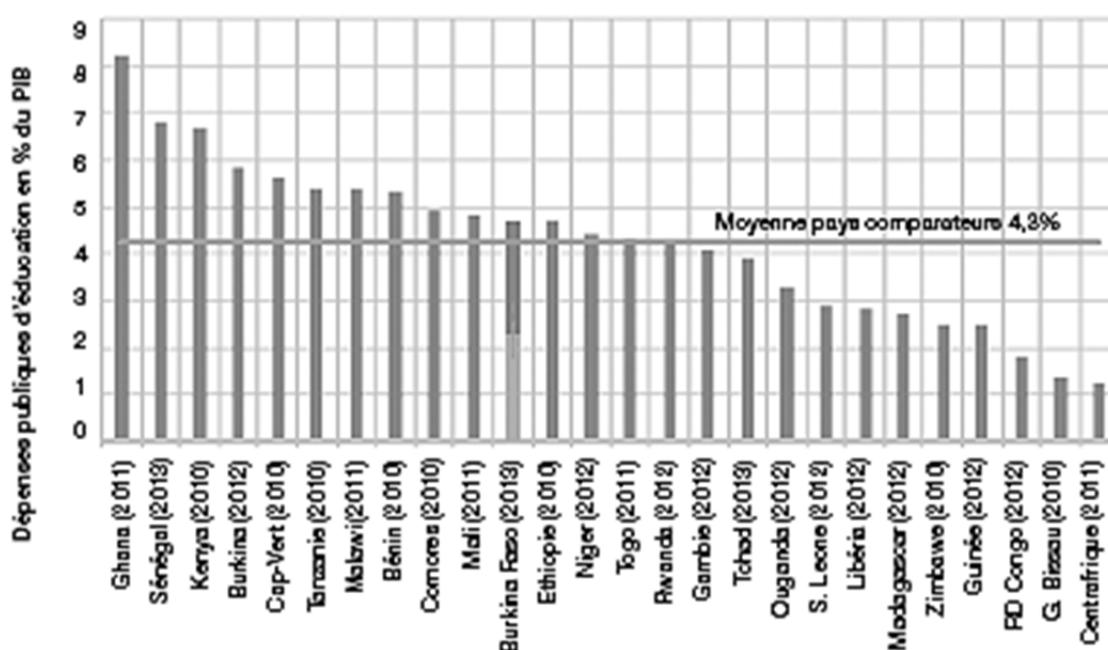


Source: RESEN (2017)

3.2. Expenditures on education

Education is a strong priority for the government of Burkina Faso. In a context of positive macroeconomic dynamics, the public spending from 2000 to 2013 has largely increased, from 435 billion to 1653 billion CFA Francs, with an annual growth rate at 10% (RESEN 2017). The public spending allocated to the education sector reaches in 2015 about 300 billion CFA francs, what represents 18% of total spending (and 30 % of current public expenditures) against an allocation of 12% in the 2000s (RESEN 2017). As shown in figure 2.3., the education budget stands at almost 5% of national GDP, what is slightly superior to the West African average but still inferior to countries like Ghana or Senegal (respectively at 8% and 6.8% of GDP). There has been a strong expansion of public funding to education with a budget multiplied by 4 between 2004 and 2013 (nearly 16% CAGR).

Figure 2.3. Public spending on education in West African countries



Source: RESEN (2017)

Public expenditures in education are mainly allocated to primary education, representing 60% of current public expenditures in education. This allocation is much higher than in countries with similar revenue (where it stands at 46% on average in 2013). As shown in Table 2.3., this has direct consequences in terms of underinvestment in other education cycles such as pre-primary education (which accounts for 0.5% of public expenditures) or TVET (1.2+0.4=1.6%). More surprisingly, the allocation to lower secondary education is very low (9.4%) considering the demographic dynamics and effects from primary education generalization. Hence, despite a strong general priority made on education, a review of subcycle allocation shows limited support to post-

primary education in the basic education cycle as well as very limited support to other education cycles.

Table 2.3. Public spending to education by cycle (2013)

Current public expenditures on education	
Preschool	0.5
AENF	1.4
Primary	61.2
Post primary	9.4
Secondary General	3.8
Vocational (short)	0.4
Vocational (long)	1.2
Higher education	17.7
Specialised education	3.9
Total	0.7

Source: RESEN (2017)

4. Specific subsectors achievements and challenges

4.1. Pre-primary education

Coverage and infrastructures

The preschool system in Burkina Faso which is not part of the basic education continuum is largely underdeveloped, with very limited infrastructures and low enrolment. The pre-primary education system is composed of nearly 800 facilities and 1700 classrooms, and including 92 public preschools (PSE, 2013). In 2014, there were around 72,000 children registered in preschools. There were enrolled in public preschools (14,000 children), community-based preschools³⁷ (21,000) and private preschools (36,000). Thus, the private sector contributes to nearly 50% of total enrolment and accounts for 56% of facilities (PSE, 2013). Since 2007, the total population registered in private preschools has been multiplied by 2,4x. This trend is still very limited considering the demographics of the country. 96% of children aged to attend preschools stay at home.

³⁷ Community-based preschooling includes various initiatives including the "Espace d'entraide communautaire pour l'enfance" also called "Bisongo" as well as "Espace d'éveils éducatifs (3E)" led by a Swiss NGO. They are mainly based in peri-urban and rural areas and targeting low-income populations.

Quality and supervision

There is very little available information about quality and supervision in pre-primary education. Typical data available to assess internal efficiency and learning in preschools are input-level data (number of facilities, of classrooms in public, community and private structures). We know that there were 35 children per classroom on average in 2012, but hiding high discrepancies. The average number of children per class was at 27 in private preschools and 45 in public preschools. Indirect comments can be made on preschool quality: there is little harmonization and regulation of preschool practices, there seems to be no public training policy for preschool and the difficulties observed later in primary schools in terms of learning show a general lack of readiness for primary schooling.

Equity

In terms of equity, the main challenge seems to increase the coverage of preschools in rural areas and low-income communities. Only 36% of children enrolled in preschools are based in rural areas, although the rural population aged to attend pre-primary education represents nearly 77% of the population. Thus, rural children have 76% less likely to attend preschools than urban children (PSE, 2013). In the central region (where the capital city Ouagadougou is localized) the pre-primary GER reaches 15% whereas the GER in the Sahel region (in Northern Burkina Faso) stands at 2%. There is no wide gender gap in pre-primary education but discrepancies between types of preschools. The percentage of girls in the total registered population stands at 50%; however, there are fewer girls registered in public (48% of the enrolled population) and private preschools (49%) but more in community-based preschools (52%), (PSE, 2013). The cost of pre-primary education is generally an important obstacle for low-income families: school fees (per children per year) vary from 25,000 to 50,000 CFA Francs in public preschools, and may rise to 300,000 CFA Francs in private preschools³⁸ (PSE 2013). The current supply of pre-primary education is there unequally distributed among the regions and communities and only reach a small proportion of the children.

4.2. Basic education

As the two components of the basic education continuum, the primary and post-primary cycles face common challenges in terms of coverage and infrastructure, quality and equity.

Coverage and infrastructures

Strong progress was achieved in terms of access to primary and post-primary education but with an insufficient deployment of infrastructures in rural areas. The number of children registered to primary schools has nearly tripled between 2000 and 2014 (+8% yearly), and the 2013 cohort stands at 2,600,000 pupils (RESEN 2017). The number of primary schools increased by an annual

³⁸ They vary from 40 to 80€ in public preschools and may increase up to 460€ in private preschools.

rate of 7.5% between 2001 and 2014 and reached nearly 13,200 schools. The number of classrooms per school also rose from 3.4 to 3.8, which means that many schools do not have one classroom for each sublevel of primary education (grades 1 to 6). In fact, due to small structures, many schools have to gather several grades in the same classroom or organize turnovers between morning and afternoon classes. There are big challenges in terms of building additional infrastructure and normalizing a high number of “under straw hut” schools³⁹ and other schools with poor infrastructure which do not provide sufficient conditions throughout the year for learning. In terms of localization, Table 2.4. shows that the expansion of primary school facilities has been stronger in rural areas. The number of schools in rural areas was multiplied by 3x between 2001 and 2014 whereas it was multiplied by 2x in urban areas. In the generalist track of post-primary education, the number of registered pupils was multiplied by 4.5 between 2000 and 2014, what remains largely insufficient as the GER stands at 40%.

Table 2.4. Primary school facilities and classrooms by status and localization (2001-2014)

	2001	...	2006	2007	2008	2009	2010	2011	2012	2013	2014
Nombre d'écoles	5 131		7 579	8 182	8 778	9 726	10 198	10 796	11 545	12 394	13 204
Statut											
- public	4 517		6 451	6 960	7 513	7 997	8 375	8 831	9 266	9 886	10 425
- privé	614		1 128	1 222	1 265	1 729	1 823	1 965	2 279	2 508	2 779
Milieu											
- rural	3 923		6 054	6 581	7 042	7 854	8 247	8 993	9 504	10 199	10 849
- urbain	1 208		1 525	1 601	1 736	1 872	1 951	1 803	2 041	2 195	2 355
Nombre de salles de classes	17 456		26 444	28 925	31 809	35 129	38 269	40 912	43 661	47 709	50 444
Statut											
- public	15 171		22 088	24 203	26 694	28 946	31 492	33 757	35 568	38 710	40 680
- privé	2 285		4 356	4 722	5 115	6 183	6 777	7 155	8 093	8 999	9 764
Milieu											
- rural	11 631		18 781	20 855	22 941	25 596	28 256	31 345	33 239	36 520	38 628
- urbain	5 825		7 663	8 070	8 868	9 533	10 013	9 567	10 422	11 189	11 816

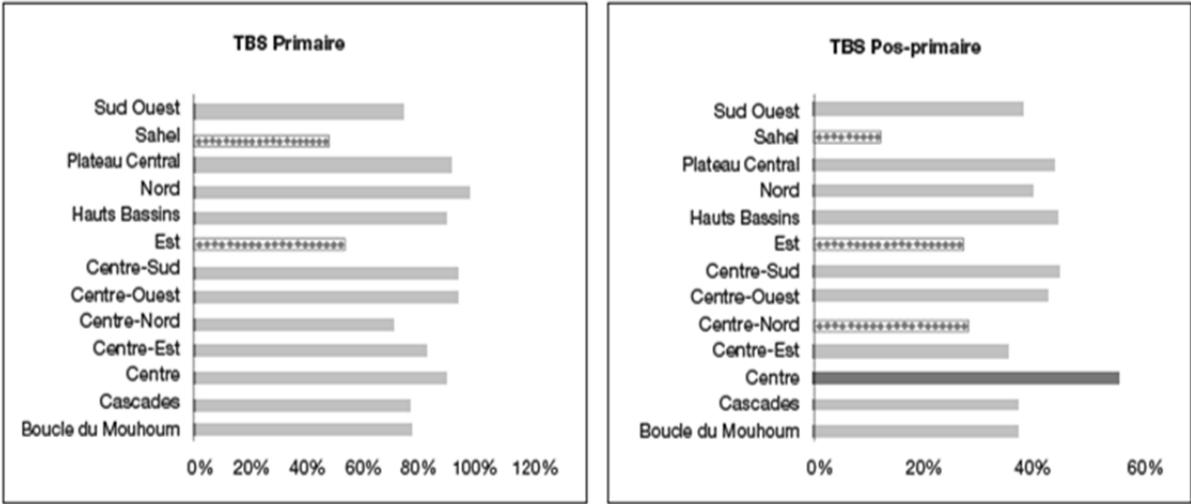
Source: RESEN (2017)

The Northern and Eastern regions of Burkina Faso have a stronger need for infrastructures.

Indeed, geographic disparities are not only articulated in terms of rural/urban but also in regional perspectives. Figure 2.4 shows that the coverage of primary education and post-primary education is substantially unequal between the different regions of the country. The Center region (that includes Ouagadougou) is one the most performing region with nearly 90% of GER in primary education and nearly 60% of GER in post-primary education. Conversely, the Sahel, East and Centre Nord Regions lag behind the other regions, with a GER in primary education at 60% and in post-primary education around 15 to 25%.

³⁹ In French, « écoles sous paillotes ».

Figure 2.4. Gross Enrollment Rates in Primary and Post-Primary Education by region (2014)



Source: RESEN (2017)

Equity

These geographic disparities raise equity issues the development of basic education in Burkina Faso. Children in urban areas have a 85% chance of accessing 1st grade in primary school whereas this figure for children rural areas is only 57%. In terms of post-primary education, the gap is even more important. Only 1% of rural pupils complete secondary education, against 13% for urban pupils (RESEN 2017). Important equity issues appear when looking at the socioeconomic conditions of pupils. Children from the poorest quintile (in terms of revenue distribution) have 2x less chances to access primary school, 6x less chances to complete primary education, 38x less chances to complete post-primary education and even 159x less chances to complete the secondary cycle (RESEN 2017).

Gender disparities are a big challenge, in particular for secondary education. In terms of gender, data show that girls have lower access to basic education. In primary education, the GER of girls stands at 96% versus 101% for boys (PASEC 2014). Girls represent only 44% of the total population in post-primary education) and a shorter survival rate (8.4 years against 9.2 for boys). Some initiatives have been pursued to counter-balance this phenomenon (financial incentives granted by parents’ associations for instance), but the gender disparities persist, with big regional differences.

Private Sector Contribution

The private institutions in the basic education cycles are heterogeneous. Private providers include secular schools and confessional schools. This latter category is itself very diverse and accounts for catholic schools, orthodox schools, Turkish schools, *Madrassa School* and *Franco-Arabic* schools (See box 2.1). Some studies show that the progressive formalization of *Madrassa schools* will

increase the proportion of the private sector in the sector in the years to come (RESEN 2017). In 2014, there were 173,000 students registered in secular schools, 171,000 in Franco-Arabic Schools, 55,000 students in Protestant school and 45,000 in Catholic schools.

Box 2.1: Madrasa and Franco-Arabic schools in Burkina Faso

Madrasa schools (or Daaras) are confessional institutions that teach the Islamic religion. Most of them are informal structures led by koranic masters and fully disconnected from the regulation and certification constraints of the public sector. These schools are free and mostly enrol children for low-income communities. They are generally of low quality (with a strong focus on theological content and no application of the national curricula) and often associated to negative practices (violence, mendicancy).

Franco-Arabic schools are a growing category of private schools in Burkina Faso and other neighbouring countries. These private schools are fee-paying institutions that teach in the two languages and include theological content. The quality of teaching in these schools varies but is generally much better than in Madrasa schools. There is a progressive formalization of Franco-Arabic schools in West African countries.

The private sector has fuelled the expansion of basic education across the country. The number of facilities managed by private sector providers rose from 1.100 to 2.700 schools, representing 1 out of 4 schools in 2014 (RESEN 2017). The total population of primary school students enrolled in private institutions reached 450,000 in 2014, which represents a proportion of 17% (RESEN 2017). Since 2000, the private sector contribution in primary education has increased at an average annual growth rate of 11.5%, against 8% for the whole sector. At the post-primary level (general track), this proportion reached 37% for a total of enrolled students in private institutions of 250,000 students. In the vocational post-primary track which is very slowly growing, 4500 students are enrolled in private institutions representing more than 60%. The private contribution is therefore much more important in the vocational post-primary cycle, but there is a strong preference of outgoing primary pupils for the generalist track. Remedial education or “night school”⁴⁰ in Burkina Faso is an important activity targeting at the early school-leavers and young workers and led by private institutions. Some 30,000 students are registered to night remedial classes at the primary level.

Internal efficiency

Beyond the access imperative, the low completion rates of primary and secondary education highlight the poor internal efficiency. Although access to 1st grade is now getting close to 100% of a given generation of pupils, universal access and completion are at reach in Burkina Faso. First,

⁴⁰ Called « cours du soir » in French.

children enter primary school very late and leave it early. Indeed, 70% of children who start the first grade are more than 6 years old (RESEN 2017). The school life expectancy is very low in Burkina Faso, inferior to 9 years. The survival rate in primary education stands at 65% (UIS Data) and the transition rate from primary rate show only 3 out of 4 pupils effectively transit from primary to secondary education. Repeating rates are relatively low in primary education (7%) but high in secondary education (20%) (RESEN 2017). Completion rates in post-primary and secondary education are increasing but remain low, standing respectively at 24% and 9%. That means that only a minority of pupils (nearly 25%) complete the basic education cycle and a small minority (nearly 8%) complete high schools and exit with the baccalaureate. The two main reasons why children drop out of school before the end of primary education are “academic failure” (45% of interviewees) and “lack of financial resources” (28%) (RESEN 2017).

Quality

There is a huge challenge of improving school infrastructure and equipment in Burkina Faso.

First, and as previously expressed, school infrastructure and equipment are far to be satisfying across the country, particular in rural areas where are localized 80% of primary schools. Numerous informal schools and precarious schools facilities do not meet with the quality standards set by the Ministry of Education: they are not accessible in all seasons (27% of schools), they lack access to water point (47%) or to latrines (31%), have no canteen facilities (31%) or have poor quality of equipment (missing tables and benches) (RESEN 2017).

Secondly, the public sector is confronted with a deficit of teachers and other key education inputs.

The supervision rate (number of students per teacher) is high in many structures: 40% of (primary) schools have a supervision rate comprised between 40 and 60 students, and 18% of schools with a supervision rate superior to 60 students. In post-primary schools, 56% of structures have 1 teacher for 60 students or more in each pedagogic group. Moreover, these teachers did not necessarily receive initial training: only 18% of post-primary schools have 100% of trained teachers in this sense. The lack of manuals and teaching guides is also critical for a majority of schools (RESEN 2017). Nevertheless, we should be careful about the effect of lacking education inputs on the overall learning performance: PASEC highlights that the use of inputs is not necessarily significant in improving test results (PASEC 2014).

Due to these poor conditions of learning, a majority of pupils do not reach sufficient levels of skills in their basic education courses.

The 2014 PASEC test highlight the large deficit of learning in primary schools. At the end of primary school (grade 5), the proportion of pupils who do not meet the sufficient level of skills in Mathematics and in Language reach respectively 43% and 41%. On a regional perspective, the PASEC results show that Northern and Eastern regions, in particular,

the Sahel, have the lowest scores both in Mathematics and Language. However, as shown in Table 2.5, PASEC test shows that Burkina is performing well compared to other PASEC countries⁴¹.

Table 2.5. Percentage of pupils below the sufficient levels of skills in Language and in Maths

Pays	Début de scolarité (2 ^e année)		Fin de scolarité (6 ^e année)	
	Langue	Mathématiques	Langue	Mathématiques
Bénin	90,4	66,5	48,3	60,2
Burkina Faso	64,6	40,8	43,0	41,2
Burundi	20,9	3,3	43,5	13,3
Cameroun	70,3	44,7	51,2	64,5
Congo	62,0	29,1	59,3	71,0
Côte-d'Ivoire	82,7	66,2	52,1	73,1
Niger	90,2	72,2	91,5	92,3
Sénégal	71,1	37,7	38,9	41,2
Tchad	82,0	52,0	84,3	80,9
Togo	79,9	58,7	61,6	52,5
Ensemble	71,4	47,1	57,4	59,0

Source: PASEC (2014)

Compared to Burkina Faso, Burundi is indeed the only country with higher scores in Language and Mathematics. A look at national exams also enhances the lack of knowledge acquisition for post-primary and secondary students: about three-quarters of pupils do not reach the minimum standard in BEPC and Baccalaureate (RESEN 2017).

Box 2.2.: The government strategy in basic education:

The priorities of the government in basic education are as follow:

Primary education

- The government plans to extend the number of schools by building additional infrastructure across the country
- The government will increase school normalization (improvements in equipment and infrastructures, in particular for schools having less than 6 classrooms)
- Several hundreds of “under straw hut” schools are being closed and replaced by new infrastructure

Post-primary education

- The government have extended the mandatory schooling to 16 in 2014
- The government will also produce a strong effort on increasing available infrastructure (3600 middle schools and 3600 classrooms are needed), with a focus on rural areas.

⁴¹ The 2014 PASEC test was made in 10 Francophone African countries.

4.3. (Upper) secondary education

Infrastructures and coverage

The coverage of (upper) secondary education is growing but still weak and due to a lack of infrastructure across the country. The GER in secondary education stands at 11% in 2017 for a total population of 120,000 students. This population has tripled since 2004. The share of private sector enrolment was of 46% (representing 55,000 students) against 36% in 2004. The night remedial classes gathered around 5,000 students in 2014 (RESEN 2017).

Quality

High schools have important difficulties to recruit qualified teachers, in particular in sciences. There is an important gap between the hiring ambitions of secondary institutions and the number of candidates trained by ENS⁴² centres: only 86% of open positions were taken by ENS graduates. Moreover, there is a misallocation of teachers between high schools. About 28% of teaching hours were not taught because of insufficient staff in certain areas (RESEN 2017).

The accumulated academic deficit impacts the students' performance at the baccalaureate exam⁴³. We do not have data concerning failed infrastructures or lacking education inputs in secondary education but as high schools are more present in urban areas, we may anticipate that learning conditions are not as problematic as for primary and post-primary institutions. However, many students start the upper secondary education cycle with important learning deficits accumulated since the first grades of primary education. Thus, nearly 78% of students do not meet the minimum standards at the baccalaureate exam and the repetition rate in last year reaches 31% (RESEN 2017).

Equity

Girls' access to and completion of secondary education is weaker than in basic education. The data available on gender in upper secondary education show that there are only 40% of girls in secondary institutions and those girls have 18% less chance to be enrolled in this cycle. A positive evolution can be observed between 2006 and 2014, but the GER for girls remains at 8% against 14% for boys. When considering a cohort of one hundred girls, only 5% of them complete high schools against 10% for boys (RESEN 2017).

There is also a significant rural/urban in secondary education as well as regional disparities. Only 20% of youth enrolled in high schools are localized in rural areas. Rural populations have 110% less chance to access upper secondary education. On one hundred children living in rural areas, two will access high school and one will complete the cycle (against 21 and 13 for children

⁴² Ecole Normale Supérieure: the public institution in charge of training the teachers of secondary education.

⁴³ The only quality proxy that we have in terms of test success rate is the Baccalaureate national exam.

based in urban areas). The Northern and Eastern regions (in particular the Sahel region) have very low GER and suffer from a very weak coverage of secondary institutions.

Box 2.3: The government strategy in upper secondary education

The government has defined clear orientations to address the access and quality issues in (generalist) high schools:

- Improving the transition from post-primary education by removing the BEPC diploma as an entry condition to upper secondary education
- Construction of scientific high schools and the development of STEM courses across the cycle

Development of preparatory classes in high schools ("CPGE")⁴⁴, with a staff of associate teachers

4.4. Technical and Vocational Education and Training

The TVET system in Burkina Faso is composed of short-term and long-term technical education (secondary education) and vocation training (tertiary education).

Coverage and infrastructure

As mentioned earlier in the section, access to TVET institutions is very low and declining in Burkina Faso. This trend seems due to a weak coverage of public and private providers, combined with low investments from public and private providers and growing enrolled populations in generalist tracks⁴⁵. There were only 21,000 students registered in technical and vocational upper secondary institutions⁴⁶ in 2014, in which we count nearly 14,700 students in private institutions⁴⁷. The contribution of private players in the cycle has varied between 70% and 80% in the last decade and now stands at 70%. This enrolled population represents only 3.4% of secondary cycle, against 5% in Côte d'Ivoire and nearly 11% in Mali (RESEN 2017).

Quality and Relevance

There is a huge issue of infrastructure that affects the efficiency and attractiveness of TVET institutions. Many vocational training programmes rely on outdated infrastructures and equipment and there is very little public investment in this cycle (capital expenditures represent

⁴⁴ CPGE : Classe Préparatoires aux Grandes Ecoles : post-baccalaureate training to prepare access to top higher education institutions

⁴⁵ TVET represents 5% of current education spending from the government.

⁴⁶ Here, we mean the technical and vocational high schools.

⁴⁷ We should also mention the 7,000 students enrolled in post-primary technical institutions, including 4,500 students in private institutions (63%).

only 10% of the sectorial public spending). The supervision rates are decent in technical secondary institutions but highlight the very low number of students in all institutions.

The external efficiency of TVET institutions is quite poor, with very low integration rates on the market and high representation of the graduates in precarious jobs. The survey assessed by RESEN (2017) show TVET graduates are more likely to spend some time inactive, probably additional training, and are less unemployed than HE graduates (they are more likely to find a job aligned with their qualifications). However, 99% of them considered they had precarious employment.

Equity

As far as equity indicators are concerned, we find similar trends in terms of gender, rural and regional disparities in accessing technical education and vocational training. There is a strong concentration of TVET institutions in Ouagadougou and very low coverage in other regions, including in main regional cities. Indeed, only 30% of registered students in TVET are based in rural regions. Thus, a student living in a rural area has 90% less chance to access this type of institutions. There is also lower access to TVET cycles for girls. The gender parity index in TVET stands at 73% in 2014 (against 31% in 2007), meaning that the number of girls enrolled in TVET institutions has much less increased than the boy's.

Box 2.4: The government strategy in TVET

The government follows two main orientations to address the access and quality issues in TVET:

- Increasing the supply of technical education and vocational training to reach 16% of the secondary population by 2020 (against 3% today). Several successful initiatives from Tunisia are being duplicated in the country.
- Improve the orientation toward TVET by increasing awareness with vocational training modules in the generalist track of post-primary education.

4.5. Higher education

Coverage and infrastructure

The growth of higher education institutions is fuelled by the entry and development of private providers, but the general coverage in this cycle remains weak. There is a quick expansion of enrolment in higher education, with an annual growth rate registered at 14% between 2007 and 2013 (RESEN 2017). As shown by Table 2.6., the enrolled population has steadily increased to nearly reached 100,000 students in 2016 (MESRSI Data) and the GER has doubled in 10 years (from 3% to 6%) (UIS Data). There were 5,000 more baccalaureate graduates in 2018 than in 2017 (43,000 vs 38,000). The expansion of HE has been stronger in private institutions (+8% of

CAGR) where enrolled students represent nearly 25,000 students and 25% of the total population. Despite such dynamics, higher education remains only accessible to a minority of the population⁴⁸.

Table 2.6. Evolution of the student population in Higher Education, by status (MESRSI, 2017).

	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
Public	54 099	58 566	63 942	64 477	71 501
Privé	14 795	15 710	17 372	19 121	23 227
Total	68 894	74 276	81 314	83 598	94 728

Source : MESRSI, 2017

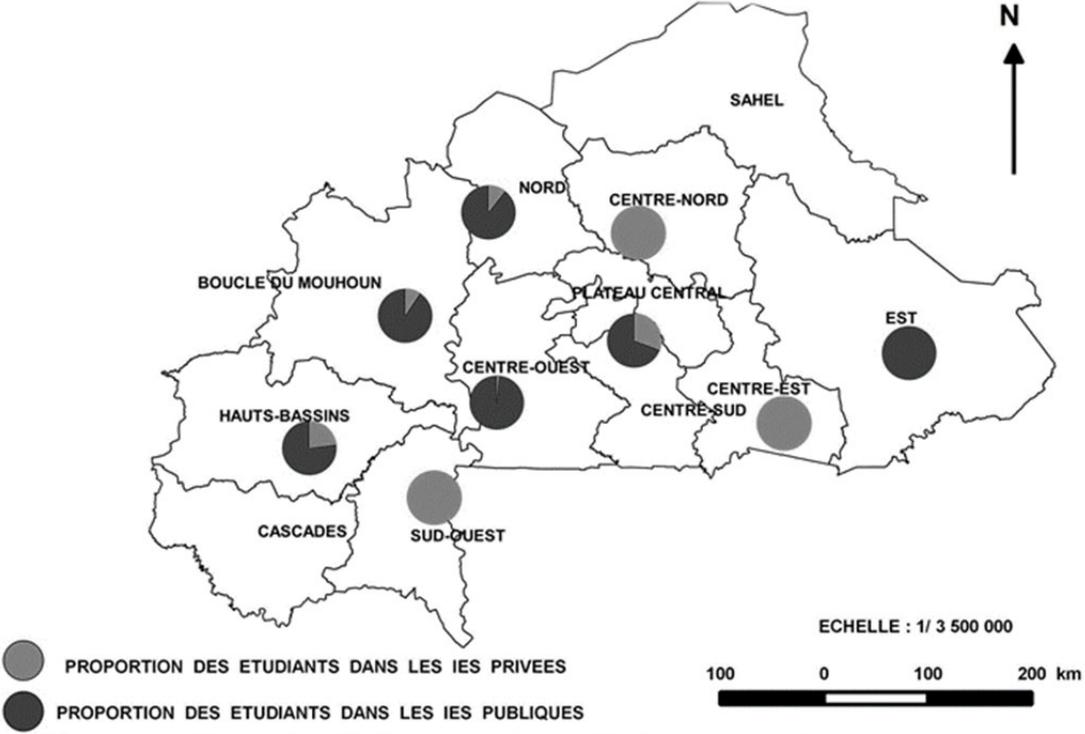
Equity

There is a critical gender issue in accessing higher education. First, the transition rate from secondary to tertiary education is higher for male students (80%) than for female students (70%). Thus, the entry to university and “grandes écoles” show important gender disparities. The female GER in higher education is at 4% (versus 7% for males). The gender parity index stands below 50% for the whole system (public and private HE institutions) but is even worse for masters and PhD degrees. It should be noticed that parity index are better in private universities (73%) than public ones (46%) in the three levels (Licence, Masters, PhD).

Important territorial disparities structure the supply of higher education in the country. Most universities are based in 3 cities: Ouagadougou, Koudougou, Bobo-Dioulasso. This concentration of HE institutions in the biggest cities is even stronger as far as private institutions are concerned. As shown by Figure 2.5, the public HE institutions are completely absent in some regions and 100% of the supply is provided by private players (in Sud Ouest and Centre Est regions for instance).

⁴⁸ The school-age population in this cycle reaches nearly 1,800,000 students, against 100,000 students registered in HE institutions.

Figure 2.5. Proportion of students in HE institutions by status and region



Source: MESRSI, 2017

However, that does mean that private institutions are equally distributed across the territory. Table 2.7 shows that 302 out of the 385 academic programmes taught by private institutions are based in the Center Region (including Ouagadougou) where 85% of the enrolled population is based. The same table also highlights the big disparities in terms of teacher localization and finally emphasizes the crucial lack of permanent teachers outside Ouagadougou.

Table 2.7. Student and teacher population in private higher education institutions, by region of Burkina Faso

REGION	# of HE Track	# of teachers		# of student	
		Total	Temporary teachers	Total	Girls
Boucle du Mouhoun	4	29	27	27	12
Centre	302	2 524	2 233	19 594	7 925
Centre Est	2	19	19	23	10
Centre Nord	4	75	70	118	17
Centre Ouest	12	80	79	216	74
Hauts Bassins	55	537	516	3 190	1 160
Nord	2	31	31	51	17
Sud-Ouest	4	14	8	8	0
Total	385	3 309	2 983	23 227	9 215

Source: MESRSI, 2017

Quality and Relevance

The quality control run by the MESRSI shows high disparities in terms of administrative and pedagogic quality in HE institutions. As detailed in Box 2.5, the MESRSI runs since 2017 an annual quality control on private of HE institutions, aiming both to ensure regulation compliance and to classify the institutions in terms of pedagogic and administrative performance.

Box 2.5: Quality Assurance Control and Institutions Ranking in Higher Education

Since 2017 and on an annual basis, the MESRSI runs an annual quality control on the administrative and academic performance of HE private institutions. The “performance” dimensions explored for this regulation control are various:

- Administrative organization and management
- Infrastructures and equipment
- Financial organization and management
- Pedagogic organization and management
- Research and ecosystem.

This evaluation enables the MESRSI not only to control the compliance of regulatory constraints but also to classify the institutions into different categories (very good, good, intermediary, bad quality etc) with a scale of 20 points. One ranking is made for private universities and another one for other HE institutions (institutes, grandes écoles etc.).

Top-ranking private universities in 2018: Université Saint Thomas d’Aquin (15.49/20), Université Ouaga 3S (14.39/20), Université Aube Nouvelle (14.02/20).

Top-ranking private HE institutions in 2018: Ecole Supérieure de Microfinance (17.02/20), Institut Supérieur de Technologie (16.67/20), Ecole Supérieure Polytechnique de Kaya (16.4/20).

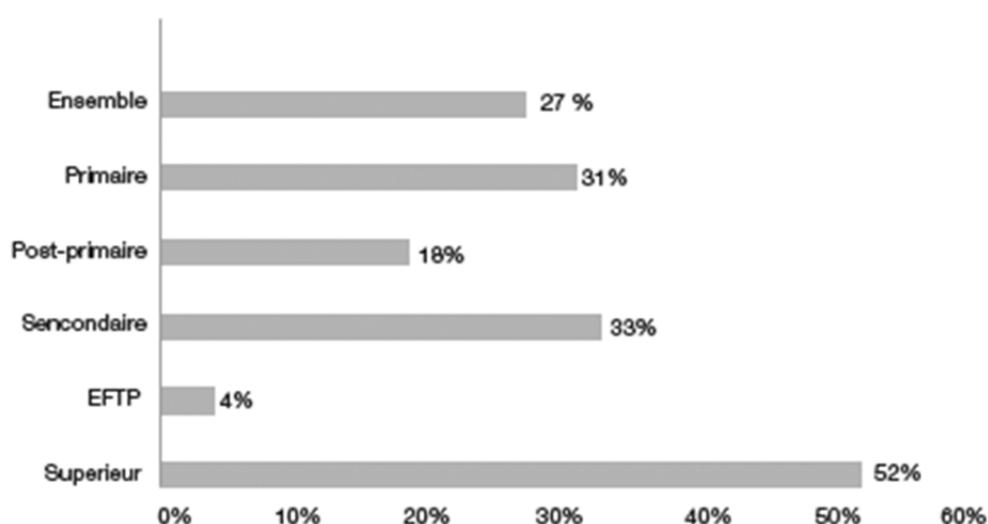
There are important limits to this evaluation. First, it is based on self-completion surveys and field visits (only 30 out of the 111 institutions were visited in 2018), what may weaken the credibility of this evaluation. Secondly, the evaluation of pedagogic performance is rather focused on inputs-based indicators (teachers qualifications etc).

This type of evaluation highlights the difficulties to regulate the practices of an emerging sector, in particular regarding teachers’ accreditation. Firstly, a significant part of the sample (19 institutions) was not included in the evaluation because these institutions are in the process of closure, legal redress or could not be found. The report also counts 12 new institutions that open too recently to be assessed. That shows the sector is quite dynamic but also still in structuration, with a number of informal/uncompliant institutions. Secondly, among the irregularities found in the evaluation, we note 88 institutions in which a part of the staff is not authorized to teach, 45 institutions in which a part of the staff is not sufficiently trained and graduated to teach in this cycle and also 63 institutions where new academic tracks opened without a formal authorization (MESRSI, 2017). Thus, it seems that accredited teacher hiring and retention is a challenge that may impact teaching quality at university.

In Burkina Faso, higher education qualifications are associated with lower precarious jobs but also to higher unemployment than other qualifications. As shown in Figure 2.6, the

performance index calculated by RESEN experts show that HE enables a better integration on labor markets in comparison with other education cycles. Unlike TVET graduates who show high levels of precarious jobs (99%) and inactivity, HE graduates access to better employment conditions as only 1% of them obtain precarious jobs. However, their unemployment rate reaches 68%, meaning that a majority of them cannot find a job after graduation and are likely to accept a job with a lower qualification after some time (Survey run in 2010 and assessed by RESEN 2017).

Figure 2.6. Performance index on labor markets, by education level (2010)



Source: RESEN (2017)

There is a major qualitative issue regarding the adequacy between the supply of training and the labour markets dynamics. Around 30% of workers are downgraded (i.e. they have higher qualifications than those required for their position). The phenomenon is largely stronger in urban areas where most very qualified workers are based and where the downgrading effects are more important.

Secondly, many graduates cannot find a job after their training since job opportunities in the labour markets are limited. In 2009, 90,000 students exit from the education system, but only 60,000 could find a job in the following year. Overall, the RESEN report (2017) shows that the demand for job markets is more or less 1.5x superior to its absorption capacity. This phenomenon is stronger for high qualification. One explanation of this trend is that many students choose academic programmes with few job opportunities afterwards. Table 2.8 shows that a big majority of students are enrolled in humanities (18%) or social sciences and business (46%) but very few are acquiring skills in health (5%) or agriculture (less than 0.1%).

In a nutshell, the qualifications provided by the education and training system are not very much aligned with those required in the labor markets, what adds to a major orientation challenge toward academic tracks and economic sectors with poor employment perspectives.

Table 2.8. Importance of academic tracks in universities and *grandes écoles* according to the number of students enrolled.

ACADEMIC TRACKS	POPULATION			F*100/M
	Female	Male	Total	
Agriculture	117	295	412	39,7
Education	1 093	4 794	5 887	22,8
Not specified	48	55	103	87,3
Engineering and industry	1 104	4 933	6 037	22,4
Arts & Literature	5 919	11 216	17 135	52,8
Health and social protection	2 176	3 529	5 705	61,7
Sciences	2 188	11 119	13 307	19,7
Social sciences, business and law	18 071	26 127	44 198	69,2
Services	752	1 192	1 944	63,1
TOTAL	31 468	63 260	94 728	49,7

Source: (MESRSI, 2017)

Box 2.6: The government strategy in higher education

The government follows several orientations to increase the supply and quality of higher education

- The regulation has been improved with the annual quality assurance evaluation run by the MESRSI since 2017 (Box 2.5)
- The progressive establishment of a student allocation system (like in secondary education) to transfer students from public to private institutions with a funding mechanism (already implemented with 2,000 students in 2018), aiming to relieve the capacity of public structures
- The strengthening of HE institution (management capacity, grants programme) and the support to innovation within these institutions
- The creation of the virtual university of Burkina (UV-BF), with the participation of the World Bank⁴⁹
- The development of more academic tracks in sciences and technologies (opening in 2019 of the Ecole Polytechnique de Ouagadougou).

⁴⁹ The World Bank has announced mid-2018 a 70M\$ plan to support higher education in Burkina Faso: <https://www.worldbank.org/en/news/press-release/2018/07/10/burkina-faso-world-bank-approves-70-million-to-support-higher-education>

5. The mobilization of the private sector in education

The private provision of education is growing in all cycles and is already substantial in secondary and tertiary education, partly due to state funding. In 2014, nearly one out of five students was enrolled in a private institution. As shown in Table 2.9, enrolment in private sector providers is important in all cycles and reaches more than 50% in pre-primary and TVET, where the State has historically made very few investments. In basic education, the public system keeps a strong share in enrolment but the growth of private sector enrolment is generally faster (+11% against +8% annually). In tertiary education, the public universities and institute are the main players (75% of students), but the dynamic of private provision is quite strong (+8% annually). In secondary education, the state funds private sector through massive student allocation. The same mechanism is being tested in higher education (2000 students in 2018).

Table 2.9. Share of private sector by education cycle in 2014

Education cycle	Share of enrolment in private institutions	Population registered in private institutions
Pre-primary	50%	36,000
Primary	17%	450,000
Post-primary	37%	250,000
Upper Secondary	46%	55,000
Technical/Vocational	70%	15,000
Tertiary	25%	18,000
ALL EDUCATION CYCLES	22%	824,000

Source: RESEN (2017)

The private sector expansion in education provision is partly fuelled by public support, in a context of low but reinforced regulation. In the last decade, the state has contributed to the expansion private players within the education system through different mechanisms: donation of real estate properties for certain projects, scholarships, funding to institutions for student allocation or for teacher wages⁵⁰. We lack data to estimate the amount of these mechanisms, but we understand they can be decisive⁵¹. In secondary and tertiary cycles, representatives bodies help to promote the dialogue between the Ministries and the multiples types of private providers (Catholic, Muslim, Protestant and secular institutions). In terms of regulation and control, the

⁵⁰ It is called the mechanisms of "équilibre budgétaire" aiming to pay additional wages for catholic schools' staff in remote regions so that these teachers can be paid as much as their counterpart in the public sector.

⁵¹ Two examples to illustrate this point: i) the student allocation funding mechanisms in tertiary education already impacts 10% of enrolled for the first year of implementation ii) the donation of properties was decisive for institutions like Université Saint Thomas d'Aquin (USTA) which now counts 2,500 students.

educational inspectors in basic education are missioned to control both public and private institutions, and some organizations like the Catholic Education Association (SNEC) have their own inspectors. However, with very limited funding invested in control capacities, the government cannot ensure a sufficient level of regulation. The high number of institutions (in particular in primary and secondary cycles) – with some of them purposefully remaining informal - makes it hard for the government oversee the full development of the private sector across the country. In recent years, the regulation was reinforced with more closures of informal basic schools and more careful control on HE institutions. Additional pecuniary sanctions toward uncompliant institutions could be implemented in the following years.

5.1. Pre-primary and basic education

The pre-primary private sector is very much concentrated in Ouagadougou where are based on a few local structures and international networks. The preschool population is still very small in the country. There are local mid-priced preschools in Ouagadougou with one or two facilities (e.g. Sherikids School, Belemtiise School) and a few other preschools in other regional cities. In Ouagadougou are also based the foreign education networks such as the French School Saint Exupery or the Turkish School Horizon. As shown in Table 2.10; the preschool fees in private preschools reached an average sum of 50,000 CFA Francs in 2014 but may substantially increase for models targeting expatriate families and local elites (up to 1,500,000 CFA Francs in a French school and to 3,000,000 in the American-style International School of Ouagadougou).

The private basic education sector is mainly composed of multiple small-scale businesses and a few international channels. We observed atomicity of supply, with a high number of locally anchored primary schools, run by experimented teachers or former head teachers (previously employed by the public sector). For reasons we expose later in this report, these projects do not expand or form collective networks but rather remain local small-scale institutions, and more or less economically fragile. To our knowledge, high-quality basic education provision is provided by foreign networks generally connected to public administrations (e.g. Saint Exupery School connected to AEF network), American schools) or in some cases to independent groups (Turkish Horizon school). School fees in private primary schools reached an average amount 30,000 CFA Francs in 2014 but rise up to 1,5 million CFA Francs (the French School) and to 9 million CFA Francs (International School) in the cases of international schooling models. The French system is also localized in Bobo-Dioulasso (Ecole André Malraux) with lower fees (nearly -20% compared to Saint Exupery).

The same dynamics can be observed in post-primary education, considering that many education models provide both primary and post-primary levels. We found in this sector many individual businesses that consist of a small-scale local structure with an average school fees reached 60,000 CFA Francs in 2014. We also find very qualitative models where school fees may go up to 2 million (Horizon International, Enko Ouaga International School, the French School) and to

9,5 million CFA Francs (International School of Ouaga). These models have a big focus on international and/or bilingual programmes.

Table 2.10. Households' average education spending for one child (in CFA Francs), 2014

	Frais de scolarité			Fournitures			Alimentation		
	Public	Privé	Ensemble	Public	Privé	Ensemble	Public	Privé	Ensemble
Pré-scolaire	13 294	48 872	32 495	3 508	6 322	5 027	1 288	1 553	1 431
Primaire	2 689	27 501	6 067	1 842	5 589	2 350	504	1 189	597
Post-primaire général	19 778	60 972	34 052	6 831	11 103	8 306	360	346	355
Post-prim. tech. & prof.	49 120	125 216	99 636	8 940	32 581	24 634	NE		
Secondaire général	29 488	79 487	58 488	8 952	15 405	12 683	804		
Sec. tech. & prof.	NE	143 775	NE	NE	13 988	NE	NE		NE
Supérieur	19 309	358 420	108 255	16 929	23 636	18 688	7 933		

Source: RESEN, 2017

5.2. Generalist upper secondary education

The generalist upper secondary cycle is fast growing and will carry development opportunities for the private sector. Boosted by the progressive generalization of post-primary education, market dynamics enable more high school projects to flourish. Important initiatives are led by confessional players (Catholic schools in particular) as well as by international organizations and donors, in the areas of sciences. As the public supply is still limited, there seems to be scope for lucrative models to meet this growing demand, coming from the urban areas in particular. Key factors of success in this dynamics seem to be the success rates at the Baccalaureate exam, the provision of remedial education services, the adequate pricing, and the provision of accommodation facilities, among others.

In premium upper secondary education, the competition is quite intense and the establishment of new players challenging. Several foreign networks created a local high school with a high focus on quality and, sometimes, international certification (e.g. The International Baccalaureate). Nearly half a dozen models are present in the country, showing that there is a market for premium upper secondary education. The level of schools varies between mid-priced and premium models, from 2-3 million CFA Francs (Enko Ouaga International School, the French School, Horizon International) up to 11 million CFA Francs for the International School of Ouagadougou. As explained in Box 2.7, Enko entered the market in 2018 and will need time to make its original model valuable and attractive to local families. Additional challenges of certification and integration within the local education ecosystem also structure the development dynamics of these schools. In the end, despite encouraging market dynamics, the implementation phase can constitute real difficulties.

Box 2.7: The development of Enko Ouaga

Enko is a network of international schools based in 7 African countries, providing high quality and bilingual education aligned with the International Baccalaureate courses. The Enko team has conducted market research early 2018 in Burkina Faso after realizing the country was with Mali one of these only countries with no models of international baccalaureate in the sub-region. Enko Ouaga International School opened its door in September 2018 with the first cohort of 35 pupils (dispatched grades 8 to 12). This first cohort will graduate in 2021. The teaching team is composed of 100% experienced Burkinabe teachers (a part of them worked abroad). They do not benefit from expatriate wages but access with IB to high-standard teaching training.

The key challenge in Enko's implementation in Burkina Faso has been the regulation process: opening authorization, the multiples administrative steps and iterations etc. Conversely, hiring the team has been relatively easy due to very good applications from local candidates. Finding the right site and building that would convene with Enko and IB's standards was also a challenge. The current building has a total capacity of 150 pupils and is a former technical school. A key challenge for the local team is now to improve the recognition of international baccalaureate in the local ecosystem, in particular by local universities.

According to Enko local team, the market is quite competitive in Ouagadougou. Enko targets a number of 150 students by 2019. The main competitor is the middle-priced Turkish school Horizon that has been active in Ouagadougou for a while. Many potential pupils of Enko registered at Horizon in 2018, this why only 35 pupils enrolled instead of 70 as targeted. Other premium models exist but are much more expensive (Universalis, International School of Ouagadougou)

5.3. Technical and Vocational Education and Training

There is a majority of private providers in the technical education and vocational training space but the sector is quite stagnant. Private technical and vocational middle and high schools serve a population of nearly 20,000 pupils, for an average fee of 125 to 145,000 CFA Francs (as of 2014). On the supply side, these models are quite expensive due to, first, the lack of specialized teachers and the necessity to contract with professionals from the corporate sector, and second, the need to acquire or rent expensive infrastructure and update costly equipment (including the materials used for the training). On the demand side, the market dynamics seemed quite stagnant in the last years. The enrolment in technical secondary institutions did not really grow, while in generalist tracks, the growth rate is critical. One key factor is the general preference of families for the generalist track and the lack of interest and trust in technical and vocational institutions. These two types of dynamics make it hard for TVET institutions to constitute structured and dynamics networks.

Models of private technical and vocational high schools can be profitable but face severe constraints to grow. Despite the general challenges we evoke above, there are lucrative models that meet a demand for low-cost and mid-priced quality and relevant training in a diversity of sectors. Table 2.11 shows that training in mechanics, logistics and accounting had in 2014 the higher share of enrolment in the technical post-primary cycle. Many institutions are in fact the sole players of their sector and serve “niche markets”. To our knowledge, very few models leverage on technologies to boost access to, and relevance of contents and optimize the costs of training.

Table 2.11. Enrolled population in each track - Technical post-primary education

	Girls	Boys	Total	Percentage
Agri-Food	41	65	106	1.6
Agronomies	130	206	336	5.1
Livestock Farming	14	32	46	0.7
Electrical Engineering	75	170	245	3.7
Mechanical Engineering	46	79	125	1.9
Industrial Maintenance	15	45	60	0.9
Civil Engineering	106	377	485	7.4
Accounting	456	393	849	13.0
Secretariat	322	15	337	5.1
Trade	9	13	22	0.3
Agro pastoral	276	433	709	10.8
Bank and insurance	93	0	93	1.4
Auto Mechanics	302	849	1151	17.6
Car maintenance	110	303	413	6.3
Steel Building	73	370	443	6.8
Metallic structures	9	46	55	0.8
Transit	139	934	1073	16.4
Other	336	490	828	-
TOTAL	2,554	4,820	7,374	100%

Source: RESEN, 2017

The Jean Paul II group, gathering three high schools and nearly 650 students in 2018, is a good example of the opportunities and challenges of these institutions face (Box 2.8). The economic models of these technical high schools seem quite fragile due to access to external funding to start the school activities, the management of revenue and cost variability, the management of regulatory constraints and finally the hiring and retention of skilled and experienced staff.

Box 2.8: The Development of the Jean Paul II Group in Ouagadougou

The technical secondary education group led by Mr Kaboré is composed of Lycée Jean Paul II, Lycée Cardinal Paul Zoungana and Lycée Philippe Ouédraogo. The Lycée Jean Paul II provides technical education in engineering, electrics, and accounting (Technical and vocational baccalaureate). to nearly 400 students (as of 2018). The model shows decent revenue and is profitable according to the entrepreneur. The two other high schools were launched recently and enrol more than 100 students each. The pricing model seems aligned with the market average as school fees go from 125,000 to 255,000 CFA Francs. These schools work on a contractual basis with the government and receive students from the public sector against an allocation per student.

The group faces different challenges in its development trajectory, both in terms of economic model and pedagogic performance. Firstly, access to ex-ante funding is essential to launch school activities. The entrepreneur had received a reimbursable grant from the World Bank to start the operations. The group also benefit from the public funding (student allocation) which help the schools to increase the enrolment but payment delays are common and may reach up to 2 years. Revenues are thus quite variable. Secondly, in terms of costs, the renting of school facilities is expensive and quite variable: the rent increased up to +50% year by year. The construction of its own facility has been a fundamental strategic move to stabilize this type of costs. To benefit from a banking loan, the entrepreneur had to first secure a land acquisition on its own mean.

As far as the educational model is concerned, recruiting teachers is the most pressing issue in the technical secondary cycle. The entrepreneur seeks to open a teacher training centre to meet its own HR needs and support the sector. The authorization request was on the process in late 2018 and a number of conditions are assessed by the Ministry (the school needs to rely on existing land and team). IN the current landscape, only the public Institut des Sciences trains secondary teachers in these specializations but has a very low capacity for meeting the needs of the whole ecosystem.

5.4. Higher education

The higher education private sector is very diverse and subjected to increased enrolment.

There are a dozen of private universities and nearly 120 HE institutions in the country (MESRSI, 2018). Due to secondary education expansion, the number of entering students in the higher education space grows steadily (+5,000 baccalaureate graduates yearly) and the total number of students should exceed 100,000 in 2018, with one out of four students enrolled in private institutions. In a context where public universities face overcapacity tension and unsuitable infrastructure (e.g. Université de Ouagadougou), the demand for private quality education constitute real market opportunities for private institutions. The average school fees in the sector

were at 360,000 CFA Francs in 2014 (RESEN 2017), what seems now to correspond to a low/middle-priced segment (e.g. Institut Supérieur de Technologies charge school fees around 350,000 CFA Francs). For top-tier universities, the fees tend to exceed 500,000 CFA Francs for bachelor degrees and 1 million for masters (in Saint Thomas d'Aquin University) and rise up to 2 million in some private institutions (Université Aube Nouvelle, Université 2IE⁵²).

The competition in the higher education sector is quite strong and the certification of degrees plays a key role in the attractiveness of private institutions. The positive market dynamics attract a number of new players in the sector, in particular in certain tracks where entry costs are low. These new institutions mainly adopt the regulatory form of “Institute” which has fewer constraints than “university” (in particular in terms of teacher qualification and research standard). Thus, some academic tracks are overrepresented in the supply of private institutes (e.g. Business, Management, and Communication). In 2018, 10 new HE institutions opened, and at least 4 of them provide training in Business and Management (MESRSI, 2018). In this context of increased competition, students and their families pay attention to quality and certification. Two levels of certification structure this flourishing supply of degrees and training. The national certification is managed by the MESRSRI and enables the recognition of degrees into Licence, Master and Doctorate. This certification is crucial for students as it enables them to take part in the civil servant entrance exam. The other type of certification is the regional certification, typically provided by the CAMES⁵³. CAMES aims to facilitate cultural, academic and scientific cooperation between African countries, and participate to the coordination of higher education systems on the continent. The degree certification process led by CAMES is demanding and costly for the private institutions but constitutes a key asset as it brings region-wide credibility for the institution and enables a better student and graduates mobility within the continent. This last point is important since Burkina Faso (as Senegal and Côte d'Ivoire) attracts a number of students from neighbouring countries and Central African countries. Other certification from ACE (African Centers of Excellence), ECOWAS and other international organizations (such as ISO) may guarantee better credibility for these institutions.

The challenge of employability is on the agenda of most top-tier HE institutions. Several high-quality universities seek to improve the professional integration of their graduates, through job placement or entrepreneurship. Beyond to the certification challenge assessed earlier, this type of work can consist of increasing the training in transversal/soft skills, building-up entrepreneurship programmes or in-house incubators, strengthen partnerships with employers etc. Scientific and engineering universities such as the well-known 2IE university include training in entrepreneurship that will enable the students to create their project and commercialize the results of their research. More broadly, the valuation of internal research and innovation through market-based initiatives

⁵² 2IE (Institut International de l'Eau et de l'Environnement) is not a pure private player but an international university funded by governments and private sector players. The Ouagadougou-based institution provides high-quality education in water, energy and eco-materials to 1,300 students from the whole region.

⁵³ CAMES stands for « Conseil Africain et Malgache pour l'Enseignement Supérieur ». <http://www.lecames.org/>

and partnerships (incubators, accelerators) appears as an important dimension for both the professional integration of these graduates and the economic model of the university. The internationalization of training is another way to improve students' employability. That may include the improvement and certification in foreign language skills (e.g. Students in 2IE must take the TOEFL exam to graduate). It can also be done by enabling student mobility through academic partnerships (co-graduation) with foreign institutions. Finally, the development of work-study and internship schemes seems a promising but challenging way. Indeed, these mechanisms require important administrative work and a strong connection with local employers. The development of alumni clubs can be also helpful as it enables business networking through the different cohorts of graduates.

Box 2.9: IST: A dynamic university of Burkina Faso

The Institut Supérieur de Technologies was born in 2000 and founded by the current president, Mr Issa Compaoré. After the first promotion of 64 students, the university steadily grew up to 1,500 students in 2018 and will enrol nearly 2,000 students in the next years. The university counts 19 different tracks (accounting, business, electronics, construction, engineering) and delivers BTS, Licence and Masters degree. IST is engaged in an allocation scheme with the State for the BTS courses (receive 150,000 CFA francs for each student but have school fees of 350,000 for other students). IST made academic partnerships with universities in Europe, Canada, Rwanda, and obtained the CAMES certification in 2007.

According to Issa Compaoré, the four key factors driving student in choosing their higher education institution are:

- The national certification of degrees
- The ranking of the institution in the MESRSI ranking
- The success rate to national exams
- CAMES certification

IST is well aligned with these preferences and now envisions developing new facilities in the region and building a new campus (IST is currently renting different facilities in town).

IST has developed an online platform to facilitate enrolment from remote localization and is not in favour of a blended model: students have to choose between online education OR in-person education. This model enables IST to enrol students from several regions of Burkina Faso.

Concerning opportunities to collaborate with an investment fund, the promoter sees great interest in benefiting from an equity investor: more careful support (compared with banking partners), the possibility to access different networks, the common strategic reflection etc

Finally, the geographic and sectoral diversification of HE institutions is a strategic challenge for many HE institutions. Our study and interviews show that many entrepreneurs seek to extend their educational offer and/or their geographic anchorage to increase and diversify their revenues and their reach. This type of strategy does not only concern well-established universities but also more small-scale institutes which have accumulated a bit of cash to engage in business development operations. In terms of sectoral diversification, the incorporation of new training can simply imply the addition of new courses but can be also grounded in uploading educational content (e.g an entrepreneurship programme) on a technologic platform (e.g. an “e-campus”). Diversification in certain sectors like IT, Bio-Medical sector or mining can be quite costly because teachers in these fields are scarce and expensive. In terms of geography, strategies can consist of setting-up new facilities in other cities of Burkina Faso (Koudougou, Bobo-Dioulasso in particular) but mostly in neighbouring countries (Côte d’Ivoire in particular because the Burkinabe diaspora there is numerous). Again, the use of education online platform may facilitate the enrolment of remote populations, what is a form of geographic diversification. IST, for instance, seeks to diversify in West African and open branches in Côte d’Ivoire and other countries. 2IE is also looking at opening new structures in West African countries.

5.5. Teacher training

The needs in teacher training are massive for the whole education system, in particular for secondary education and in sciences. In the primary education cycle, there are nearly 45 private centres that provide initial teacher training, including 30 in the sole Ouagadougou area. The generalization of basic education and the growing enrolment in secondary and tertiary cycles calls for an important increase in the quantity of initial training supply, which could be partly driven by private teacher training programmes. The local administration and its technical partners (AFD, WB) emphasize the need to train teachers in the areas of sciences and technologies to furnish a number of high schools that will be launched in the next years.

Teachers specialized in technical courses are needed in TVET and higher education institutions. In the tertiary level, teachers hired by private institutions come very often from public universities for extra hours, but these institutions also tend to hire (young) unskilled teachers to complement the staff at low cost. The burning question is related to technical courses. Unlike the generalist courses (e.g. Humanities) which can be provided by university teachers, technical courses require specialized teachers and professional experts that are lacking in the ecosystem. Contracting with professionals from local companies is generally expensive for small-sized structures, adding to the challenge of outdated equipment. Today, TVET institutions mostly rely on retired engineers and short-term trained baccalaureate holders to provide courses in the construction sector for instance. A lot could be done in continuous training to improve their knowledge and practices.

There are some private-led initiatives aiming to train more teachers at secondary and tertiary levels. The IPSO⁵⁴ project led by catholic priests seeks to establish a new teacher training center and a university of sciences localized in Ouaga 2000 (Ouagadougou). This project could start by 2019 and reach critical capacity by 2025. Other small education groups like the Jean Paul II group in Ouagadougou seek to create teacher training programmes but are hindered or sometimes frozen by lack of funding and/or regulation issues.

5.6. Education technologies

The sector of education technologies is barely nascent in Burkina Faso, constrained by important barriers. Key structural factors may hinder the entry of big “Ed Tech” players from other countries: the small size of the domestic market, the widespread poverty and fragility in rural areas and the lack of telecom infrastructures in many regions. Therefore, promising “ed-tech” models from the sub-region did not select Burkina Faso in their expansion plan, which still provide opportunities for the local player to emerge. However, the deficit in (public) funding to research within local universities does not permit an ecosystem to drive innovations in the Tech sector. The entrepreneurial dynamic around education technologies is thus quite limited.

There are very few initiatives to promote access to digital education content at all stages, except some project led by public players. To our knowledge, most of emerging projects are led or supported by public organizations. The OPEN Education project is led by an association and enables free access to education content for primary and secondary cycles. The CEDO (Centre d’Enseignement à Distance de Ouaga) consists of a network of training centers equipped with teleconference material to deliver remote short-term training courses to civil servants. The Virtual University of Burkina Faso project (UV-BF) could become a game changer, but it still in the phase of implementation⁵⁵. This new university aims by 2025 to become a regional leader in training by playing a catalyst role in teacher training and access to educational content. The UV-BF will rely on infrastructures with numeric spaces in Ouagadougou, Bobo-Dioulasso and in each region of the country. Virtual University projects have shown great potential in other countries from the sub-region (Senegal, Côte d’Ivoire) and could initiate more projects in the area of remote learning. Other in-house initiatives are being implemented by HE players but with limited externalities on the ecosystem. For instance, IST has built an online education platform (e-campus) targeting students who live remotely. In addition to these projects, there is very limited development of start-ups and projects led by private players to disrupt or improve access to education in Burkina Faso.

⁵⁴ IPSO stands for Institut de Pédagogie et des Sciences de Ouagadougou

⁵⁵ See the press article from 2018: <http://lefaso.net/spip.php?article83354>

5.7. Supplementary education

Remedial education is an important sector in the education ecosystem and could constitute an area of diversification and distinction for education providers. As enhanced earlier, remedial education providers (i.e. suppliers of “night courses”) provide services to quite a high number of students and seem to constitute an economic activity per se. Table 2.12 shows that, in the recent years, the demand for remedial classes focused on post-primary education (preparation of the BEPC diploma), and to a minor extent, on technical secondary course (preparation of the technical and vocational baccalaureate). We have little information about pricing and specific economic models in this area, notably because they tend to be provided by core education providers. Indeed, remedial education services allow them to optimize the use of classrooms and of teachers while increasing the overall revenue of the school. To our knowledge, the use of technologies to increase accessibility and adaptiveness of these services is not very exploited by local players. There could be scope for technology-based models to address this demand with digital access to complementary education content and/or a blended education approach in the main urban areas at least.

Table 2.12. Remedial Education enrolment by education cycle (2014)

Remedial Classes by Cycle	Number of pupils registered
Post-primary (generalist)	30,000
Post-primary (technical)	150
Generalist upper secondary	5,000
Technical upper secondary	15,000

Source: RESEN, 2017

6. Policy context and regulation of private players in education

In this sub-section, we gather some information concerning regulatory and administrative constraints impacting the opening and development of private provision in education. To do so, we separate the basic education on one hand and the tertiary education sector on the other hand. Three levels of regulation are as follows: licensing, operations, investment activities.

6.1. In primary and secondary education

Licensing

To our knowledge, the administrative process to open a new private school seems to be quite heavy. We should distinguish the demand for creating the school and the demand for opening the school.

- Creation of the school

This is the first step in opening the school and consists of a validation by the Ministry (MENA) of the project. Key conditions to validate this step relates to the infrastructure (confirmation of the renting agreement for the school facility). Some fiscal issues also intervene in this step (to our information, a 5% tax of the school facility's annual rent is to be paid). Several administrative processes are to be fulfilled, with various public agencies. That seems to include minimum standards of security and sanitation for the school facility. An administrative visit is implemented by the Ministry.

- Opening of the school

This second step relates more to the composition and the qualification of the teaching staff. It seems that the school can start its operations before the acquisition of the opening authorization. Once this step is validated; the control operations led by the Ministry are much less frequent.

Operations

Concerning the curriculum, private basic schools need to follow the national curriculum if they want the students to take the national exam (CEPE, BEPC, Baccalaureate). Certain schools follow the curriculum of other courses (e.g. The International Baccalaureate) which have their own requirements. To our knowledge, there is limited quality controls and audits targeting these schools. There are no mandatory requirements for continuous teacher training.

However, additional control and audits are implemented in the case of contractual relationship with the State (établissement conventionné). A set of specifications is required to receive allocated students and benefit from the public allocation funding.

Investment activities

To our information, there is little constraint on foreign investment in local private education projects and facilities. The school promoter does not seem to be proprietary of the facility. We have no information concerning the minimum detention of shares by a Burkinabe person or institution.

6.2. In tertiary education

Licensing

The same constraints apply for tertiary institutions: creation and opening authorization are delivered by the Ministry (MESRSI) to start the project. A land acquisition and the creation of staff are necessary to obtain the school creation authorization.

Operations

The integration into the LMD system implies a set of specifications, including teacher qualification and status.

An annual control quality evaluation is run by the Ministry and relates to both administrative and pedagogic dimensions (as described above in the higher education in section 5.4).

Other requirements can be done by other certification agencies such as the CAMES.

Investment activities

To our information, there is little constraint on foreign investment in local private education projects and facilities. The school promoter does not seem to be proprietary of the facility. We have no information concerning the minimum detention of shares by a Burkinabe person or institution.

► Education challenges in Côte d'Ivoire

1. Introduction

Côte d'Ivoire made impressive progress from the time of the economic and political crisis in terms of education. Data from 2015-2025 Education Plan (MENET-FP et al., 2017), show that enrolment increased at all levels over the period 2005-2014. The average annual increase in enrolment were 13.6% for preschool, 7.5% for primary, 8.5% for lower secondary general education, 6.7% for upper general secondary education, 11.7% for TVET and 2.1% for higher education.

An important principle has been established by the law 2015-635 dated September 2015. In its article 2-2, it stipulates that the State is obliged to maintain within the school system all children aged six to sixteen and to put in place a mechanism to integrate or reintegrate children from nine to sixteen who are out of the system.

Insertion rate in the leading sectors of the economy is low. In 2014, almost seventy-five per cent of individuals worked in the service sector, about 15 per cent in agriculture, while only 10 per cent were in the manufacturing industry and in construction, the sectors who mostly contribute to employment creation in the country (Christiaensen and Premand, 2017). According to OECD (2017), this results from the inability of the education system to give the youths the specific and operational skills sought by employers of the leading sectors. The lack of adequate skills do not allow young people to have access to qualified jobs and confine them to precarious jobs, where they do usually work informally, are underpaid and overexploited. Many young people turn to "subsistence" entrepreneurship as a refuge for their lack of skill. Moreover, in 2013, about 38 per cent of young women and 33 per cent of young men were out-of-school and not at work, neither on training, or apprenticeship (OECD, 2017)

2. General organization of the national education system

The education system in Cote d'Ivoire has a (3)-6-4-3 structure. Pre-school is not compulsory. Children enter primary school at age 6 and the first cycle lasts six years. At the end of this first cycle, children pass an exam, named CEPE, that allows them to access the second cycle. Lower secondary school last four years, but after the first two years, pupils have the option to continue with the general curriculum or to select a professional curriculum. After 4 years of general lower secondary, pupils are awarded the BEPC (Brevet d'Etudes du Premier Cycle), allowing them to enrol to the general upper secondary cycle or to enter a teacher training institution (CAFOP). At the end of the upper secondary schools, pupils pass the general BAC (Baccalaureat).

Lower technical secondary education is delivered in Vocational Training Centres (*Centres de Formation Professionnelles*) or in Technical Education Colleges (*Colleges d'Enseignement Techniques*) and it ends with the awards of the CAP (*Certificat d'Aptitude Professionnelle*). CAP only gives access to

the technical and professional senior secondary schools, that deliver either the technical BAC, the BEP (*Brevet d'Etudes Professionnel*) or the BT (*Brevet technique*). Only student having passed the BAC can enrol in Universities.

Since January 2017, and after several reforms on the administrative organization of the education system, there are two main ministries in charge of education: the Ministry of National Education, Technical Education and Vocational Training (MENET-FP) and the Ministry of Higher Education and Scientific Research (MESRS). The Ministry of Women, Child Protection and Solidarity (MFPE) is also related to education issues because it takes care of parental education programmes and early childhood protection centres (CPPE). Finally, the recent Ministry for the Promotion of Youth, Youth Employment and Civic Service (MPJEJSC), established in 2016, is in charge of the education for out-of-school and dropout youth⁵⁶.

Since 2015, an Interministerial Committee for the Coordination of the Education Sector, chaired by the Prime Minister and composed by the Minister of Education, the Minister of Higher Education, the Minister of Planning, the Minister of Budget and the Minister of Economy, has been established. Its permanent secretariat, called the Task Force, is in charge of (i) developing the education sectoral plan every 5 years, (ii) searching for external financing for the implementation of the plan, (iii) assuring the monitoring and the evaluation of the sector plan (producing an annual review).

3. General Analysis

3.1. Access to education and demographic trends

Forecasts of the MENET-FP, indicate that under-18 constitute 46.7% of the total population in 2015 and 42.2% in 2025. Over the same period, enrolment will rise from 1.13 million to 2.19 million, with an annual growth rate of 6.88% over 10 years (Kouadio et al., 2018)

Access to education continued to increase in Cote d'Ivoire in the last decade. Data from the DSPS (2018), reported in table 2.13., indicates improvements in Gross Enrolment Rate for all levels of education between 2013/14 and 2017/18. Gross enrolment ratio in primary school increased from 70% in 2007 to 100% in 2017. This important increase can be explained by the government commitment to support the education sector after a decade of socio-political crisis, which disrupted the functioning of the Ivorian education system, and by the massive donors' support (MENET-FP et al., 2017). Access to the first year of lower secondary general education increased as well, from 33% in 2007 to about 67% in 2017.

⁵⁶ The MPJEJSC has been created who came to compensate the lack of collaboration between the former Ministry of Youth and Sport and the Ministry of Employment. It is in charge of the elaboration and monitoring of the PNJ (Plan National Jeunesse) 2016-2020, that includes, among others, the National Strategy for Youth Employment (SNIEJ, Strategie Nationale pour l'Insertion et l'Emploi des Jeunes).

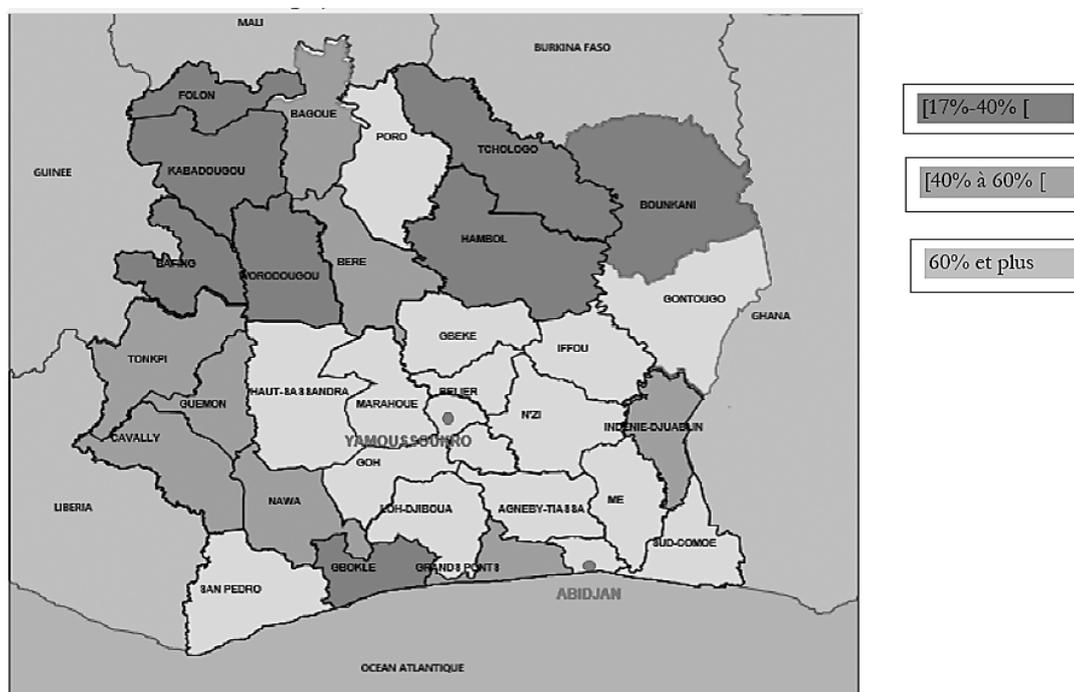
Table 2.13. Evolution of enrollment rates in the Education system

	2013/14	2014/15	2015/16	2016/17	2017/18
KG GER	6,9	7,4	8,2	8,8	9
Primary GER	94,7	95,4	101,3	104,6	100,6
Primary NER	77	78,9	87,8	91	91,06
Lower Secondary GER	50,8	53,8	58,4	63,5	66,6
Upper Secondary GER	27,2	28,1	29,3	28,4	35
Lower Secondary NER					42,6
Upper Secondary NER					16,8

Source: Kouadio et al, 2018

Regional disparities are important, as show from the figure below for lower secondary education. In most regions in the North access to secondary education was still below 40 per cent in 2015 (Kouadio et al., 2018).

Figure 2.7. Enrollment in secondary education by region



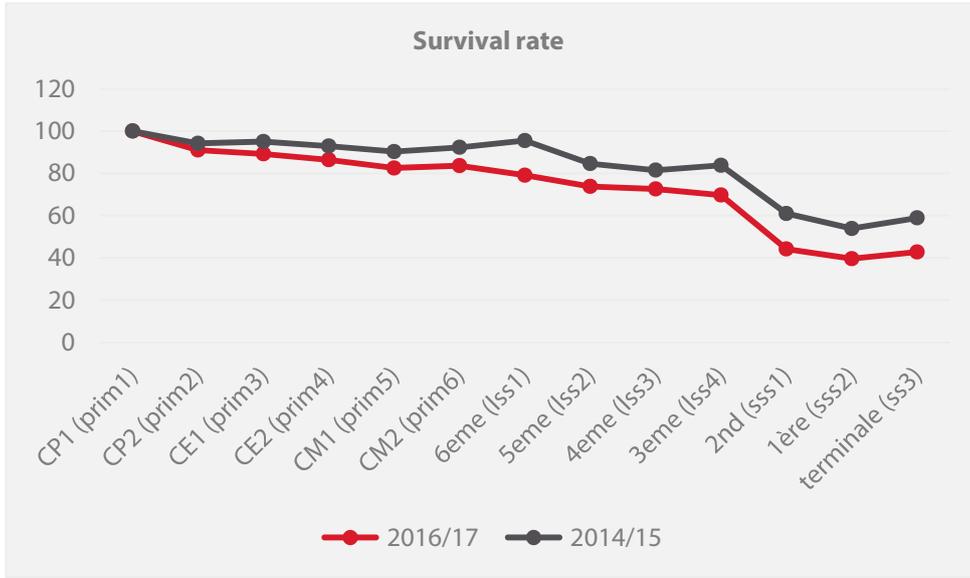
Source: Kouadio et al., 2018

The percentage of out-of-school children of primary school age has declined significantly, from 43 per cent in 2009 to 25 per cent in 2013 and 9% in 2017 (Nations Unies, 2018). Despite these improvements in access, still, 1,265,310 children aged 6 to 11 and 801,710 children aged 12 to 15 were out of the school system in 2016. Out-of-school children are mostly concentrated among the lower income population, in rural areas, girls, as well as in the North and South West regions. (RESEN 2016)

Completion rates in primary and secondary education remain challenging: almost 22 per cent of pupils did not complete the primary level in 2017/18, while 45% do not complete lower secondary education and 70 per cent do not complete upper secondary (DSPS, 2018).

Figure 2.8. below show the progression rates from primary to the end of senior secondary school. We can remark how the ability of the education system to retain students is decreasing over the last years. For the year 2014/15, out of 100 pupils enrolled in CP1, 58 of them stayed in school up to the end of the senior secondary school, while in 2016/17 this number had decreased to 43.

Figure 2.8. Progression rates for primary to SHS



Source: MENET-FP and DSPS (2017)

Repetition rates remain quite high: national averages were at 10.6% in primary school and 11.9% in secondary general in 2017/18, but the proportion of repeaters is far higher for the last grade of lower secondary, where it is equal to 39 per cent (DSPS, 2018). Repetition rates in the public sector are on average twice as high as in the private sector in general education. (MENET-FP et al., 2017).

Data from ENSETE (2013) and reported in OECD (2017) show that in 2013, there was still 35 per cent of individuals aged 15 to 19 with less than primary education. The percentage is even lower for girls (62.7%) and for individuals living in rural areas (67.4%).

3.2. Expenditures on education

The share of public expenditure on education as a percentage of GDP has exceeded 4% for nearly two decades. It represented 29.5% of total current government expenditure (excluding debt service) in 2013. In terms of distribution across school cycles, 41 per cent of current education expenditure was devoted to the primary sector in 2015, followed by lower secondary education (19.82%), tertiary education and scientific research (16%) and upper secondary education (15.3), as shown in table 2.14 below.

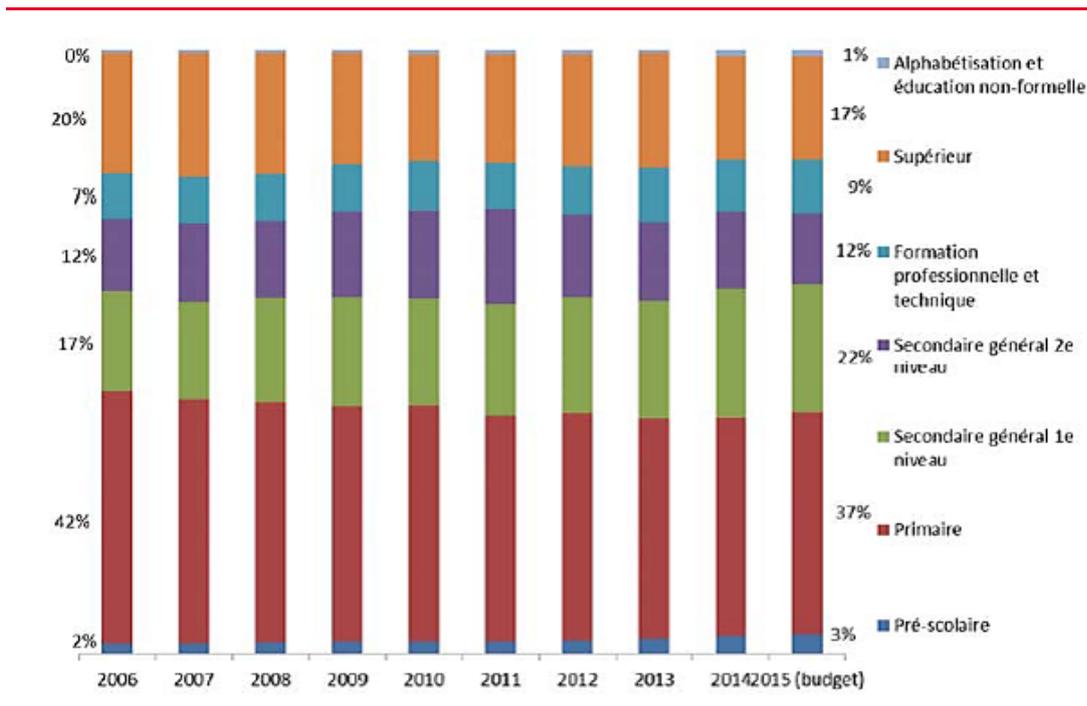
Table 2.14.

	2015
Early Childhood	1.42
Alphabetisation	0.40
Primary School	41.22
Lower Secondary School	19.82
Upper secondary school	15.30
TVET	1.64
Tertiary Education and Research	16.05
	100.00

Source : MENET-FP et al. (2017)

MENET-FP et al. (2017) shows that salary expenditures absorbed on average 75% of expenses in 2013 (90% in primary education), while spending for equipment and non-wage costs is quite low. This explains why it is common in public schools having schools directors asking for parental contribution for some operating expenses.

Figure 2.9. Public spending in education by education cycle, 2006-2015



Source: MEN et al. 2016

Table 2.15. Expenditure in education by source of funding, 2006-2015

		2006	2007	2008	2009	2010	2011	2012	2013	2014	2015 (budget)
Financement initial	Administrations publiques	65.5%	66.2%	69.0%	66.7%	66.2%	64.2%	67.0%	63.2%	65.8%	68.2%
	Sources internationales	0.0%	0.0%	0.4%	1.9%	1.8%	0.1%	1.4%	1.3%	0.8%	1.3%
	Ménages	34.5%	33.8%	30.6%	31.4%	31.9%	35.8%	31.7%	35.4%	33.4%	30.6%
Financement final	Administrations publiques	63.5%	64.1%	67.4%	66.8%	66.4%	62.4%	66.3%	62.9%	64.9%	68.1%
	Sources internationales	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.0%	0.4%	0.3%	0.1%
	Ménages	36.5%	35.9%	32.6%	33.2%	33.6%	37.6%	32.7%	36.7%	34.8%	31.8%

Source: MEN et al. 2016

Transfers to the private sector represented on average about 12% of current education expenditure in 2013, but they are particularly important at the lower secondary, TVET and tertiary education, for which they represent nearly 25 per cent of current expenditures (RESEN, 2016).

In addition to public financing of education, households contribute to about 37% of total education expenditure. Most of family resources go to lower and upper general secondary education, where households contribute to financing around 45 per cent of current expenditures

Public unitary cost analysis shows that in 2013 the State annually spent around 160,000 CFA on average per child, with the unitary cost varying between 97,000 CFA for primary school and 1.1 million CFA for TVET. These unitary costs are quite similar to other ECOWAS countries, while significantly higher at primary and secondary levels. (RESEN, 2016).

Table 2.16. Average per pupil expenditure by education cycle and place of residence

NIVEAU D'EDUCATION	2008 (Prix courants)			2008 (Prix constants de 2014)			2014 (Prix 2014)		
	Urbain	Rural	Total	Urbain	RURAL	Total	Urbain	Rural	Total
PRESCO	86 167	21 635	69 882	96 600	24 254	78 343	144 740	59 647	129 044
PRIMAIRE	55 346	19 448	33 659	62 047	21 803	37 734	58 597	25 381	42 000
SEC GEN 1	97 747	75 487	89 199	109 582	84 627	99 999	106 401	92 345	104 208
SEC GEN 2	141 519	98 645	132 695	158 654	110 589	148 761	164 023	126 385	161 228
EFTP	207 867	70 435	201 494	233 035	78 963	225 890	264 234	76 449	260 995
SUPERIEUR	340 138	133 038	330 400	381 321	149 146	370 404	391 823	217 046	388 571

Source : MEN et al. 2016

Table 2.17. Household education expenditures by wealth quintile and by education cycle

Niveau d'éducation	2008 (FCFA constants de 2014)					2014 (FCFA constants de 2014)				
	Q1	Q2	Q3	Q4	Q5	Q1	Q2	Q3	Q4	Q5
PRESCOLAIRE	14 073	29 513	38 416	55 194	101 295	20 129	28 699	63 297	97 369	224 522
PRIMAIRE	13 415	17 137	23 148	31 096	63 821	19 414	26 378	33 808	49 216	96 630
SEC GEN 1	50 368	61 802	72 423	79 686	130 231	60 025	63 234	76 153	100 922	178 931
SEC GEN 2	84 993	82 081	95 183	112 663	185 562	84 639	119 474	103 649	142 618	222 385
EFTP	284 103	11 5045	143 729	278 905	223 289	82 131	180 296	130 295	205 870	315 304
SUPERIEUR	100 448	323 617	117 162	165 609	447 598	104 421	173 855	187 072	206 881	518 760

Source : MEN et al 2016

4. Specific achievements and challenges.

This section explores – for each level of education – infrastructure, quality, equity and management issues and the role of the private sector. It also describes specific projects or recent reforms that concern each education level and presents its main challenges.

4.1. From kindergarten to Upper secondary school

Infrastructure issues

Big efforts have been done in the last two decades in order to expand **education supply. The private sector has largely contributed to this expansion. The role of community-based education providers has also been increasing**, in particular in remote areas and in pre-primary education.

President of Cote d'Ivoire, Alassane Ouattara, announced in 2012 an ambitious plan, aimed at assuring education for all children aged 6 to 16 before 2015. This required enormous efforts in terms of class constructions and teachers' recruitment and training.

Moreover, the examination to enter lower secondary school was abolished in 2011 by the Council of Ministers, who established that all pupils obtaining 85 points (10/20) to the CEPE could automatically have access to upper secondary school⁵⁷. This reform has significantly increased pressure to public secondary schools, and to private as well because the State affected the private schools all the students to which it was unable to offer a place. In 2012 the number of new classrooms required in order to enrol all the new entrants to lower secondary school for the period 2015-2025 was estimated at 12,230 classrooms (Kouadio et al., 2018).

The State thus decided to launch the construction of the "colleges de proximités", that is small lower secondary schools⁵⁸, located in remote rural areas of the countries, that allow pupils to go to school near their families. The construction of community lower secondary schools was facilitated from the partnership with the AFD, that built 40 colleges, and with the World Bank (through the Emergency Basic Education Support Project) (Kouadio et al., 2018).

All in all, the increase in the number of classes in public schools was of around 27 per cent for primary school and 29 per cent for secondary school between 2013 and 2017. Concerning pre-schools, the increase in the number of classrooms was of around 49 per cent in the same period

⁵⁷ Before that, only the pupils who ranked first in the admission exam could enrol in lower secondary school. The State affected the student on top of the list to public schools and the others to private schools, and this up to their maximum capacity. This implied that, because of the insufficient number of places, pupils obtaining less than 12 were usually excluded from the schooling system.

⁵⁸ These colleges are built according to a standard plan: they have two classes per level, so eight in total; they have latrines, water points, administrative offices, teachers' rooms; they enrol kids coming from primary schools situated within a 5 km radius (Kouadio et al., 2018).

and this allowed an increase in enrolment by more than 39 per cent, reaching 180 thousands of pupils (enrolment was still at 74 709 in 2010-11) (DSPS, 2018)

For pre-school, average pupil/teacher ratio is quite good, but it differs across the type of pre-schools: it ranges from 19 in private kindergartens, to 21 in public preschools and 30 in community structures (RESEN 2016). The structure under the Ministry of Solidarity, Family, Women and Children (MSFFE), the Centers for the promotion of early childhood, have a pupil/teacher ratio even lower than private structures, at around 17. Available data on pupil/classroom ratio is contradictory: according to RESEN (2016) the ratio has increased from 34 on a national average in 2013/14 to 41 in 2016/17, but according to the more recent data from DSPS (2018) it was at 23 in 2017/18.

Pupil/teachers ratio is far higher for primary school, with the national average being at 44 in 2018. The ratio is slightly lower for the private school, at 41 pupils per teacher. In terms of school equipment they are quite poor at **primary level**. 45% of public primary school had water facilities in 2017 (35% in rural areas), 45% had functioning latrines and 55% had a school canteen. In 2017/18, 9 per cent of pupils lived more than 3 km far from their primary school. Data in table 2.18 below show how important regional disparities exist with respect to all indicators, signalling important inequalities across geographical locations.

Table 2.18. School equipement by education cycle

Preschool:

	% of schools without electricity	Pupil/classroom ratio	Pupil/teacher ratio
Highest	93.30 (Guemon)	38 (Worodougou)	28 (Bounkami)
Lowest	6 (Abidjan)	18 (Tonkpi)	12 (N'zi)
national	46.4	29	21

Primary schools:

	% of schools without electricity	Pupil/classroom ratio	Pupil/teacher ratio
Highest	95.7 (Bere)	49 (Abidjan)	49 (Abidjan)
Lowest	5.4 (Abidjan)	33 (Bafing)	32 (Folon)
national	65.6	43	44

General Secondary

	% of schools without electricity	Pupil/classroom ratio	Pupil/teacher ratio
Highest	64.3 (Boukani)	85 (Mankono)	
Lowest	2.0 (Abidjan)	37 (Minignan)	
national	16.8	58	

Source: DSPS (2018)

Kindergarten

Gross enrollment rate at pre-school is very low, it was at around 9 per cent in 2017/18. Despite this, it has increased over time: it was at 6.9 per cent in 2013/14. Pre-school access is gender balanced (DSPS, 2018). Only 8 per cent of pupils attending pre-schools were not aged 3 to 5 (MENET-FP, 2017). Pupils enrolled in the third year of pre-school represented more than 46 per cent of the total, indicating that parents tend to enroll kids late (DSPS, 2018). This is one of the reasons why the government has recently decided to include a pre-school class in the primary public schools.

Demand for pre-schools is quite low in the country, and particularly in rural areas. In fact, 63 per cent of schools are located in urban areas and 77 per cent of pupils enrolled in pre-school live in urban areas (DSPS, 2018). There is poor access to pre-school infrastructures in Cote d'Ivoire. In terms of equity, children from wealthier households are 8 times more likely to enroll in pre-school with respect to the poorest ones (RESEN, 2016).

This is somewhat unsurprising since investment in early child development has not been a priority up to now in the country. Cote d'Ivoire does not have a national early childhood development policy yet, but only sparse services and interventions targeting children aged 0 to 6 are put in place (RESEN, 2016).

72 per cent of pupils is enrolled in public pre-schools. Private preschools are almost exclusively located in urban areas. There has been an increase of community schools thanks to the support of some partners including UNICEF, but they only represent one per cent of the offer.

Besides pre-schools, there are around 100 community animation centres for children and 88 early childhood protection centres that are devoted to the development and well-being of children aged 0 to 5 (Nations Unies, 2018).

Primary and lower secondary schools

Equity issues

Gender parity seems to be reached at primary level, even if gender disparities persist in some regions, where GER for boys is higher than for girls. Gender disparity is still present in lower secondary, where average GER stands at 71.5 per cent for boys, and at 61.4 per cent for girls. Girls GER reach very low levels in some regions, like Folon (15.8%), Boukani (29.5%) ou Bafing (29.3%).

Inequalities in enrolment rates persist across regions: 15 regions (among the existing 33) present a GER lower to 100% and 9 of them lower than 90%. Most of these regions are located in the North of the country (MENET-FP DSPS 2017)⁵⁹. Inequalities also exist with respect to household income: children from better off families are 6 times more likely to have access to lower secondary school

⁵⁹ We remark that there are several inconsistencies between data sources with respect to some key education indicators. Inconsistencies exist even across ministerial sources.

than the ones from the poorest. Also, only 13% of children living in rural areas complete lower secondary school, compared to 49% of children living in urban areas (RESEN 2016).

Quality issues

Success rates at national exams (CEPE at the end of primary school and BEPC at end of lower secondary school) **have been increasing in the 2000s** (except during the crisis in 2011-2012), they were at respectively 81 and 60% in 2017, but with a strong heterogeneity across DRENET, success rate for CEPE, for example, ranges from 55 to 98 per cent across DRENET (MENET-FP DSPS 2017).

PASEC 2014 results show that education outcomes remain low: 83 (50) per cent of pupils did not acquire a sufficient skill level in French (Maths) at the end of second grade. While at the end of primary schools, the percentage decrease at 52 per cent for French and increases to 73 per cent for Maths. These scores are on average worse than the ones of the other African countries participating in PASEC 2014 evaluation (PASEC, 2016). Important disparities across regions exist with respect to education attainments.

Management issues

The number of hours taught by teachers varies between regions, what implies that **teachers allocation is not optimized** (1/3 of teachers are under-used in lower and upper secondary schools, where the average time of teaching reaches respectively 12 and 14 hours, instead of 21 and 18 hours). (RESEN 2016)

Weight of the private sector

Private schools account for about 15% of enrolment for primary schools education, while they account for almost fifty per cent of enrolment for secondary general. 72% of secondary schools are private (lower and upper secondary general confounded), with important differences across DRENET. In Abidjan 91 per cent of secondary schools are private, while the percentage significantly lowers in some DRENET (the lowest is 34% in Bourdoukou).

An agreement with the private sector is established: private schools receive 120,000 CFA for every pupil enrolled in lower secondary, 140,000 for each pupil enrolled in upper secondary and 175,000 for each pupil enrolled in technical schools.

Upper Secondary School

Equity issues

Students from better off families are 46 times more likely to access upper secondary schools with respect to the ones from poorest families. Also, only 5% of children from rural areas can hope to complete high school, against 29 per cent for children living in urban areas (RESEN 2016).

Quality issues

The success rate to the BAC was at 44 per cent on average in 2017, ranging from 29 per cent to 56 per cent according to the DRENET. This rate continues to increase, in 2013 it still was at 34 per cent, but it is still very low (MENET-FP and DSPS, 2017).

The project “Ecole Numériques d’Excellence Africaine Côte d’Ivoire” (African Digital School of Excellence Côte d’Ivoire, ENEACI) has been launched in is part of the African Digital Schools Initiative (ADSI, 2017-2019) and is promoted by the Global E-Schools and Communities Initiative (GESCI). This project responds to the government's overall goal of introducing ICTs and harnessing the effectiveness of this tool as a lever for qualitative changes in the national education system. (ROCARE report)

4.2. Higher education

The sub-sector of higher education is confronted with an important increase in the number of students, which results in pressure on existing infrastructure and human resources. The number of students increased from 170 thousands in 2013 to 190 thousands in 2015. (MENET-FP et al 2017)

Around 65 per cent of students is enrolled in the five public Universities of the country. The University Félix Houphouët Boigny, located in Abidjan, is the biggest in the country, with 60,000 students. The University Nangui Abrogoua (Abidjan), with about 5000 students, is specialised in scientific and technological fields. The Alassane Ouattara University is located in Bouaké, the second largest city in the country, and hosts more than 30,000 students. The University Jean-Lorougnon-Guédé (Daloa) has been rehabilitated in 2012, and hosts today about 4,000 students. Finally, the Université Péleforo-Gabon-Coulibaly (Korhogo) is the more recent University of the country.

A vast program of infrastructure (*Programme de Décentralisation des Universités en Côte d’Ivoire*, PDU) has been promoted since 2014, with the aim to decentralize tertiary education supply. The University of Man is operational since the academic year 2016-17. The University of San Pedro has been built (public-private partnership for the construction, the propriety of the building will be private for a certain number of years), as well as the one of Bondoukou (public contracting). The two establishments should be operational in 2020. Five other Universities were supposed to be built before 2020, but fundings have been the only fund for the University of Dabou right now, while there are still ongoing discussions on the other projects⁶⁰. The state has also begun rehabilitating university residences.

In order to solve the problem of a surplus of students, the Virtual University of Cote d’Ivoire (Abidjan) (UVCI) has been created in 2015. It offers undergraduate programmes in several fields of computer science and new technologies, including IT security and databases. It currently has more

⁶⁰ More details on this project can be found here: <https://www.pdu.ci/index.php>

than 6,000 students, and established several partnerships with digital enterprises, like Microsoft or Orange⁶¹. The establishment of the UVCI also replies to the government's willingness to promote Information and Communication Technologies (ICTs) in education.

Supply remains dominated by Arts programs, which represent 56% of enrolments, with scientific and technical training concentrating only 32.5% of enrolments in 2013. This despite 2009 education policy explicitly called for a rebalancing of supply towards scientific and technological sectors. (RESEN 2016)

Private providers represented 44.5% of the total supply in 2014. (MENET-FP et al 2017). According to WB and AFD (2018), private tertiary institutions are considered as a second best solution for students that cannot enter the public ones.

Recent years have been characterized by recurrent strikes of teachers, administrative and technical staff, as well as students. Because of strikes, the academic year is often longer than normal and student register important delays in obtaining their diploma. MENET-FP et al 2017 also observe that tertiary education in the country is characterized by a low degree of internal efficiency, a high degree of violence and by the poor performance of the scholarships systems that make higher education difficult to access for less wealthy households. Indeed, a child from wealthy families was 70 times more likely to have access to higher education than a child from the poorest ones (RESEN 2016). In 2015, girls represented 35.6% of students. Among them, only 26.9% are in scientific fields.

An important number of reforms have been put in place. The LMD (Licence-Master-Doctorat) system has put in place, in order to align Ivorian higher education to international standards, but it takes time to be effective. More recently, the PADES (*Projet d'appui de l'enseignement Supérieur*) program has been launched with the support of the World Bank⁶² and the idea of the French-Ivorian HUB has been launched in October 2018, aiming at "improving the Ivorian training offer by putting French expertise at the service of local higher education institutions"⁶³.

A lack of training in Science, Technology and Mathematics (STM) exists and at the same time, there are not enough scientific graduates (BAC C). This poses a problem of qualitative inadequacy between student training and skills demanded on the labour market. According to OECD (2017), young people should be mostly oriented towards programs and training in the processing industry (manufacturing), in engineering and architecture (construction), commerce and administration, computer science, physics, mathematics and statistics.

⁶¹ <http://uvci.edu.ci/>

⁶² This project aims to support the development of higher education by: (i) diversifying the supply for vocational programs and increasing the number of students in all type of vocational programs; (ii) improving the quality and relevance of training in public higher education institutions and strengthening the L-M-D system; (iii) improving the governance and management of higher education sector. More details on the PADES: http://www.enseignement.gouv.ci/index.php?open=ressources&res=details_offre&offID=264

⁶³ <https://www.campusfrance.org/en/france-supports-innovative-partnerships-in-africa-with-the-franco-ivorian-hub-of-education>

Officials from the MERSR are also afraid about a quantitative mismatch that could occur in the next few years because current labor market conditions will not allow absorbing all the future graduates. Some of them declared that they would like to regulate the flow to higher education beyond the age of 16: ideally, only 25% of secondary schools graduates should go into higher education, the others should be oriented towards professional training.

4.3. Vocational education⁶⁴

Since January 2017, there is only one Ministry for education and TVET, that is the Ministry of National Education, Technical Education and Vocational Training (MENET-FP). At the same time, a State Secretariat for Technical Education and Professional Training has been created.

A diagnostic made by the MET-FP in 2016 censured 62 public TVET institutes in the country, with an annual capacity of 35,000 students⁶⁵. Their number did not increase since 2002, the conditions of their infrastructures were obsolete as well as their equipment (METFP, 2016). Ten new establishments have been created since 2017.

Concerning private providers, their number increased from 433 in 2012 to 680 in 2016, when they enrolled about 65,000 students. Half of the establishments are based in the Abidjan district, 26 per cent of the public ones and 53 of the private ones (METFP, 2016).

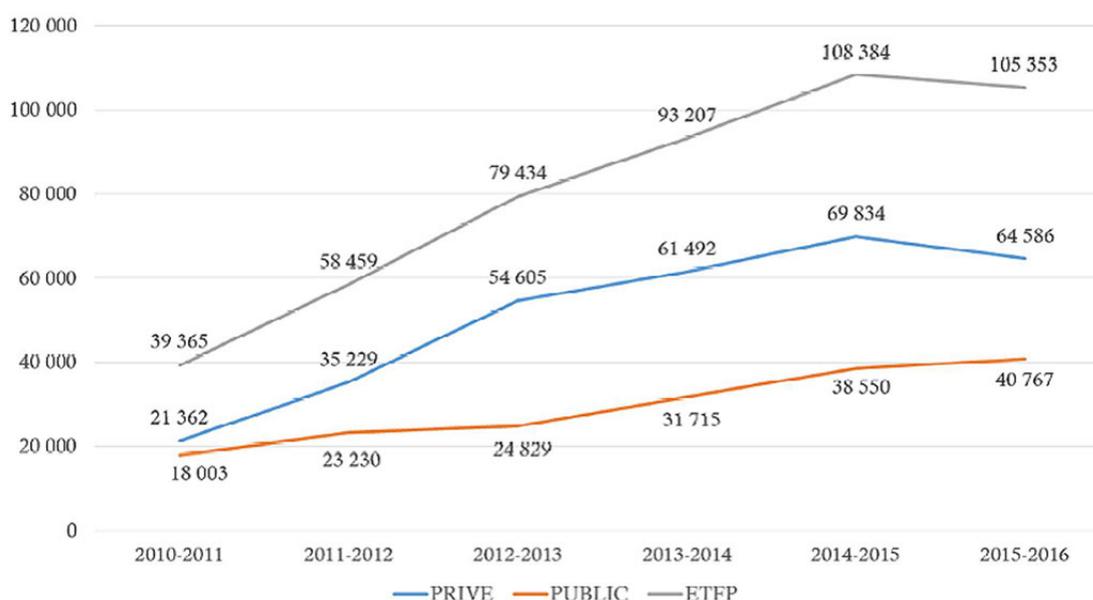
The number of students enrolled in TVET increased from 39,365 in 2011 to 105,353 in 2016, mainly due to the increase in the number of learners enrolled in private educational institutions, as shown in figure 2.10 below. Today 117,800 young people are in vocational training, the government goal is reaching 200,000 students in 2020 (METFP, 2016).

Despite this increase, only six per cent of students opted for the TVET in the 2015-2016 school year. This option remains palliative solution for the students, and it is mostly seen as a second-best options for the ones who cannot have access to general education.

⁶⁴ This paragraph mainly concern TVET at secondary level. TVET at the tertiary level is offered at Universities, so it is covered by the paragraph on tertiary education.

⁶⁵ Three Technical High Schools (LT), preparing for the Baccalauréat (BAC) and for the Brevet de Technicien Supérieur (BTS); ten Professional High Schools (LP), preparing for the Technician Certificate (Brevet de Technicien, BT) and the BTS, six Professional Development Centers (CPM), preparing for the Brevet d'Etudes Professionnelles (BEP), Brevet de Technicien (BT) and Brevet Professionnel (BP), four Centers of Office, Communication and Management (Bureautique, de Communication et de Gestion, CBCG), preparing for BT and BTS; one Center of Electronics and Applied Computing (CELIA), preparing for BT and BTS; eight Technical Education Colleges (CET), preparing for the Certificate of Professional Aptitude (CAP), BEP and BT; and thirty vocational training centers (PSC), preparing for the CAP and the BEP. Besides that, in rural areas, there are ten Mobile Training Units (UMF) and three Application and Production Workshops (Ateliers d'Application et de Production, AAP), used for the specialization of craftsmen and for the logistical support of young graduates.

Figure 2.10. Number of pupils enrolled in private and private TVET, 2011-2016



Source: METFP, 2016

In terms of sectors, most students are trained in the service sector (about 72 per cent in 2016), while less than 0,5 per cent of them are trained in the primary one. The rest are trained in the industrial sector. Girls represent 8,6% and 18,3% respectively in the agricultural and industrial sector, while they are overrepresented in the tertiary sector, with a proportion of 60.7 per cent (METFP, 2016).

A recent survey made by ETFP (2018) shows that, one year after obtaining their diploma, about 37 per cent of TVET graduates are employed. This percentage is far higher from the 2017 data, that reported an employment rate of 14.43. Government target a fifty per cent employment rate by 2020. The percentage is lower for BEP graduates. When examining the employment rate by sector, we see that among the sectors registering the highest employment rate, we find carpentry, electronics, aesthetics, jewellery, topography, bakery/pastry, construction, mechanics, car bodywork.

A Strategic Plan for the Reform of TVET has been launched in 2016. The plan is based on several pillars, including: (i) the improvement of private sector involvement in identifying labor market needs and in facilitating labor marker insertion; (ii) the improvement of employability through programs' revision and teachers' training on the competency-based pedagogical approach; (iii) the increase in the supply of apprenticeship and sandwich training; (iv) the introduction of bridge classes (*classes passerelles*) allowing access to TVET for pupils at any level of general education (METFP, 2016)⁶⁶.

⁶⁶ Several institutions are supposed to contribute in the project setup. The National Agency for Vocational Training (AGEFOP) manages employability projects such as the Projet Formation par Apprentissage (PFA) which aims to promote

At the same time, a large plan of infrastructure construction and renovation has been promoted as well. The problem here is that the renovation of buildings and equipment is very expensive, and it is often possible only thanks to the help of technical and financial partners⁶⁷. But, once renovated, establishments need to be operational and the operating budget that the state gives them is very low⁶⁸.

Finally, one critical aspect is the negative perception of TVET. This is why the State Secretariat for TVET decided to put in place a communication plan to reduce prejudice and to make TVET more attractive for young people. The plan includes a campaign in the newspapers and magazines, on social networks, as well as the organisation of events, such as the Open Village and the Open Days at TVET Institutions, where youths can meet with TVET professionals and teachers (OECD, 2018).

The Ministry for the Promotion of Youth, Youth Employment and Civic Service (MPJEJSC) is in charge of short term training programs that are addressed to unemployed people. A number of projects have been promoted in the last years, among others: (i) the Programme d'Appui à l'Amélioration de l'Employabilité et à l'Insertion des Jeunes (PAAEIJ), (ii) the Projet pour l'Orientation Professionnelle et la Formation par Apprentissage des Ex-Combattants (PROFADEC), (iii) the Projet d'Appui au Traitement Économique du Chômage (PATEC), (iv) the Projet Emploi Jeune et Développement des Compétences (PEJEDEC), (v) the Projet C2D Emploi, and (vi) the Programme de Développement des Initiatives Génératrices d'Emplois (PRODIGE). Between 2013 and 2015 these programs targeted about 65 thousands of youths and cost 48.8 milliards de FCFA (OECD, 2017).

According to OECD (2017), some of these programs (PEJEDEC financed by the World Bank and C2D Emploi, financed by AFD) registered positive effects on employment and wages thanks to the effective management system that was put in place and to the conditionalities imposed by the donors. Most of the other programs did not attained their objectives in terms of the number of targeted youths, and one of the reasons could be the lack of funding. The PAE (Programme d'Aide à l'Embauche) Program, for example, which aims to improve the employability of young people by offering them internships in enterprises, placed 1,827 people on internship from 2012 to the end of

the social and professional integration of thousands of out-of-school youths through the training to a specific job. The Vocational Training Development Fund (FDFP) manages the Initial Training and Apprenticeship (FIA) project, which promotes sandwich training for young people aged 14 to 26 in order to facilitate them in obtaining a job in an enterprise. The implementation of the vocational training reform is receiving significant financial and technical support, in particular through the C2D Vocational Training Project financed by France and the Project Support to Vocational Training and Youth Integration (PROFORM). (OECD, 2017)

⁶⁷ The Saudian Fund, the Koweitian Fund, the Arab Bank for Economic Development in Africa, the Islamic Development Bank, the UNIDO, and Japan and Morocco gave financial and/or technical support in the projects' realization: <http://www.formation-professionnelle.gouv.ci/fr/projets>.

⁶⁸ For example, 6.2 billion Fcfa have been used to rehabilitate and equip the Professional High School of Man, but the operating budget allocated to the school in 2018 was of 12.3 million Fcfa.

2013, that is 81% of the target, but only 38 per cent of the youths who completed their internship managed to find a job.

It is worth to mention here the the Fond de Développement pour la Formation Professionnelle (Development Fund for Vocational Training, FDFP), that was set up in 1991 by the government to consolidate the vocational training system. The Fond is mainly financed through taxes at the charge of the enterprises (the apprenticeship tax and the additional tax for continuing vocational training, representing respectively 0.4 and 1.2 per cent of the payroll). The payment of these taxes gives employers the right to ask subsidies for the training of their employees. The Fund finances face-by-face and online training provided by companies who previously received its accreditation.

Box 2.10. Government's strategy for Education

Here we briefly present the main pillars of the current education strategy, according to the last Education Sectoral Plan (2016-2025) and to the conversations we had with officers at the Ministry of Education. We present the government strategy by education sector.

Pre-school main objectives:

- To improve access to pre-school quality services, through the construction of new classes and the recruitment of new teachers.
- To give priorities to the improvement of the offer devoted to pre-primary kids aged 5, through the construction of a class reserved to them in all the new-build schools and in the renovated ones.
- To revise CAFOP programs to better prepare teachers to teach to pre-school kids.
- To improve the pre-school offer in rural areas through the development of the *Centres Communautaires*
- Private providers are supposed to supply 27 per cent of the pre-school offer by 2025, mainly in urban areas, but no subventions are envisaged.
- To reduce the pre-school program to 2 years, with an age of entry at 4. This in order to immediately improve access to pre-school to kids aged 4 and 5 to existing structures.

Primary school main objectives:

- To build about 3,000 classes per year and to renovate 5% of the existing ones. Low-density populated areas will be prioritized.
- To put in place a parallel offer for never enrolled and dropout kids. Bridge classes (*classes passerelles*) will be proposed to kids aged 10 to 13. These classes will allow kids to catch up and enrol in primary school. For kids aged 14 to 16, special classes preparing to vocational training and at the same time providing general education will be proposed.
- To affect 6,000 additional by year to public primary schools.

Lower secondary main objectives:

- To build new secondary schools (projections show that 1840 colleges should be built

between 2015-2025 in order to assure education for all secondary age-school children. The construction of proximity colleges will be pursued and more bivalent teachers will be trained.

- To revise programs to make them being in line with the policy of compulsory schooling up to 16.
- To improve completion rates and to lower repetition. - To give particular attention to the girls aged 12 to 16.
- To reduce subvention to private schools, while at the same time improving the quality of their services through a deeper control to their standards' compliance and to the number of pupils they effectively enrol. The ambition is to have 40% of students in private and 60% public in lower secondary education.

Upper secondary main objectives:

- To build new classes and new schools.
- To better use existing resources in terms of teaching staff and infrastructures (a lot of under service is observed)
- To elaborate on a new policy with respect to private providers: they should propose scientific classes, they should have qualified teachers, and open training schools for private teachers.
- To push pupils towards scientific and technological series (BAC C). One possibility would be to put in place an orientation system during the second year of upper secondary school.

TVTE main objectives:

- To push pupils towards technical upper secondary education.
- To build new establishments, especially the ones devoted to girls
- To develop sandwich programmes in upper secondary education.
- To establish new training programmes, providing a certificate of competences, for individuals aged 14 years and older who just completed primary schools.
- To put in place professional branches and, with their aid, to identify priority sectors
- To better monitor the private sector's quality and performance and to revise juridical norms for private providers.

Tertiary education main objectives:

- To build 5 new Universities and 2 IUT (Technical University Institute)
- To improve accreditation and certification procedures
- To increase the number of grants, but only in the priority sectors (mainly in the scientific ones)
- To reduce subventions to private establishments, trying to push more students towards the public ones.

Other main objectives:

- Several reforms are preconized in order to improve the management of the education system. They should concern, among others, the administrative and pedagogical management of schools, the optimization of resources utilisation, the functioning of the general inspection system.
- To improve the use of education technologies, especially in secondary and tertiary education. Technologies are planned to be used in training, but also in the management of the education system (eg individualized monitoring of student absences or progress).
- To improve the quality of school amenities, in all cycles.
- Promoting campaigns against violence at school

The realisation of the plan needs that the country keeps devoting about 30 per cent of current expenditure to the education sector

4.4. Teachers training

Currently, MENET-FP is in charge of primary schools initial teacher training and of in-service teacher training, while the MESRS is in charge of secondary schools initial teacher training, with a lack of communication between the two Ministries (OECD, 2018). Concerning pre-school teachers, the ones teaching in public schools receive the same training as primary school teachers, while the ones employed in the structures under the supervision of the Ministry of Solidarity, Family, Women and Children (MSFFE) mostly received specifically training targeted at the pre-school level, being preschool educators or assistant preschool educators (RESEN 2016).

Primary school initial teacher training takes place in sixteen CAFOP (*Centre d'animation et de formation pédagogique*), that are spread over the country, and train around 5,000 teachers per year. Secondary school initial teacher training is concentrated at the ENS (*Ecole Normale Supérieure*) of Abidjan, where not enough teachers can be trained because of budget restrictions (ENS capacity is not reached). Governments aim to have a CAFOP in every Ivorian region in the medium-term and two satellite ENS campus by 2020 (localised in Bouaké and Sand Pedro, financed by Millenium Challenge Corporation).

A lack of teachers, in particular at the secondary level is perceived in the country. The current challenge is to enrol much more students at the ENS, that would be able to train between 5,000 and 6,000 teachers per year if there were resources. An alternative could be the development of undergraduate and master courses in pedagogy, but this option is currently under explored by the Government.

A reform of the initial training of primary school teachers is ongoing. It began in 2012 and it benefited from the support of the *Centre international d'études pédagogiques* of Sèvres (CIEP) for the revision of the teachers' competency framework, for the finalization of the pedagogical tools necessary to the implementation of the reform. The project has several objectives, including: (i)

making teacher training less theoretical and more practical, by increasing the number of internships and sandwich courses, (ii) adopting a competency-based approach and revising CAFOP curricula accordingly, (iii) changing recruitment procedures to select the best students at the entrance at CAFOP, (iv) adopting a new system for teachers deployment, based on the regional level. The project is currently being tested on three CAFOP and will be extended to three other CAFOP in 2019 before generalization in 2020 (OECD, 2018).

Concerning secondary school teachers, their training is mainly theoretical and academic with little time devoted to pedagogy issues. In the last few years, considerable efforts have been made in order to train teachers for the *colleges de proximité* (see section 4.1), that must have specific skills since they are supposed to teach two different subjects (OECD, 2018).

Concerning in-service training, at present, it is assured by the DPFC (*Direction Pédagogique et de la Formation Continue*) through the thirty-six antennas of pedagogy and continuing education spread all over the country. The problem is that there are currently 1,225 academic advisors for the primary school's teachers and 900 for the secondary school teachers, the number is quite low if compared to the 76,300 and the 28,000 primary and secondary (general) school teachers employed in the country (DSPS, 2018).

DPFC is very dynamic in terms of distance learning. Their objective is to use digital technology when possible in continuing teacher training. Two ongoing projects, Ifadem-Papdes, led by OIF and AUF, and Mobile-learning, led by AFD-AUF, are already in place to facilitate this process. Projects aimed at equipping classes with digital technologies and training teachers about their use have also been promoted (i.e. Sankoré-RCI 2013, Unesco-CFIT) (OECD, 2018).

In terms of teaching quality, MENET-FP, in partnership J-PAL Europe, Pratham, and TRECC (Transforming Education in Cocoa Communities) program, are currently developing a TaRL (Teaching at the right level) pilot. TaRL classes are currently running in fifty schools Gabiadji and Méagui (two cocoa-growing localities) and IPA will do the evaluation one year and a half after the begin of the project, that is March 2019. If TaRL implementation is successful, it can be scaled to an additional 200 schools in 2019-2020 and even beyond afterwards⁶⁹.

It is also important to remark that teachers' absenteeism is an important issue: together to the students' absenteeism and to the delays at the beginning of the school year, it causes on average the loss of two months per school year in primary school (RESEN 2016).

⁶⁹ "From Evidence to Action - PEC, le Programme d'Enseignement Ciblé in Côte d'Ivoire" M. Raoul Kone Deputy Chief of Staff, MENET-FT, presentation to the TaRL Conference 2018, South Africa: <https://www.teachingattherightlevel.org/conference2018/>

5. The mobilization of the private sector in education

This section reviews the private sector contribution to the different education cycles in Ghana and illustrates the major needs and challenges of private education providers in the country. It also describes the role of some ancillary education services in Cote d'Ivoire.

5.1. Pre-tertiary

The number of classes in private pre-tertiary education notably raised in the last years. The number of classes in private primary schools, for example, registered an increase by 25 per cent between 2013 and 2017, while the number of classes in secondary schools increased by 62 per cent over the same period. Concerning enrolment, it increased by 31.6 per cent in primary schools and by 44.7 per cent in private schools. These percentages are based on statistics from DPSS and could be underestimated because of the existences of unregistered private schools.

In terms of location, only 13.2 per cent of new entrants in private primary schools were located in rural areas in the academic year 2017/18. In terms of regional distributions, we can observe that most private schools are concentrated in Abidjan, with a 48 per cent of primary and 91 per cent of secondary private schools, while in some DRENET their number is very low, the extreme being the DRENET of Bouna with only two private primary schools on the 208 in total and one secondary school on the eleven.

Affectation system:

Before 2011, students could enrol in secondary schools only if they obtained a very good score to the CEPE exam. Public schools enrolled the ones who graded highest, up to their maximum reception capacity. Private schools did the same with the pupils in the middle of the ranking. Given the limited number of places, this implied that even pupils obtained a score of 12 or 13 (the exam is passed with a score of 10) to the CEPE could be excluded by secondary schools. Today, all pupils passing the CEPE are allowed to enrol in public or private school. In 2011, when the government stated that all children passing the CEPE exam had the right to enrol in secondary school, there was a deep increase in the number of students that were assigned to private schools, because the number of places in public institutions was still very low. But the government did not increase the budget accordingly and this determined an important liability with the private schools, who couldn't be paid on time. After demonstrations from the private establishments, all the debts have been repaid, but the government decides not to repeat the same mistake. The new policy is now to affect students up to a certain budget, the rest must be welcomed in the public institutions. This implies an important increase in class size. In the 2018/19, in some schools, the number of 100 students per class has been reached.

Pupils assignment is made according to the proximity (to avoid reassignment requests) and the preferences of the students. Once assigned, the State verifies that the students are actually present in the institution because the state pays on real assignments, not on those that have been

accepted. It is very expensive for the State to control the real presence of the students, and it takes time. This contributes to delay the payment to the schools, that is usually done several months (even one year) after the begin of the academic year. Government is currently studying options to reduce the cost of this control, for example through the use of tablets or other IT.

The state pays 120.000 CFA for a pupil enrolled in lower secondary school, 140.000 CFA for upper secondary school and 175.000 CFA for technical secondary schools. These amounts are independent of schools performances, thus creating potential incentive problems. Schools do not normally have the right to ask for additional fees, but an officer said us that this is tolerated by the State because the amount it transfers to private schools is not enough to cover all the costs.

Table 2.19. Per-pupil public transfer to private school in secondary general and technical education, 2013

	Nbre d'élèves orientés dans le privé	% effectifs privés	% des effectifs totaux	Transfert par élève (FCFA)	CU en % du PIB/tête	CU en % du CU public
Collège	281 619	66%	31%	120 000	17	64
Lycée général	6 613	4%	2%	140 000	20	32
Lycée technique	47 537	100%	95%	175 000	25	13
FP	6 926	-	-	175 000	25	17
BTS	64 327	78%	-	390 000	56	-

Source : RESEN 2016

Table 2.19. above shows that the amount paid to the private schools are lower than the unitary cost per pupil in public schools. This is true across all education cycles, but in particular for technical and vocational education, that have higher unitary costs.

Household education expenditure in education according to the public or private nature of the establishment is presented in table 2.20 (MEN et al, 2016). Households expenditures are on average far higher for private schools, with differences being more important for pre-primary and primary education, where families spend for private education three times the amount they would spend in order to enrol kids to the public ones⁷⁰. However, in order to understand if private schools are accessible to the poor, it is more useful to look at the costs of private schools that are located in a low income district. With this respect, we refer to the work by Harma (2018), who run a survey on private schools in three low-income districts of Abidjan in order to estimate the market potential for financial services to private schools. She estimates the average annual costs of private schools to parents being at around 53,000 CFA for pre-primary schools, at 83,000 CFA for primary schools,

⁷⁰ The costs for public schools is not zero because the COGES (Comités de Gestion des Établissements Scolaires) often ask for parental participation in order to cover school expenses that cannot be covered with the limited public budget.

at 108,000 CFA for lower secondary and 116,000 CFA for upper secondary. Costs include tuition fees, registration fees and extra fees (i.e. uniform, textbooks, and other material). They do not include lunch cost. When we compare the costs estimated by Harma (2018) to data in table 2.20, we see that enrolling kids in private primary schools cost much more (three times) than enrolling them in the public ones. But this is not the case for the other schools level: private pre-primary seems to be even less expensive than the public ones, while for lower secondary school the difference is still in favour of public school, but it is thinner.

Table 2.20. Per child household expenditures in education in private and public schools, by education

NIVEAU D'EDUCATION	2008 (Prix de 2014)		2015 (Prix de 2014)	
	Public	Privé	Public	Privé
Précolaire	53 852	98 460	66 462	205 110
Primaire	25 688	132 831	29 908	103 691
Sec gén 1	77 781	159 700	79 966	154 642
Sec gén 2	106 524	222 157	114 486	221 956
ETFP	164 891	299 536	200 803	294 671
Sup	218 382	615 112	254 593	557 217

Source : MEN et al. 2016

It is interesting to note that sixty-nine per cent of schools proprietors declare that they target moderately poor families, while 25 per cent declare serving lower middle-class families and 26 per cent declare serving very poor families⁷¹.

School proprietors surveyed by Harma (2018) report significant challenges with respect to the ability of households to pay for the totality of fees. They estimate at 25 per cent the average proportion of income from fees that they lose every year for this reason. They also declare to frequently withdraw children from schools when parents do not pay fees on time.

Average tuition fee only is estimated at 59,000 for lower and at 67,000 for upper secondary schools. These amounts are far lower than the amounts transferred by the State to the secondary schools, indicating that it is financially interesting for private secondary schools to have students sent from

⁷¹ International poverty line stands at 473.3 CFA per day per capita in 2018, while the lower middle income class poverty line stands at 797 CFA in 2018 (<https://databank.worldbank.org/data>). This means that individuals living with an annual per capita income of around 173 thousands CFA (at the international poverty line) need to spend almost 50 per cent of per capita income to enrol in private primary schools, while individuals living with an annual per capita income of around 291 thousands CFA (at the lower middle class poverty line) need to spend around 29 per cent of their per capita income.

the State. Twenty-four secondary schools are included in the Harma (2018) study and only eleven of them received students from the State (on average 69% of their students are funded from the State. According to Harma (2018), schools are allowed asking those students for extra fees, but these are capped at 37,000 CFA per year.

Although receiving students from the State seems to be financially profitable for schools, many difficulties are associated with this system. Payments are often delayed (the average delay is one year) and schools need to ask for loans in order to cover their operating costs⁷². Also, the number of students sent by the government is not stable over time, thus making difficult for schools to planify the number of students enrolled. Finally, schools can not select their students, and the state does not send them the ones who performed better at the CEPE exam. This implies that some schools owners prefer not to be engaged with the State.

Harma (2018) shows that the main school operating cost factor are teachers' salaries, that represent almost 73 per cent of schools total annual costs. Primary school teachers earn on average 525,000 CFA, that is higher than the salary earned in the public sector, that stands at 390,000 CFA since 2108⁷³. Many school proprietors own the land where the school is built (47%), but many others need to pay for a rent that can represent important costs and is in fact mentioned as the second source of costs for private schools.

The average size of the schools surveyed by Harma (2018) is quite big with respect to private schools in other African cities. Schools enrol on average 336 students, and a few of them enrol up to 2,000 pupils. Being able to enrol a big number of pupils is the most important determinant for school profitability, thus explaining why most proprietors declare that they would like to build more classes to expand the schools if they were able to do so.

⁷² Harma (2018) reports that Ecobank offers loans to schools that are in this situation.

⁷³ Information on the primary school teacher's salary comes from: <http://www.gouv.ci/actualite-article.php?recordID=9269>

Box 2.11. A basic school with high ambitions: IBSA – International Bilingual Schools Of Africa

IBSA was created in 2017 by Valérie Zoudiet Coulibaly and her husband, with the goal to provide an outstanding quality of education in several African countries. IBSA is a school network for kids from 2 to 11, offering pre-school and primary bilingual education. The English program is based on the British International Program, while the French one is based on the French National Education program.

IBSA's education model is quite innovative, centered on active pedagogy where the teacher adapts to the student. The schools are quite small, with less than 300 children.

IBSA's ambition is to become the reference network for African (and international) expatriates who often change the place of residence. The model they propose is thus quite elitist, the annual fee is around \$3,500 per year, that is still lower than the one charged by the British or American schools. The network does not have a social impact policy and does not aim to expand access to low-income students, except if a donor proposes to pay scholarships for them. Their mission is rather to form a better elite.

The first two schools have been established in 2017 and 2018 in Abidjan, a third school will open soon in Ouagadougou. The owners plan strengthening the model, verifying the demand for their school is high as they suppose, and then starting to expand in other African countries.

IBSA is a member of the International Primary Curriculum (IPC), a network of schools that was created by Fieldwork Education in 2000 and now comprises about 1,800 schools in over 90 different countries that share learning experiences, resources and ideas.

In terms of infrastructure policy, they do not build their schools but prefer to rent their locals for a long term period, this allows them to be more flexible if they need to move or expand a school. Also is less risky at the beginning of the activity.

Teachers/ qualifications

For primary schools, only 23 per cent of teachers is qualified as defined by the government (Harna, 2018), while the majority of them are secondary school graduates. There is a high level of teacher turnover, but this is not felt like a problem by the school proprietors. Since 2011, all private schools teachers that are not qualified are invited to follow a mandatory 2-weeks training led by the Direction of Pedagogy which gives them a certificate. The cost of the training is about 30,000 CFA per person and it is paid by the schools. About 13,000 teachers have been trained up to now.

Private teachers, if authorized by the DREN, may also teach in private schools, but without exceeding a certain number of hours. And in fact, according to Harna (2018), most secondary schools' proprietors hire public teachers to teach part-time in their schools during their free time.

Box 2.12. Two pre-primary schools : 'Maison Cerise' and 'La Coccinelle'

Maison Cerise was established in 2016 from two pre-school educators that were trained in France. The school at present has twenty children from 0 to 6 years. It is a bilingual school, proposing a playing-learning model, centred on the development of a child's autonomy. The proprietors said that it was not easy to find educators that were able to apply this model, that is quite different from the one commonly practised in Cote d'Ivoire. Besides the recruitment problem, the school suffers from the competition because several pre-schools opened these last years in the centre of Abidjan and most of them are cheaper than Maison Cerise. Not all parents seem to understand that this school proposes something different in terms of quality and even less are able to pay for that. The location also poses a problem because the school is not very well located and visible so that it is difficult for them to advertising. The school aims to integrate the IYC network, but the cost (5,000 pounds) is currently not affordable for them.

The ration pupil/teacher is currently equal to 3, lower than in France. The school charges 600,000 CFA per year, so it is quite expensive, but it is still cheaper than the French or the US schools. It thus targets the high and upper middle class.

La Cocinelle is a pre-school for kids aged 2 to 6, created in 2011 par Sara Adico, and localized in Cocody, one of one of the wealthiest suburbs of Abidjan. The school costs 265,000 CFA (\$470) per year and targets middle and higher income families living in the surrounding area. The school obtained a grant from the Word Bank in order to open. In the beginning, they had 13 children, in 2018/19 they were about 80. They do not benefit from any government subvention but have been authorized.

Mrs Adico is supported by a pedagogical consultant working at the Ministry of Education in order to conceive the school program. The school employs eleven persons, and eight of them are educators. The educators earn on average 250,000 CFA per month.

The owner of the school, Mrs Adico, presented to Comoé a project to create a training re-centre for pre-school educators, mainly for the private pre-schools, who struggle to find qualified employees in the sector. She already contacted the Ministry of Solidarity, Family, Women and Children (MSFFE), that is willing to help them with the project that is to cost about 45 million CFA.

5.2. Tertiary and Vocational Education

Tertiary

According to WB and AFD (2017), private higher education is regarded as second-level teaching where are directed the students who are not admitted in public education. Most students go to private establishments with for the purpose of obtaining a BTS.

There are many private higher education providers⁷⁴, mostly offering programs in Arts. The International University of Grand Bassam is the most prestigious private university of the country and it offers an American style education, with all courses taught in English. It offers programs in Business Administration, Political Science, Mathematics, Computer Science, Computer Information System and Mechanical Engineering Technology. Tuition fees amount to more than two million CFA francs per semester. Two other private establishments that are quite prestigious are the Catholic University of West Africa, that is part of the UCAO network and has two units in the country (Health Science in Abidjan and Humanities and Theology in Yamoussoukro), and the *Université des sciences et technologies de Côte d'Ivoire* (UST-CI)⁷⁵.

The State transfers private establishments 300,000 CFA per student affected in for a BTS and 450,000 for undergraduate programs and programs in industrial sectors. This amount is perceived to be quite low to cover all unitary expenses institutions might have. This is why private institutions are informally allowed to ask annexe fees to the students. Currently, the Minister would like to ask private institutions to reduce the annexe fees they ask for (putting a ceiling at around 60,000 CFA), while at the same time increasing state subsidies. Discussions between the MESRS, the Ministry of Budget and Private Institutions representatives are currently going on this topic. Apparently, The World Bank recommended replacing the current system with direct scholarship provision to the students. An officer from the MESRS said to us that they tried to implement this system in a pilot, but the approach did not work because some institutions found themselves empty.

As seen above, the Education Plan 2015-2025 states the objective to orient more than half of the students to towards private higher education, while at the same time reducing the resources devoted to it. Also, private higher education should be concentrated, on the basis of multi-year contracts, on priority sectors.

⁷⁴ MESRS and DESPRIV (2016) reports 44 higher education providers in 2016, but other sources indicates around 10 universities and more than 100 school and other private institutions.

⁷⁵ <https://www.cotedivoire.news/actualite/37783-liste-et-classement-des-universites-cote-d-ivoire.html>

Box 2.13. A network of private tertiary institutions: The Intellect Africa Group

The Intellect Africa Group is a network of several schools (one in Gabon) enrolling more than 6,000 students, including over 200 foreign students. The schools are independent but they have a single owner, Mr Djegba, who is also president of the CONFESUP, one of the unions in private tertiary education.

The group includes five tertiary institutions: (i) Intellect Africa (I.A), created in 1996 (bachelor's and master's degrees in business and computer science), (ii) Afrique Formations (A.F), created in 1999 (bachelor's and master's degrees in business administration); (iii) Higher School of Interpreting and Translation (E.S.I.T) created in 2010, (iv) The School of the Sea (E.S.M) created in 2009, that also have a school in Gabon and (v) The Higher School of Accountancy Expertise, created in 2013.

In terms of teaching staff, the group employs 5 professors, 20 assistant professors and 150 lecturers. 75 people are employed as administrative staff. Most lecturers are recruited at the master level. Then Intellect Afrique provides them with internal training on pedagogy. They are currently thinking about the possibility to help their teachers obtaining the CAPES (*Certificat d'aptitude au professorat de l'enseignement du second degré*), but they hesitate because they are afraid teachers might prefer to leave to join the public sector once qualified. The group also employ teachers and university professors working in the public sector as contractors, as well as professionals working in the private sector. Salaries are very heterogeneous according to qualifications, but they are often lower than the ones paid in the public tertiary institutions.

The subventions that the schools receive do not allow them to cover all the expenditures, so their main sources of revenues are the students who entirely pay their tuition fees and continuing education. On average 50 per cent of their resources come from the government. They need bank support in order to deal with government delays in payments. Banks are now available to concede short-term loans (1 or 2 years) to private tertiary institutions, but they are not available to provide them with long term loans, that would be necessary for them to develop. Mr Djegba also said that the Minister is trying to raise tuition fees to private universities and is also planning to introduce tax exemptions on didactic material.

Concerning infrastructures, Mr Djegba says that most schools buy or build their infrastructure because it is not easy to find enough large spaces to rent. Besides that there is cheap building land outside the city and schools' proprietors want to take advantage of this land.

Vocational

As mentioned in section xx above, vocational education is mostly provided by private institutions in the country, that enrol about 60 per cent of the student. We were not able to understand if the programs offered by private and public institutions are heterogeneous or not.

5.3. Ancillary players

This section is consecrated to the role of the ancillary education services in Ghana. In the ancillary services category, we include **education technology, e-learning, in-service teacher training or skill training provided by private providers, publishing, and supplementary education**. It is quite difficult to obtain information on all these sub-sector. Here we cover only the ones for which we were able to collect some information or for which we were able to interview some actors.

*Publishing*⁷⁶

80 per cent of the publishing market in the country is for the school market, that has been liberalized in 2002, but it is heavily regulated. All the books for the school market must be written in collaboration with the ministry of education. Those adopted by public schools are written directly by the ministry that assigns the publishing to a publisher through a call for tenders every five years. Public pre-schools are more flexible in the choice of textbooks with respect to public primary and secondary schools. Private schools can choose the textbooks they want to use from a list approved by the Ministry. It seems then that publishers who print the textbooks for the Ministry (Collection "Ecole & Développement") need to deal with the strong constraints imposed by the State through its terms of reference, that is short turnaround times, large volumes, long delays in payments, prices imposed by the State. The market for tertiary education is dominated by foreign publishers, while the one for secondary education is quite rich because it includes activity and exams books beyond the textbooks. There are a few publishers who dominate the market, as shown in the table below. Publishers often use foreign actors for printing.

Table 2.21. Publishers operating in Cote d'Ivoire

Publisher	Year of establishment	Complementary information	Market share
NEI-CEDA	1961-1972	Monopolist for public primary textbooks up to 2002	37%
Eburnie	2002		25%
Fra-Mat Editions	2005		18%
Les Classiques Ivoiriens	2004		12%
Les PUCI	1998	Mainly publishes textbooks for Universities	NA
Neter	1992		NA
JD Edition	2014	It produces almost exclusively activity books	NA
Vallesse Editions	2005		NA

⁷⁶ The source of the sub-section on Publishing and on Ed-tech in the Sectorial Study conducted on Education in Cote d'Ivoire by Comoé Capital. The study is not public.

Education technology.

The ed-tech sector in Cote d'Ivoire is developing quite impressively. We present below the few ed-tech organisation that currently operate in the country. Some others projects are expected to be launched soon.

- **CHALKBOARD Education:** a French company, also present in Ghana, that offers mobile learning solutions to universities, secondary and higher education institutions
- **Eneza:** an e-learning platform for teachers, students and adults using sms technology, also present in Ghana (<https://enezaeducation.com/>)
- **Etudesk:** a start-up offering professional and short-term online courses (between 2 and 10 hours) through its interactive platform <https://www.etudesk.com/> (see section on case studies)
- **Qelasy:** a company based in Abidjan, proposing tablets and didactic applications for teaching and learning in six francophone African countries, also present in Morocco <http://www.qelasy.com/>
- **Educarriere:** a website presenting work and training opportunities in Cote d'Ivoire <https://emploi.educarriere.ci/>

6. Policy context and the regulation of private players in education

This section deals with the governance of the system and the regulation of private players. It includes key legal constraints in terms of licensing (licence, certification), operations (curriculum, quality control, teacher training and obligations), investment activities (constraints of ownership, foreign player etc.)

Private education is supervised by the DEEP, Direction de l'Encadrement des Etablissements Privés, that is a department of the MENET-FP. The process for private schools to register consists of three steps: (i) applying for an authorisation to create a school, that allows the school to operate for a few months; (ii) submitting an application for opening, that allows the schools working for five years; (iii) applying for government recognition (reconnaissance) after which the school receives a certificate, that has to be renovated every three years (Harna, 2018). In order to receive government authorization, schools need to meet a certain number of requirements, for example, the school proprietor needs to be the owner of the infrastructure. Inspections are frequent. Even not-recognized schools are inspected by government officers (Harna, 2018). This suggests that the existence of non-registered schools is tolerated.

Private tertiary institutions are under the control of the General Direction of Quality (Direction Générale de la Qualité). They are subject to authorization before creation, then for their opening. One of the conditions opening is that the majority shareholder is of Ivorian nationality. They are inspected, and inspections can also be unannounced. Their programmes must also be approved. BTS students pass the same exams whether they are trained in public or private institutions, with the exam being organized by a specific department (Direction des Examens, des Concours et de

l'Orientation). In order for Private Universities to deliver their diploma, they need to sign an agreement with a public University, that allow them to provide training and deliver diplomas from the partner university, without any additional control. Establishments can be authorized by the MESRS to issue their own diploma for post-BTS training and may also apply for accreditation at African and Malagasy Council for Higher Education (CAMES), an institution that tries to harmonize higher education and research in Francophone Africa. A commission evaluates all private institutions, put them notes and makes a ranking the quality of institutions⁷⁷ (World Bank and AFD, 2017).

Private higher education institutions are governed by the revised Uniform Act on commercial companies and economic interest groups (the "Revised Uniform Act") of the Organisation for the Harmonization of Business Law in Africa (OHADA). They are usually in the legal form of individual enterprises or enterprises with limited liability and they are managed by a board of directors (World Bank and AFD, 2017).

⁷⁷ We could not find the official ranking of private universities.

► Education challenges in Ghana

1. Introduction

Ghana is a country where **access to education has considerably increased** in the last decades and **gender parity seems to be reached** in both basic and secondary level, but where **important heterogeneities across regions** persist.

Ghana is one of the few African countries where **kindergarten is compulsory**, with an official age at school entry fixed at 4 years old. Unfortunately, because of the lack of places in schools, this often translates in a late enrolment in kindergarten, where is common to find children of primary school age. **Quality of kindergarten is quite low**, mostly because of a lack of qualified teachers.

More in general, **quality of basic education is quite low**, as shown by National Education Assessment 2016, according to which less than fifty per cent of kids achieved minimum competencies in English and Mathematics in their last year of primary school. The government seems aware of the problem and decided to make **quality one of the key priorities for the Education Strategic Plan (ESP) 2018-2013**, that will be published soon. An important reform of the initial teachers training system is ongoing, together with a revision of all curricula. Moreover, IPA (Innovation for Poverty Action) has evaluated several successful pedagogical innovations in the country, and the government is now planning to scale up some of them.

Government has invested a lot in **infrastructure expansion** in the last decades, mostly at the **secondary school level** and this with the aim to expand access to secondary education. In the 2017/18 academic year, Free Senior High School (SHS) policy was launched, implying a strong pressure to secondary school infrastructures.

The number⁷⁸ of **basic private schools also significantly raised**, as well as the number of children enrolled in those schools. **Enrolment in private SHS is less common** and this because of their poor reputation. What is interesting in Ghana is that basic private schools are generally perceived offering a better education with respect to the public ones, but the opposite is true for senior secondary schools. This also explains why private SHS are suffering from a drop in enrolment since the introduction of the Free SHS policy.

Vocational education is still considered as a second choice from Ghanaian students, with less than seven per cent JHS graduates opting for vocational programs at school. Several reforms have been undertaken to improve TVET quality and attractiveness, but with poor results for now. A new reform should be launched soon.

⁷⁸ We could not have access to the draft of the Education Strategic Plan 2018-30. Despite this, several officers disclosed us information about the content of the Plan. This is why we are able to refer to its content in our report.

The number of students pursuing to **tertiary education has expanded** in the last decades, but access to tertiary education remains quite difficult, especially for low-income students. The **quality of some public Universities has improved** and they also start attracting students from other African countries, notably from Nigeria. **The number of private tertiary institutions has exploded.** They are mainly offering Arts programs, since they cost far less, and they do not often distinguish for the high-quality of the service they offer.

From our study, **Ghana emerges as a business-friendly environment**, the ideal place for a start-up to establish. The ed-tech sector is quite dynamic, there are some organization exploring the in-service teachers training market, there is a proliferation of remedial classes. There are several foundations working with microcredit institutions in order to financially support low-fees private schools.

In this section of the report consecrated to Ghana, we present the country education system, with specific analysis by the cycle of education. For each cycle, we look at the issues of access, equity and quality and we look at the role of the private sector. We also illustrate the government strategy with respect to main issues and challenges the sector is facing. Finally, we highlight the opportunities and the constraints for private actors operating in the country, and this both for private education providers and for ancillary education services.

2. General organization of the national education system

The education system in Ghana has a 2-6-3-3 structure. Ghana is one of the few African countries where pre-primary education is compulsory and the official age at entry is four. Six years of primary education follow. There is not a certificate of primary school completion, all children have completed the sixth grade of primary school are automatically admitted into secondary school. Secondary school is divided into Junior Secondary School (JHS) and Senior Secondary School (SHS). JHS consists of three grades, it provides general education and it is considered being part of basic school, so it is compulsory. The Basic Education Certificate Examination (BECE) represents the terminal point of basic education. Students who obtain this certificate can proceed into secondary education, general or vocational.

General SHS consists of three years and is composed of compulsory core subjects and elective subjects: students can choose between agriculture, arts or science, business programme, vocational programme or technical programme. If they choose a vocational or technical program, they enrol in a technical SHS. In order to access to **technical SHS**, students must pass a common entrance examination, like in the general SHS. These schools provide theoretical and practical education. At the end of the SHS, students pass the West African Senior School Certificate Examination (WASSCE). If they obtain a sufficient result, they can apply to a university or polytechnic program. The tertiary education system consists of Universities, Polytechnics and Colleges of Educations.

An alternative to general or technical SHS are **technical institutes**, that propose a 4-year curriculum, divided into two cycles of two years (a pre-technical/craft course followed by general technical/craft course.) Student can obtain different certifications according to the kind of program they followed (i.e. the Awards from City & Guilds, the Royal Society for the encouragement of Arts, Manufactures and Commerce or the West African Examinations Council). Students can then access to polytechnics or apprenticeships.

Informal TVET includes the apprenticeship system and on-the-job training, without formal certification. The duration of the apprenticeships can range between two to three and a half year.

There is only one **Minister of Education** in Ghana, that is organised in five divisions: Basic Education, Second Cycle Education, Non-Formal Education, Inclusive and Special Education, Tertiary education. Each division is managed by a different agency: The Ghana Education Service (GES) manage the pre-tertiary education, the National Council for Tertiary Education (NCTE) manages tertiary education, the Non Formal Education Division (NFED) deals with non-formal education, the Special Education Division (SPED) with special education, and the Council for Technical and Vocational Education and Training (COTVET) with TVET. Three independent national bodies are responsible for the accountability of the education system: the National Inspectorate Board (NIB), the National Teaching Council (NTC), the National Council for Curriculum and Assessment (NaCCA).

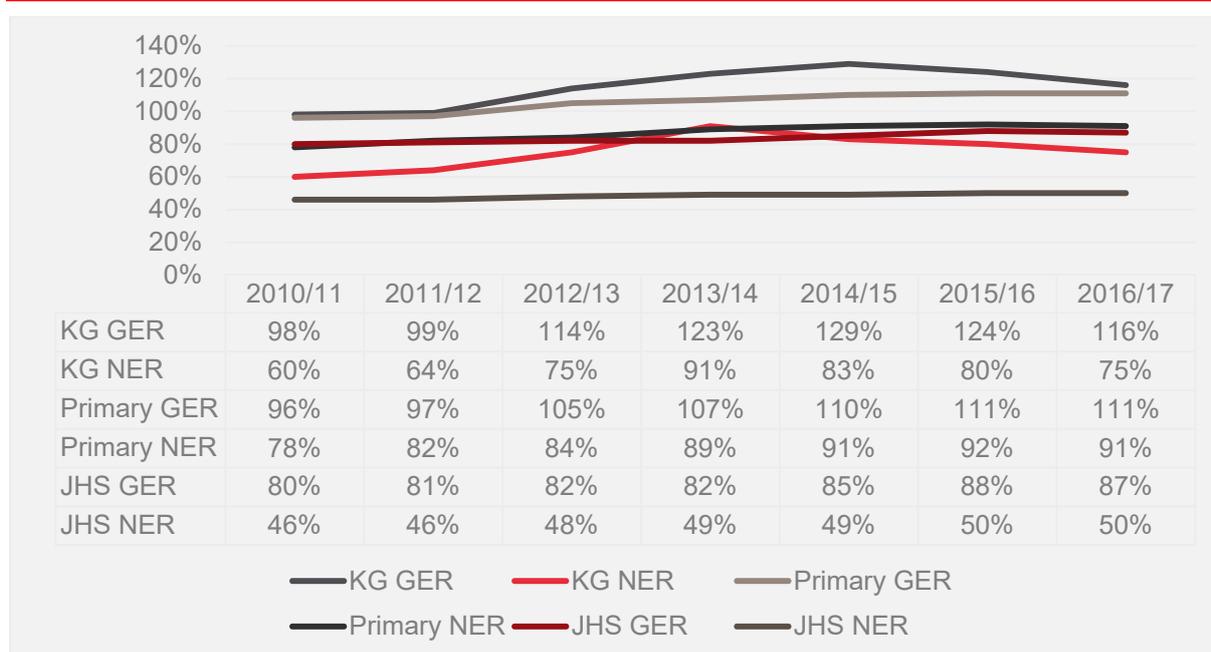
2018/19 is the second academic year of the introduction of **the Free SHS Policy** that is expected to determine important changes in the Ghanaian education system. It is also the year of the launch of the reform of the initial teaching training system. A new education strategic plan for the period 2018-2030 has been recently released, but it is not yet publicly available.

3. General Analysis

3.1. Access to education and demographic trends

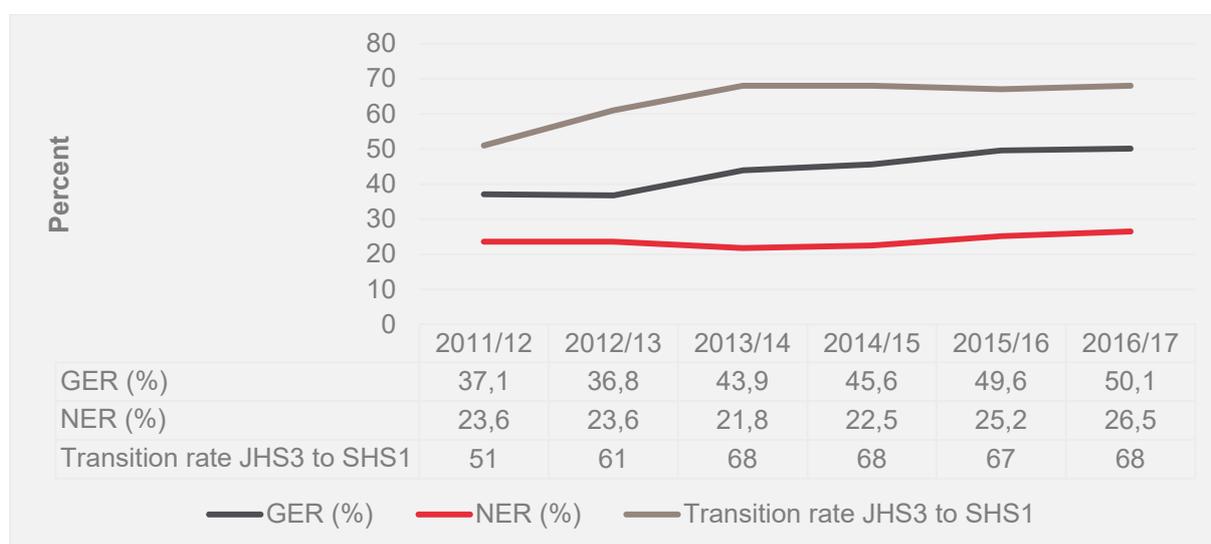
Access to education substantially increased in Ghana in the last decades. Data from the Ministry of Education, reported in Figure 2.11, indicates improvements in Gross and Net Enrolment Rate for all levels of education between 2010 and 2016. Figure 2.11 also shows that GER exceeds NER for all education levels: this occurs because many kids do not enter school at the appropriate age and because grade repetition is very common in the country. Repetition rate is particularly high for the first year of kindergarten (37%) because of the high number of under-age children who enrol in that grade. Repetition rate varies between 10 and 15 per cent in primary school, it is at 19% in the first year of JHS and 15% in the second one. Repetition is low (5%) in the last year of JHS, probably because it is the last compulsory year of schooling. It increases again at about 15% for SHS.

Figure 2.11. GERs and NERs for basic education, 2011–2017



Source: Ministry of Education (2018)

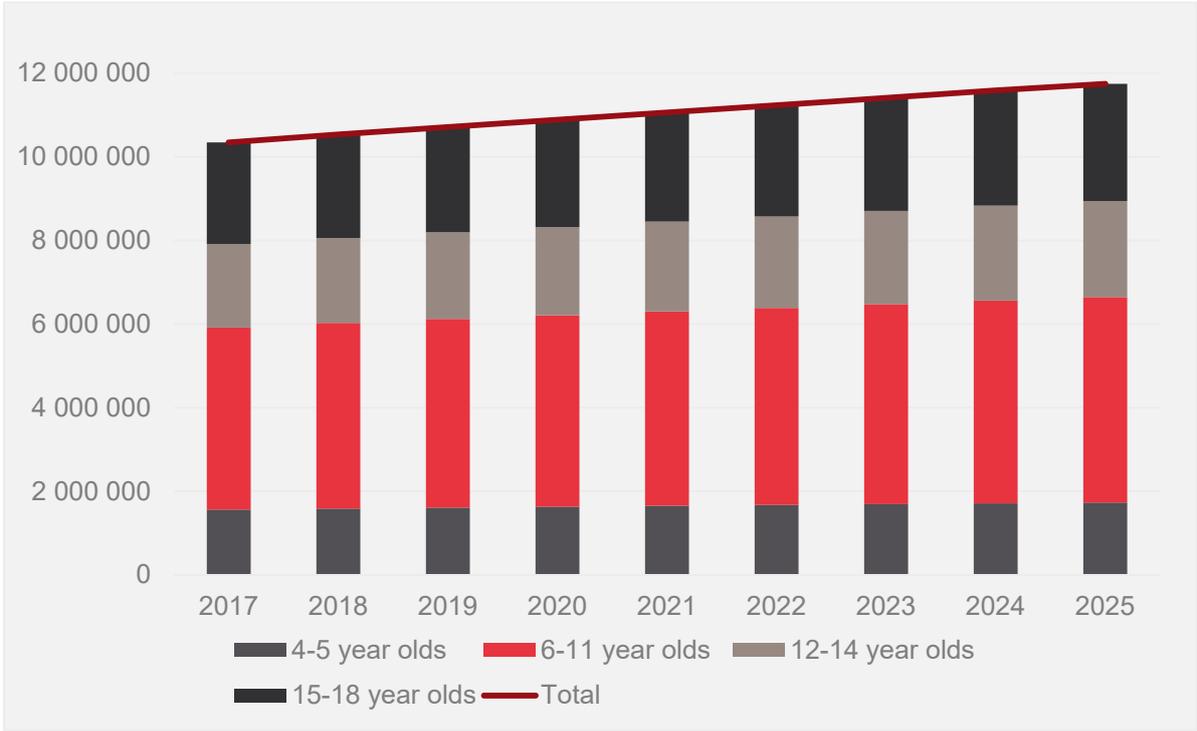
Figure 2.12. GER, NER, and JHS3 to SHS1 transition rate for SHS, 2012–2017



Source: Ministry of Education (2018); Note: Transition from JHS3 to SHS1 uses figures of JHS3 students in the previous year.

Figure 2.13 shows that the **projected numbers of children are expected to grow** for all school-age categories in the next years. This means that the enrolment rate will continue to grow, with an ensuing pressure on infrastructures. Enrolment is expected to rise even more in SHS because of the introduction of the free SHS policy (see below).

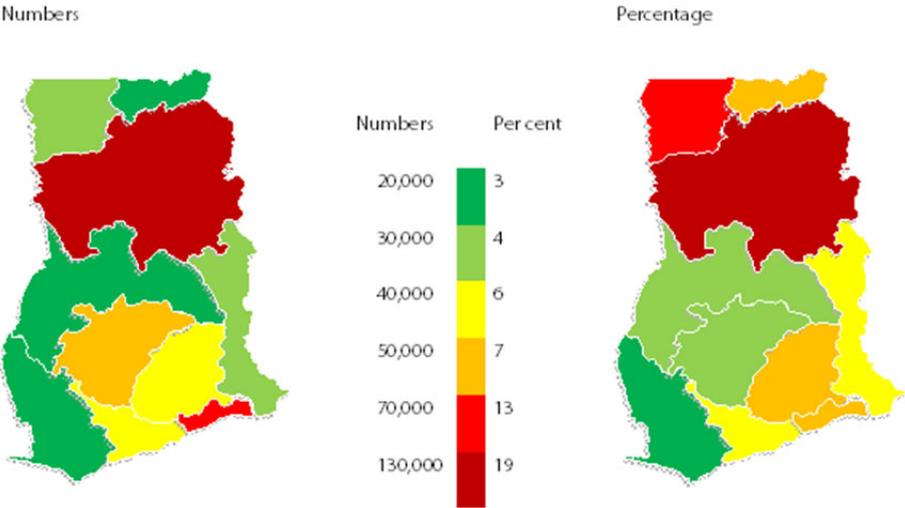
Figure 2.13. Projected number of school-going children by appropriate school-level age category 2017–2025



Source: Ministry of Education (2018)

Despite the increase in enrolment rates that we observed, the percentage of out of school children remains very high, especially in the north of the country, as showed in Figure 2.14.

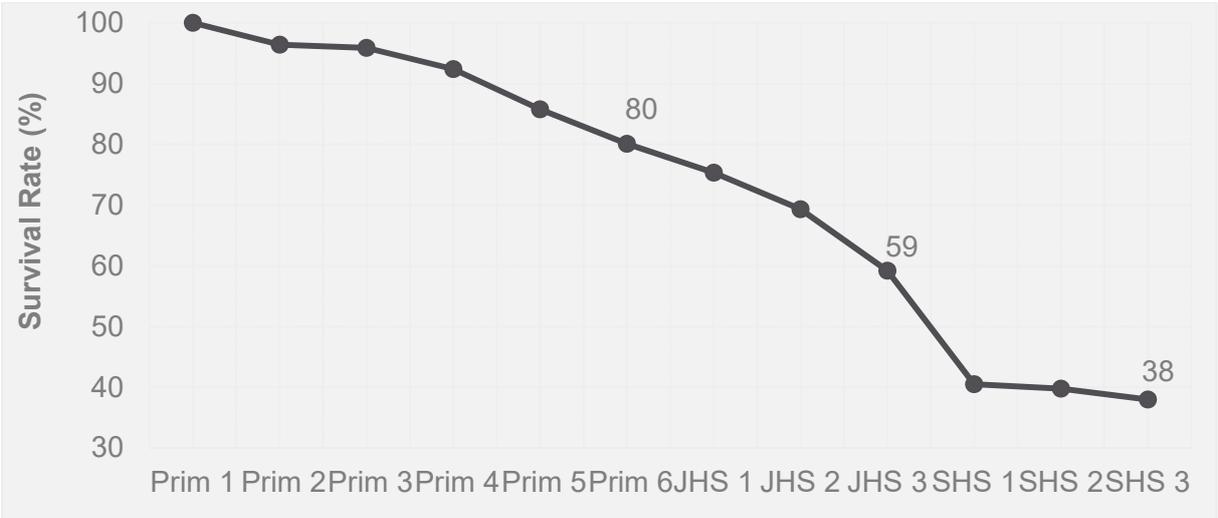
Figure 2.14: Regional distribution of Out of School Children, 2014



Source: Ministry of Education (2018)

Figure 2.15 shows the **progression rates** from primary school to SHS. For every 100 children who enter primary school, 75 enrol in JHS, 59 are still there at the end of JSH and only 41 enter the SHS. According to estimations based on DHS 2014 data, progression rate from primary to SHS is even lower, with only 16% of pupils entering kindergarten being able to enter SHS. Up to now, the transition from JHS to SHS contributed to drastically reduce the number of enrolled pupils, but this is likely to change thanks to the free SHS policy.

Figure 2.15. Progression rates for primary to SHS



Source: Ministry of Education (2018)

3.2. Expenditures on education

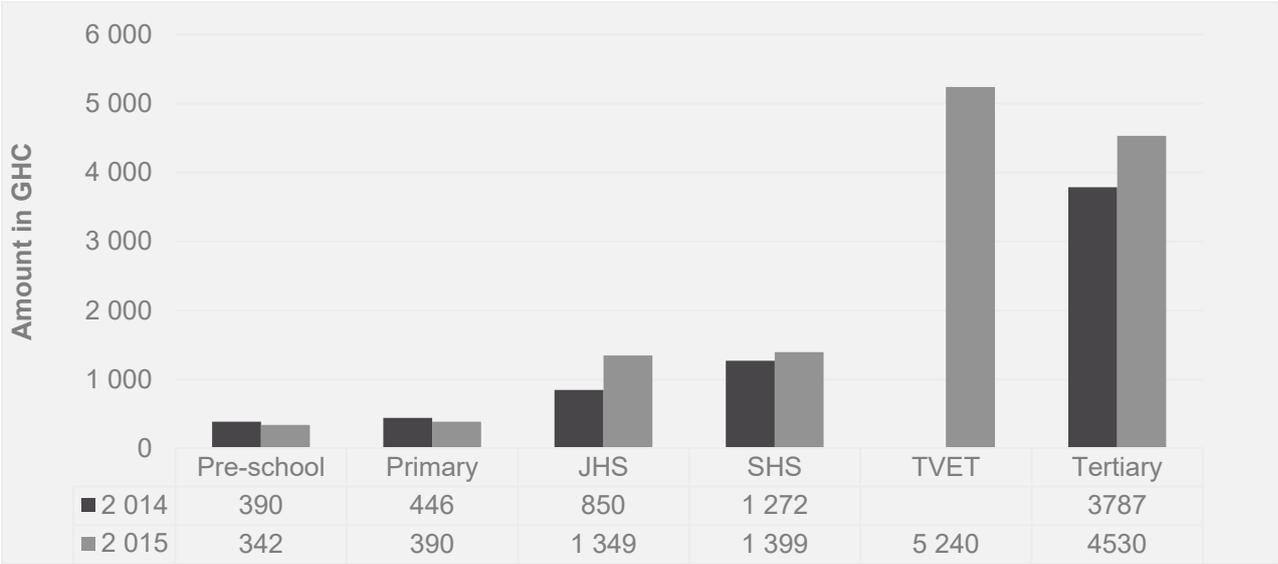
According to the World Bank (2017) Ghana spends a higher proportion of GDP on education than the other ECOWAS countries. In 2015, education expenditure (excluding internally generated funds), represented 5.3% of GDP and 19% of total government expenditure. Most of the total education expenditure – 68 per cent in 2015 - is used to pay wages. Most funding is used for primary and secondary general education and for tertiary education (table 2.22), while per-student spending varies a lot by education sub-sector, with vocational, technical and tertiary education being far more expensive than the other sectors (figure 2.16).

Table 2.22. Proportion of education spending by sub-sector, including and excluding IGF, 2015

Sector	Proportion of education spending, including IGF	Proportion of education spending, excluding IGF
Pre-school	6.0%	7.4%
Primary	17.3%	21.4%
JHS	14.8%	18.2%
SHS	23.4%	17.5%
TVET	2.5%	3.1%
Inclusive and special education	0.4%	0.5%
NFE	0.2%	0.2%
Tertiary	25.2%	19.0%
Management and agencies	10.2%	12.6%

Source: Ministry of Education (2018). IGF: internal generated funds. “IGF is predominantly fees and levies paid by students directly to SHS and tertiary institutions. As such, they should be defined as private contributions to education expenditure; however, it is customary to include IGF in the overall education expenditure” (Ministry of education, 2018, p.7).

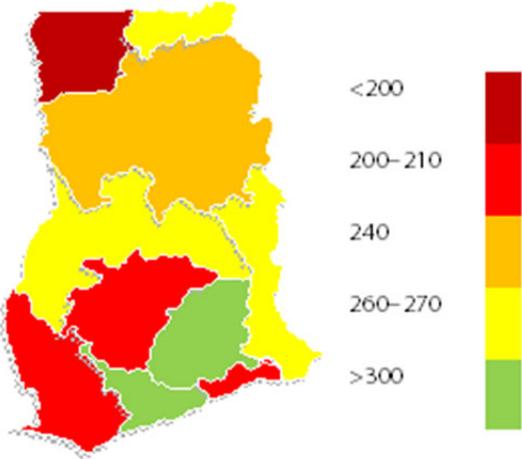
Figure 2.16. Unit cost by level of education, public schools only, and excluding IGF, 2014 and 2015



Source: Ministry of Education (2018)

Per-student spending also varies across regions: for primary education for example higher amounts are spent for Central and Eastern Region, while the lower amount are spent for Ashanti, Greater Accra, Western and Upper West Region (figure 2.17).

Figure 2.17 Total per-student spending on public primary education 2015



Source: Ministry of Education (2018)

(Public) education expenditure is financed by funds from the government budget, from the Ghana Education Trust Fund⁷⁹, from the ABFA (the Annual Budget Funding Amount, that is the channel through which oil revenues are used to support the budget), but also from development partners.

4. Specific achievements and challenges.

This section explores – for each level of education – infrastructure, quality, equity and management issues and the role of the private sector. It also describes specific projects or recent reforms that concern each education level and presents its main challenges.

4.1. Basic School: from kindergarten to JHS

Infrastructure issues

In the past decade, many basic schools have been built, restored or expanded to face the increase in enrolment in basic schools and to ensure a proper learning environment to all kids. A big effort has been done in order to replace the schools that did not have any infrastructures and were placed under the trees. Nevertheless, the effort has not been sufficient to respond to the country needs. The **pupil/classroom ratio remains very high** in all regions for kindergarten, but also for primary and JHS in some regions (table 2.23). The table also indicates how many classrooms should be built in each region and for each level in order to attain the maximum ratios of 45 for kindergarten, 40 for primary, and 40 for JHS.

Table 2.23. PCRs and classroom backlog for kindergarten, primary, and JHS by region, 2016

Region	PCR			Classroom backlog		
	Kindergarten	Primary	JHS	Kindergarten	Primary	JHS
Ashanti	49	36	35	351		
Brong Ahafo	52	35	33	519		
Central	46	37	33	70		
Eastern	43	31	28			
Greater Accra	46	52	48	26	1583	612
Northern	86	46	46	2256	1545	445
Upper East	81	50	45	785	1077	190
Upper West	81	40	35	638	31	
Volta	53	33	29	408		
Western	52	36	34	438		
Total	55	38	35	5491	4236	1247
% of total classrooms				24%	5%	4%

Source: Ministry of Education (2018)

⁷⁹ The Ghana Education Trust Fund is a public sector agency established in 2000 with the aim of providing supplementary funding for education infrastructures and facilities. 2.5 per cent of VAT collections are transferred to the fund on annual basis

Kindergarten

In 2007, the Ghanaian government decided to make **pre-primary school compulsory for pupils aged 4 and 5**. Today, most children enter kindergarten, but not always at the appropriate age. Data show that 41% of six years old kids are still in pre-school. The lack of places in kindergarten is one of the reasons explaining this problem: pre-school is compulsory, so kids need to enrol in kindergarten before going to primary school. But, since places are limited, priority is given to older kids⁸⁰. Of course, this initial late enrolment has subsequent effects on all the following levels of education, partially explaining the important difference between GER and NER.

According to IPA,⁸¹ the **quality of kindergarten education is very low in Ghana**, in particular in urban and peri-urban areas. This can be explained by the low qualifications of teachers, that are often untrained and use methods that are not appropriate for small kids. A few projects have been run in the past few years by Innovations for Poverty Action (IPA), in collaboration with several researchers, the National Nursery Teacher Training Center (NNTTC), the Ghana Education Service among others, with the aim of improving instructional quality and at the same time implementing parental awareness interventions that aligns parents' demands with the accepted age-appropriate teaching techniques⁸². One of the problems researchers have identified is in fact that parents do not easily accept play-based teaching techniques and make pressure for the teachers to use more traditional methods.

In one of these projects, NNTTC offered to teachers and head teachers an eight-days training (a five-days course plus two refresher trainings some months later). The program was effective in improving the quality of child-teacher interactions in the class, and this in turn determined small gains in children's literacy and numeracy skills and social-emotional outcomes. Moreover, the teacher training reduced teacher turnover in the private sector (McCoy and Wolf, 2018). The NNTTC is currently seeking funds to scale up the project.

This program was run in both the public and private sectors. Researchers have been able to compare public and private kindergartens that were in their sample, observing that private kindergarten mostly serve "wealthier families, have smaller class sizes, and children attending private kindergartens are slightly more likely to have the skills to be "school ready. However, public schools have more qualified classroom teachers, and classroom quality (defined as instructional

⁸⁰ Unicef wants to propose school readiness camps before the begin of the academic years to prepare children who did not attended pre-school to directly enter primary school.

⁸¹ <https://www.poverty-action.org/study/improving-kindergarten-quality-ghana>

⁸² <https://www.poverty-action.org/study/improving-kindergarten-quality-ghana>;
<https://www.povertyactionlab.org/evaluation/effects-play-based-preschool-learning-program-rural-ghana>

support, classroom organization, and emotional support to students) is similar across public and private kindergartens.”⁸³

The Government seems conscious of the problem of low teaching quality at the kindergarten level, a revision of the training program for kindergarten teachers is ongoing and a reform of the system is envisaged in the 2018 Strategic Plan.

Currently, about 20% of kindergarten pupils are enrolled in private schools, but the percentage varies across regions, from 60% of enrolment in Greater Accra to less than 10% in the Upper West region.

Primary and JHS

Equity issues

Gender parity seems to be reached in both primary and JHS levels, even if gender disparities persist in Western and Northern Regions. Inequalities in completion rates persist among rural and urban areas and across quintiles of revenues and across regions, as shown in table 2.24. The central region shows the least net attendance for basic schools. Some authors suggest that this could be related to the relevance of fishing activities for the livelihoods of people living in this region where children are likely to miss classes to go fishing (Ananga, 2011).

Table 2.24. Parity indices in completion rates by level of education across gender, rural/urban, quintiles, and regions

2014 Education level	Primary	JHS
Gender: girls/boys	1,05	1.02
Location: rural/urban	0,74	0.61
Income: poorest quintile/richest quintile	0,48	0.37
Region: lowest/highest	0,50	0.35

Source: Ministry of Education, Education Sector Analysis (2018).

Quality issues: Tests in English and in mathematics are administrated every year to a representative sample of pupils attending the fourth and the sixth level of basic education since 2005. Results for this National Education Assessment (NEA) for 2016 show that **less than 50 per cent of children enrolled in the last year of primary school (P6) achieve minimum**

⁸³ https://steinhardt.nyu.edu/scmsAdmin/media/users/mhm327/baseline_findings_public_private_updated_June_2016.pdf

competencies in both mathematics and English. If some difference can be observed between boys and girls, the most striking differences concern locality, with pupils living in rural areas showing significantly lower performances than pupils living in urban areas (table 2.25). Results of pupils living in the three Northern Regions perform less than the others. Another remarkable difference can be observed between the pupils attending public and private schools.

Table 2.25. Proportion of pupils achieving minimum competency by sex, location, type of school, 2016

Subject and grade	Sex		School location		School type	
	Male	Female	Rural	Urban	Public	Private
Maths						
P4	41.9%	41.5%	37.9%^	47.0%***	38.1%^	55.6%***
P6	44.9%***	42.8%^	40.8%^	47.8%***	41.6%^	53.2%***
English						
P4	49.8%^	52.0%***	45.2%^	59.0%***	46.1%^	69.6%***
P6	47.6%	48.1%	41.6%^	56.0%***	43.9%^	64.6%***

^ = reference; ***p = 0.000.

Source: Ministry of Education (2018)

Performance in mathematics (and science) can be also evaluated thanks to the TIMSS () data. Ghana participates to the TIMSS project in 2003, 2007 and 2011. Pupils enrolled in the second grade of JHS have been tested with very negative results: Ghana was always among the last countries in terms of performances.

The Government is conscious of the poor quality of basic education. Basic school and SHS curriculum are in a revision process, with a specific focus on science, technology, engineering and mathematics (STEM). The new primary school curriculum is rolling out in September 2019 and JHS and SHS are supposed to roll out in September 2020.

Management issues

According to the Education Strategic Plan 2018-30, **the accountability system is weak and inefficient.** Strengthening system accountability, from the teachers up to the ministry functionaries, is one of the government priorities. World Bank has promoted the GALOP - Ghana Accountability for learning outcome – a project that aims to hold directors and teachers accountable on management issues⁸⁴.

⁸⁴ World Bank, Project Information Document (PID), Concept Stage | Date Prepared/Updated: 12-Dec-2018 | Report No: PIDISDSC24903.

Basic public schools receive a capitation grant in order to implement their activities. The value of this grant was doubled in 2017 because it was perceived as too low. However, this grant is often disbursed with big delays, and sometimes schools complain they do not receive the entire amount that was planned so that they need to search for another type of funding (NDPC, 2015).

Weight of the private sector

Private schools account for about 20% of enrolment for basic education, with important differences across regions. In terms of infrastructures, private schools constitute about a third of basic school structures in the country, but with an unequal distribution across regions. For example, only 6% of private primary schools are located in the three Northern Regions, while 43% are located in the Ashanti Region and Greater Accra.

4.2. Senior Secondary School

The academic year 2017/18 was marked by one important reform, that was announced by the New Patriotic Party in 2016 elections, **the Free SHS**. Indeed, even if there were no tuition fees, other costs (i.e. admission fees, examination fees, library and laboratory charges, textbooks, learning material, uniforms, meals, etc..) represented an important barrier for access to SHS and partially explained the low enrolment in SHS. It also explained an income parity index that stands at 0.21 in 2016/17, indicating that access to SHS was mostly reserved to wealthy families, while children from the bottom quintiles and from the poorest districts were far less likely to access SHS. About 25 per cent of students were admitted each year but did not finally enrol. The Government has thus decided to absorb these costs for the new entrants to SHS in the academic year 2017/18⁸⁵. This “free SHS” policy was expected to increase demand for secondary education, especially from lower income families. According to President Akufo-Addo declaration, around 90,000 students benefitted from the free policy in its first year of application (<http://dailyguideafrica.com/8000-fresh-teachers-for-free-shs/>). Data show that the number of enrolled students increased from about 310,000 in 2016/17 to about 360,000 in 2017/18⁸⁶. No data are available for now to understand how the policy impacted the different income quintiles.

⁸⁵ This policy has been motivated, among others, by « a study by Innovations for Poverty Action that found that providing scholarships for SHS increased secondary school completion by 30%, while also leading to significant gains in relation to cognitive scores. The impact of the scholarships is particularly pronounced for girls in terms of learning outcomes, tertiary enrolment, fertility and marriage, and labour market outcomes (Duflo, Dupas and Kremer, 2017). »

⁸⁶ Data revealed by Dr. Matthew Opoku Prempeh, Minister for Education:
<http://moe.gov.gh/edge/content/uploads/2018/10/GES-COUNCIL-PRESENTATION-Copy.pdf>

Infrastructure issues

A massive policy of infrastructure development for SHSs was initiated in Ghana in 2012, with the support of the World Bank. This policy is still actual, and in December 2017 another 40 million dollars loan from the Work Bank was approved in order to improve some SHSs in the country. Despite these efforts, table 2.26 below shows that about 2900 classes needed in 2016 in order to reach the targeted PCR of 40 pupils per class. Within the framework of the current SHS free policy, the government was confronted with a lack of classes and decided to implement a double track system – a system that splits students and staff into two tracks and while one track is at school the other is on vacation – for about 400 of the total 630 public SHSs, starting in 2018/19 academic year. Moreover, in 2018, about 8,000 SHS teachers are expected to be recruited.

Table 2.26. SCRs and classroom backlog in SHS by region, 2016

Region	PCR	Classroom backlog
Ashanti	49	877
Brong Ahafo	43	109
Central	43	155
Eastern	49	585
Greater Accra	47	272
Northern	55	478
Upper East	51	217
Upper West	45	77
Volta	36	
Western	44	123
Total	46	2894
% of total classrooms)		16

Source: EMIS 2016 database

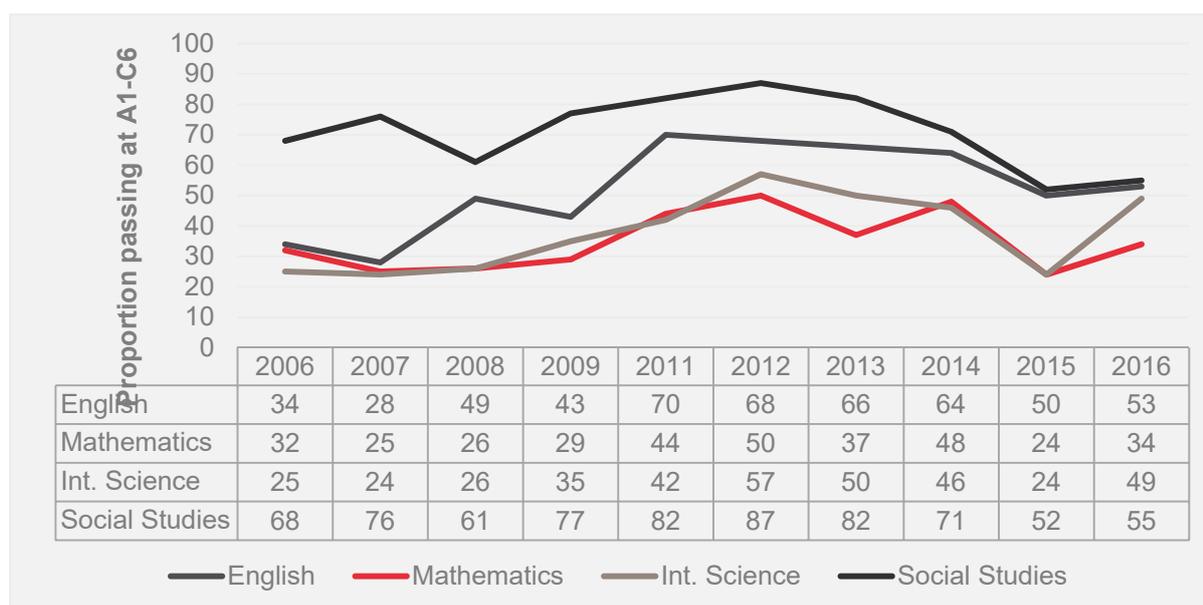
Equity issues

Gender parity was nearly been reached in 2016/17 in SHS, with a parity index at 0.96. Data for 2014 show that girls still presented significantly lower enrolment and completion rates with respect to boys (43,6 against 47,7 per cent for the enrolment rate; 42 against 47 per cent for completion rate) (Ministry of Education, 2018b).

Quality issues

Quality of secondary school education can be evaluated looking at the results to the WASSCE certification. Figure 2.18 shows the proportion of pupils passing the certification with at least C6 (the score that allows enter to University) over the period 2006-2016. Performances vary a lot across subjects and that worse performances are observed once more for mathematics and science. Heterogeneity across regions are observed for WASSCE results, with the three Northern Regions showing the worse scores.

Figure 2.18. Attainment of A1 to C6 in WASSCE examinations across the four core subjects, 2006–2016



Note: WASSCE was not held in 2010 due to a change in the number of years of SHS from three years to four years, which meant that no exams were taken in 2014. **Source:** Ministry of Education (2018)

As for basic education, the **government is seriously concerned about the low performances in secondary school** and particularly in science and it plans to review the existing curriculum.

As illustrated in section 1, at the SHS level, students can enrol in different programmes. Table 2.27 show that almost half of the students opt for Arts, followed by business and home economics (a vocational programme). Enrolment in science programme is at less than 12 per cent. Pupils enrol less in scientific programs, and, when enrolled, they perform worse. These data allow us to conclude that **pupils have low interest and low skills in scientific and technical programs.**

Table 2.27. Percentages of students enrolled in SHS programmes by academic years

Programme	2011/12	2012/13	2013/14	2014/15
Agriculture	6.8	6.1	5.6	5.3
Business	22.0	20.7	17.7	15.5
Science	11.6	11.7	11.6	11.9
Arts	39.1	40.5	43.0	44.1
Technical	3.3	3.3	3.3	3.1
Vocational- Home Econ	11.1	11.9	12.8	13.8
Visual Arts	6.0	5.9	6.0	6.4

Source: EMIS 2015 data

It is interesting to remark that the strongest heterogeneity in WASSCE results is across schools: in some 'high-quality' schools, all students receive a A1-C6 grade, while in some others 'low-quality schools' all students receive a lower score⁸⁷. This happens because placements to SHS favour selection⁸⁸. Best students often come from good private schools. **Free SHS policy is likely to further exacerbate disparities between high-quality schools and the rest of the schools**, although one element of the policy is that at least thirty per cent of places in SHSs are reserved for pupils coming from public schools.

4.3. Higher education

In the 2016/2017 academic year, about 444,000 students were enrolled in Ghanaian tertiary institutions, representing a Gross Enrolment Ratio of about 17%.⁸⁹ **Tertiary education is still largely elitist and unavailable to significant parts of the population**, but an increase in enrolment is expected in next years because of the Free SHS policy. Also, Ghana started to attract students from other African countries, particularly from Nigeria. The biggest challenge for the system is thus to be prepared to absorb the increased numbers of students from pre-tertiary, starting from the 2020/2021 academic year.

⁸⁷ Data from the GES show that over 400 public and private SHS across Ghana, out of the 916, produce less than 10% students qualified to enter tertiary education.

⁸⁸ Students give preferences for the SHSs where they want to enrol. There are three groups of schools A, B and C. They can give a preference for an A school, two for B schools, two for C schools. Then each school can select the students from the list of candidates. Of course they tend to select the best ones. According to IPA, most students tend to give preference for the best A schools even if they do not know if the grade they have allow them to obtain a place in that school. IPA is evaluating a project where students receive a manual containing the average scores of acceptance for each school, so that they can understand if they have a probability to be accepted in that school. The idea is that with better information students could make better choices and obtain a better placement.

⁸⁹ GER is calculated here as the Total Tertiary Enrolment/Population within 19-23yrs *100.

There are currently in Ghana about 170 higher education institutions of various kinds, 81 of them are private. Table 2.28 shows the number of public and private tertiary institutions, by type.

Table 2.28. Number of Public and Private Tertiary Institutions and enrolment by gender

Institutions	Number	Number of Students		
		Male	Female	Total
<i>Public Institutions</i>				
Universities	9	156413	102256	258669
Technical Universities/Polytechnics	10	33365	17567	50932
Colleges of Education	45	24041	20772	44813
Specialized Institutions	8	5692	4631	10323
Colleges of Agriculture	3	652	108	760
Nursing Training Colleges	15	1634	4691	6325
<i>Private institutions</i>				
Tertiary Institutions	74	37350	28672	66022
Colleges of Education	3	2721	2475	5196
Nursing Training Colleges	4	270	668	938
Total		262138	181840	443978

Source: NCTE, 2018

In terms of field, **29 per cent of students is enrolled in a Science program** (i.e. Applied Science, Technology, Agriculture, Engineering etc.), while the remaining 71 per cent is enrolled in Arts programs (i.e. Business, Social Science, Humanities etc.). These percentages are far from the target ratio of 60 to 40 fixed by NCTE. Demand and supply-side reasons contribute to explain this difference. Tertiary institutions offer much more Arts-related programs than Science related ones. In particular, private tertiary institutions rarely propose Science programs. At the same time, students prefer to enrol in Arts-related programs.

Gender Parity Index for Tertiary Education in Ghana stands at 0.69, indicating that **important gender inequality exists** at this level of education.

58 per cent of students is enrolled in public Universities, while polytechnics and colleges of education enrol about 11 and 12 per cent of students respectively. **Private institutions enrol about 16 per cent of students.**

There are nine public Universities in Ghana, but three of them (the University of Ghana, Kwame Nkrumah University of Science and Technology and University of Education Winneba) enrol 65 per cent of the total number of students enrolled in public universities. Some of the public University offer courses during the vacation period, called sandwich programs, as well as distance learning programs. Most distance learning programs are undergraduate programs in the fields of Arts. More than 80,000 students were enrolled in such programs in the 2016/2017 academic year and the demand has increased significantly since 2012.

There is a polytechnic in each of the ten Ghana regions. They were originally created in order to “provide middle-level management personnel to support the economic development of the country” (Report, page 20). Now they are in the process of eight of being elevated to Technical Universities, with the aim to improve quality and attract more students. At present, courses at polytechnics last from two to four years. In the end, students obtain a Bachelor of Technology degree, that represents the highest TVTE professional qualification (Gondwe and Walenkamp, 2011).

All public pre-tertiary teachers are formed in Ghana in the Colleges of Education. In 2016/17 there were 45 public colleges of education spread all over the country, and four accredited private colleges of education. The creation of private colleges of education is quite recent because teacher training was traditionally perceived as a public sector prerogative. However, five private colleges of education became public in 2016/17, and this as the effect of the ongoing reform that affects these colleges. All Colleges of Education have been recently upgraded to University Colleges and offer – starting from 2018/19 academic year - a four-year Bachelor of Education degree. Students now have the opportunity to specialize as early childhood, primary or junior secondary teachers from the begin of the program.

Finally, tertiary institutions include Nurses Training Colleges and Specialized Institutions offering training in specific subjects, including journalism or film making.

4.4. Vocational education

Vocational education in Ghana is provided at the secondary level in conventional and specialized schools and at the tertiary levels in polytechnic institutions⁹⁰. Since 2006, TVET activities are coordinated by the Council of Technical and Vocational Education (COVTET), but the governance of the TVET system remains complicated because several ministries, other than the Ministry of Education, are involved in the provision of vocational education (i.e. the Ministry of

⁹⁰ This paragraph mainly concern TVET at secondary level. TVET at the tertiary level is offered at universities and polytechnics, so it is covered by the paragraph on tertiary education.

Employment and Labour Relations, the Ministry of Youth and Sports). For example, non-formal and informal vocation training is coordinated by the National Vocational Training Institute (NVTI) that is under the Ministry of Employment and Labour Relations⁹¹.

At the secondary level, formal TVET education is provided in the technical secondary schools (SHTS) and in the teaching training institutes (TTIs). Pupils graduated in technical secondary schools may pursue their education in polytechnics or universities, while the ones graduated from TTIs may choose between polytechnics and apprenticeship.

The Ministry of Education (2018 ESA) records 120 public TVIs (technical and vocational institutes) institutions and 58 private ones for 2016, indicating an increase with respect to previous years⁹². A similar increase is registered for SHTS. However, enrollment in these schools is quite low, with only 13.6% of students enrolled in technical subjects at general secondary schools.

According to the Government, the low enrollment in vocational schools is due to the negative perceptions and the poor quality of these schools. In the *Education Sector Analysis 2018*, we can read: *"In general, evidence suggests that there is a poor public perception of TVET, which is only seen as a good option for academically weaker students, resulting in low social demand for TVET. The social demand for TVET is constrained by the low absorption capacity of TVET institutions and poor quality. Due to the inadequate academic and physical infrastructure of many of the existing schools, only a small percentage (of about 5–7%) of JHS (BECE) graduates can be admitted into public and private TVET schools"*. Moreover, for a high percentage of the youth who are placed in those schools, this was not the first option since most JHS graduates prefer general SHS. As a consequence, only one-third of those who are placed in a technical institute actually enroll (Ministry of Education, 2018)

Most of the vocational education in Ghana is still non-formal and it is based on a 3-years traditional apprenticeship model⁹³. In 2012 COVET has introduced the eight levels 'National and Vocational Education and Training Qualification Framework', proposing qualifications from proficiency 1 up to the PhD in technology. The main idea of this framework, summarized in table 2.29, is that qualifications are no more reserved for formal education but they also concern informal and non-formal training that allow people to acquire technical skills (UNESCO-UNEVOC, 2016). The main objective of the framework is to recognize the value of traditional informal apprenticeship and to give uniform standards and learning even to individuals trained in the informal economy.

⁹¹ NVTI operates 38 vocational centres providing training in 28 skill areas (UNESCO-UNEVOC, 2016)

⁹² "Some institutes are administrated by the GES at the MOE, while others are administrated by the NVTI of the Ministry of Manpower Development and Employment, by the Ministry of Local Government and Community Development, or by the Department of Social Welfare" (UNESCO 2003).

⁹³ Innovation for Poverty Action is currently evaluating an apprenticeship program, the National Apprenticeship Program (NAP) that has been initiated by COTVET and implemented at district level by the GES, in partnership with craft trade associations. It is a 1-year training period, during which apprentices are trained by a master trainer, that is payed by the government (IPA study summary on Returns to Apprenticeship Training in Ghana).

Table 2.29. The Ghana National TVET Qualification Framework

Level	Qualification	Status	Certifying Institution
8	Doctor of Technology	Formal	-
7	Master of Technology	Formal	-
6	Bachelor of Technology	Formal	Polytechnics
5	Higher National Diploma	Formal	Polytechnics
4	Certificate II	Formal	GES-TVET Institutions
3	Certificate I	Formal	GES-TVET Institutions
2	Proficiency II	Informal/Non formal	NVTI/Informal trade associations
1	Proficiency I	Informal/Non formal	NVTI/Informal trade associations

Source: COTVET Legislative Instrument LI 2195 of 2012

Closely related to the qualification framework is the Competence Based Training model. Core subjects, like Math, English and Science, are introduced in all TVET curriculum, so that all TVET student can acquire basic general skills besides practical skills (Alagaraja & Mensah, 2018).

According to Alagaraja & Mensah (2018), formal TVET in Ghana has several problems: first, it is perceived as an inferior form of education, so that students entering the system have weak academic results; second the labour market opportunities for its graduates are generally weak; third there are not enough partnerships with employers in the industry; last but not least, the sector is underfunded, so that it is not easy to guarantee equipment and resources for a high-quality training and education.

Vocational education is one of the priority of the government for the next education strategic plan. Measures will be taken in order to address the low enrolment in formal TVET and its poor quality.

COVTET officers said that they would like to **encourage the private sector to be more involved in TVET**. Private sector representatives are already on the board of all technical institutions, but they are not sufficiently involved. In government's view, it would be rationale for enterprises to invest in training and receiving qualified workers in exchange, as it works in the Switzerland model, where training is paid from enterprises, while infrastructures and equipment are funded by the government and the training program is elaborated by employer organizations and associations (Hoffman and Schwartz, 2015).

COVTET recently elaborated a **five years strategic plan for the TVET transformation** (2018 – 2022), that is based on five pillars: management, access, quality, financing and environmental sustainability. In terms of management issues, the main idea is to realign all TVET institutions to the

Ministry of Education and to strengthen the role of COVTET. In terms of quality, the strategy is focused on more effective implementation of the Competency Based Training Policy and on the progressive adoption of a dual TVET system inspired to the German model, where theory and practice in a real work environment are closely interrelated⁹⁴

4.5. Teacher training

The colleges of education traditionally offered initial teacher education preparation in Ghana. Examinations were centralized at the University of Cape Coast, that also offered degree programs to teach both at basic and high schools. The University of Education, Winneba, as well offered this kind of degree programs (Asare & Nti, 2014).

The ongoing reform of the initial teacher training is changing this system. As mentioned in section 3 above, a 4-years degree is introduced starting from the 2018/19 academic year. This reform has been implemented after a long work done by the Government of Ghana in collaboration with the University of Cambridge, with the financial support of the DFID. The T-TEL project's mission was to transform the delivery of Pre-service Teacher education in Ghana by **improving the quality of teaching and learning through support to all Public Colleges of Education** from 2014 to 2018⁹⁵. The reform did not just concern the form but also the content of the initial teacher training, because the curricula have been revised. One of the main objectives was to introduce more innovative teaching practices and methods since the ones that are traditionally used are quite old. Apparently, this is not so easy in the Ghanaian context. Several actors we met mentioned teachers', managers' and parents' reluctance to the adoption of new practices as very important constraints.

Several projects on teachers training have been recently implemented in the country. Innovation for Poverty Action has evaluated the Teacher Community Assistant Initiative in Ghana and the Strengthening Teacher Accountability to Reach all Students (STARS) Projects, two initiatives based on the TARL approach. In the first case, high school graduates provided remedial classes to the weakest pupils in classes 1-3, while in the second teachers in grades 4-6 and head teachers were trained on the TARL approach and were requested to apply it for a part of their class time. Results of both initiatives were very positive in improving children' literacy and numeric skills⁹⁶. According to IPA, the STARS project is likely to be scaled up given its success. Moreover, USAID has recently financed an early grade reading project that was implemented in 100 districts, where 600 regional supervisors were trained on innovative reading teaching methods.

⁹⁴ German cooperation (GIZ) closely cooperates with the Ghana Government in the TVET sector, especially in the non-formal sector, through the Ghana Skills Development Initiative (GSDI).

⁹⁵ <https://www.t-tel.org/home>

⁹⁶ <https://www.poverty-action.org/study/evaluating-teacher-community-assistant-initiative-ghana>

Besides old teaching practices, one of the most important problem for Ghanaian public schools is teacher absenteeism. According to estimates reported in Abdul-Hamid et al. (2015), teachers are absent from schools for 43 school days per year.

Box 2.14. Government's strategy for Education

Here we briefly present the main pillars of the current education strategy according to the conversations we had with officers at the Ministry of Education. The Education Strategic Plan 2018-2030 should be released soon, but it is unfortunately not yet publicly available at the time of writing.

- Quality of education is the new priority, in all education level. Government is doing a big effort with this respect, working for example at the revision of curricula or reforming the initial and in-service teachers training.
- The government aims to strengthen the accountability and the management of the education system. Some ongoing reforms in this field are the fusion of the NCTE and the NAB, the reform of the NIB to better regulate the pre-tertiary private sector, the introduction of compulsory qualifications for teachers in private schools, the revision of accreditation procedures for private tertiary institutions, the GALOP Project with the World Bank.
- TVET: quality is low, resources are poor, demand is low. The government makes efforts to implement the National TVET Qualification Framework (established in 2012) and the Competence Based Training (already piloted in some TVET institutions). On this field, they work in close cooperation with the GIZ (German Agency for International Cooperation).
- Enrolment is expected to increase, especially for SHS, thanks to the Free SHS policy: this implies the need to build more infrastructures. In a few years, the pressure on tertiary education is also expected to increase.
- Government searches for a closer collaboration with the private sector, but modalities are not clear yet. The possibility of PPP is explored. Government's vision is to see a private sector that will provide niche programs in areas of national priority to drive innovation and competition in the sectors.

Some functionaries of the GES mentioned us the ongoing discussions between the Government and the Educational Outcome Fund, without giving additional details.

It is worth to mention the Ghana Partnership Schools (GPS) Project, started in September 2018, by the Ministry of Education and the GES, in collaboration with ARK, an international NGO: 100 public schools localized in four different regions (Ashanti, Northern, Central and Greater Accra) are given to private school operators to manage for three years.

5. The mobilization of the private sector in education

This section reviews the private sector contribution to the different education cycles in Ghana, and illustrates the major needs and challenges of private education providers in the country. It also describes the role of some ancillary education services in Ghana.

5.1. Pre-tertiary

The number of private education providers in pre-tertiary education notably raised in the last decades. The number of private primary schools, for example, registered an increase by more than 46 per cent between 2009 and 2015, while the number of JHS increased by 57 per cent in the same period (Table 2.30 below).

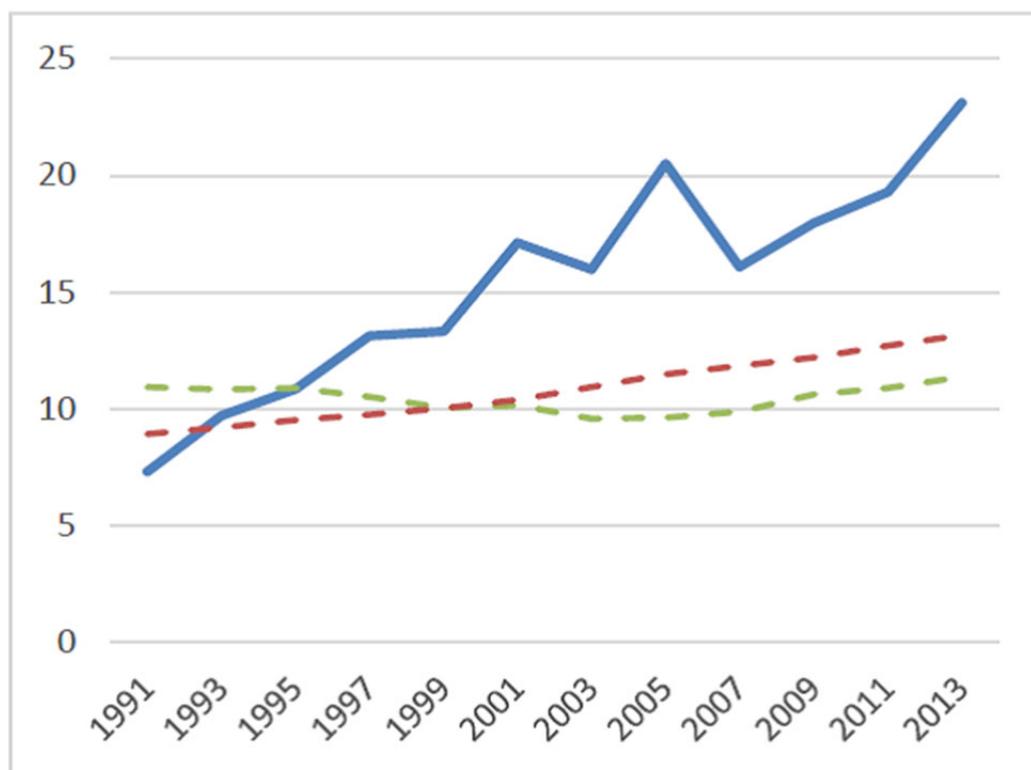
Table 2.30. Number of public and private basic schools

		2009/10	2014/15	Total growth	Percent change
Kindergarten	Government	12,481	13,828	1,347	10.8%
	Private	4,990	7,132	2,142	43.0%
Primary	Government	13,835	14,405	570	4.1%
	Private	4,722	6,904	2,182	46.2%
JHS	Government	7,969	9,445	1,476	18.5%
	Private	2,799	4,395	1,596	57.0%

Source: R4D (2016) – Data from the Ministry of Education

More significantly, **enrolment rates in those schools increased constantly since 1991** and more than in the other sub-Saharan countries, as showed in figure 2.19 below (Abdul-Hamid et al., 2015). This occurred despite in Ghana the government does not provide any kind of support to private schools, except the provision of textbooks and teacher training to the more remote schools located in villages that lack a public school.

Figure 2.19. The enrolment rate in basic private schools in Ghana, in SSA and in the lower-middle income countries



Source: Abdul-Hamid et al. 2015. The blue line depicts the Ghana trend, the green one the SSA trend and the red one the lower-middle income countries trend. Data are from EdStats.

Enrolments in private schools are heterogeneous across urban and rural areas and across regions, with the highest enrolment rate in Greater Accra and the lowest in the northern regions. This official data may do not take into account enrolment in private institutions that are not certified and that may be more spread in remote areas of the country.

A World Bank study on the private schools in the Kasoa district (Central Region) showed that “overall, private education costs to parents are 2.5 times public education costs. While the cost of private schooling for the poorest families is approximated at 15 per cent of total household income, hidden costs at public schools exist and add up to around 6 per cent” (Abdul-Hamid et al 2015, p. 6). This means that private education is on average more expensive than public education, as expected, and that it is more difficult for poor families to send their children to private schools. However, data from the GLSS 2005, show that 11 per cent of poor students and 5 per cent of extremely poor students are enrolled in private schools, meaning that (i) some private schools are accessible for the poorest and (ii) some poor families make the effort to send their children to private schools despite their cost (Akyeampong and Rolleston 2013; Akaguri 2011).

Private schools in Ghana are commonly classified in low-fees, medium-fees and high-fees schools. When speaking to private and public actors in the Ghanaian education sector, this classification is not straightforward, but when using the criteria proposed by Tooley and Longfield (2013) – i.e. a private school is a low-fee school when it charges less than 10 per cent of income for a family at the poverty line to enrol all its children - World Bank counted 9 per cent of low-cost private schools in the Kasoa district. In his PhD dissertation on the contribution of low fees private schools to access to education for all in Ghana, Akaguri (2011) claims that private schools are mostly attended by better-off children and only seldom by poor children thanks to the flexible fee practices of some schools. Moreover, he observes that “the perception that the LFPS provides a better quality of education relative to the public school in a similar environment is not supported by the evidence. (p.202)”. Finally, a recent study by R4D for the IDP foundation shows that only 2 per cent of pupils enrolled in LFPS come from the poorest 25 per cent of Ghanaian households (R4D, 2016).

According to Abdul-Hamid et al. (2015) and (R4D, 2016), **operating costs for private schools are far lower than for public schools thanks to the low teachers’ salaries:** on average, a teacher in a public school in Kasoa receives a monthly salary that is five times that of a teacher in a non-government school.

What is interesting in the Ghanaian system is that while private primary schools seem to perform better than public primary schools, the opposite is true for SHS. Public SHS are commonly recognized as being better than private SHSs. The demand for private SHSs is quite low, with only 6% of SHS’s pupils enrolled in private schools. Moreover, recently some private SHSs observed a decrease in enrolment and explained it with the Free SHSs policy that decreased the cost for a public school that is now more competitive than private ones. Proprietors of private SHS are now demanding to extend the free SHS policy to pupils enrolled in private schools, claiming that this could be a valid alternative to the double tracking system⁹⁷.

R4D (2016) conducted a survey on LFPS in five Ghanaian regions in order to evaluate the IDP Rising Program (see box 2.20). This study, together with the World Bank study mentioned above in the Kasoa district (Abdul-Hamid et al 2015) and a recent research conducted by Capplus in seven district of the Greater Accra region (Harma, 2018), coupled with our own interviews, allow us to depict a clear picture of the major needs and challenges of private schools in the country.

Infrastructure is a major issue for all stakeholders. Usually, private schools are born with one or two classes and then grow up little by little over time in order to allow more pupils to enrol. School proprietors claim that a school becomes profitable only when it reaches a certain number of students enrolled. Moreover, parents and proprietors often complain about the quality of existing infrastructures (i.e. lack of toilets and sanitation facilities or dilapidated classrooms), that are particularly poor in rural areas, in unregistered schools and in poorest regions.

⁹⁷ See: <https://www.myjoyonline.com/news/2018/september-25th/cape-coasts-biggest-private-school-crumbling-as-free-shs-double-track-begins-to-bite.php>

For these reasons, it is thus critical for proprietors to be able to expand and to improve school infrastructures. The studies mentioned above show that most proprietors do not have enough resources to pay for quality infrastructure development projects. Harma (2018) show that for more than 90 per cent of sample schools fees payment represent the main source of funding for the school and that about 75 per cent of the schools do not have additional sources of funding. When the school has just started, the main source of funding is often the family income of the proprietor. 25 per cent of the sample schools report having taken a loan (mostly from microfinance institutions), but only 3 per cent said that it represents an important (main or second one) source of funding.

Most private schools are usually very flexible with payments, proposing delayed fees' payments to families who have financial difficulties. In Greater Accra, 60 per cent of proprietors said that parents are often – if not always - irregular in payments and that they need to chase them. However, this flexibility and this proximity to families can be seen as one of the strengths of the private schools since it allows them to reduce the number of pupils' dropout.

At present, **most private schools teachers are high-school graduates** who do not have any specific qualification. According to private schools proprietors their teachers are trained in the school. They usually remain in the school for a few years and then try to enter a college of education to acquire a formal qualification allowing them to teach in the public schools where salaries are far higher. This implies that private schools suffer a high **teacher's turnover**.

This situation is likely to change soon because the Government has recently decided that **all teachers – in both public and private schools – will need a four-year Bachelor of Education degree to be able to teach**. Private schools will need to elaborate new strategies in order to deal with this new constraint: GNACOPS, the Ghana National Council of Private School, one of the associations of private schools, recently proposed to register all current non-trained private school teachers as volunteers giving them an allowance through their association.

The lack of specific qualification for teachers allows private schools to pay them very low salaries and thus to keep their costs of functioning very low. This might change in the near future.

Box 2.15. A chain of Low Fee Private Schools: Omega School

Omega Schools is a chain of low-cost private schools based on a pay-as-you-learn model, that has been founded by Ken Donkoh and James Tooley in 2008. Ken Donkoh has been the CEO up to 2014 when Alain Guy Tanefo has replaced him. The first schools have been opened in 2009 and the chain has now 37 schools, almost all located in Greater Accra. The original idea of the chain's founders was to provide high school quality at the lowest costs, thanks to two main instruments: (i) daily payment or pay-as-you learn model, i.e. children pay only when they attend school and (ii) the standardisation of education contents, i.e. Omega relies on a group of local experts that create lessons plans and workbooks and train non-qualified teachers on the use of these contents in class.

Efficient management of the enterprise is necessary in order to make the model work. At the beginning of its experience Omega has widely worked on advertising its brand both nationally and internationally. One of the founders, M. Tooley, wrote in 1999: “With the larger education companies it is clear that the brand name works as it does for other consumer goods and services, reassuring parents and students that high quality is being offered and maintained’ (1999, p. 40) and encouraged private education providers to spend about ten per cent of their income on promoting its brand name. The commercialisation of the Omega brand internationally allowed the company to obtain support from Google, who allowed a grant of \$250,000 to Omega Schools to start a similar chain in Sierra Leone in 2011 and from Pearson in 2012, through Pearson Affordable Learning Fund (PALF), who also helped Omega to extend its network of schools⁹⁸. In 2013, DFID awarded a grant to Omega to pilot a chain of Girls High Schools in Ghana, but the grant was then cancelled for an undisclosed reason (Right to Education Project, 2016).

In those years, DFID actively supported initiatives promoting private schooling and declared in his Education Position Paper of July 2013 its willingness to support low-cost private schools (DFID, 2013). This position has been severely criticized, among others, by The Right to Education Project (2016), by Curtis (2016), and even by the United Nations Committee on the Rights of the Child (CRC, 2016)⁹⁹. Today, DFID continues to support other low-cost chains (e.g. Bridge International Academies), but the new DFID education policy, dated February 2018, is far less explicit and talks about supporting “public-private partnerships which open up access to low-cost private schools to out-of-school and marginalised children, including those with disabilities” (DFID, 2018). Indeed the period where there was a very optimistic view about the contribution of Low Fees Private Schools to guarantee an education for all seems to be behind us. The Bridge International Academy scandal in Uganda, occurred in 2016¹⁰⁰, has probably largely contributed to give voice to all the critics against the standardized education approach promoted by these school chains. More than 170 civil society organizations have signed a document claiming for the investors and donors to stop supporting Bridge International Academy.¹⁰¹ A debate on the benefits and risks related to the spread of an education model based on the standardisation of contents and massive utilisation of technology recently emerged¹⁰². To our knowledge, a rigorous impact evaluation of this model has not been conducted yet.

Concerning Omega Schools, it seems that starting from 2014, internal and international factors pushed the company to adopt a less media-oriented strategy. Omega group was now a big group and Pearson pushed for it to be directed by someone who was more qualified than the former CEO.

⁹⁸ <http://www.omega-schools.com/history.php>

⁹⁹ “The Committee is concerned about the State party’s funding of low-fee, private and informal schools run by for-profit business enterprises in recipient States. Rapid increase in the number of such schools may contribute to substandard education, less investment in free and quality public schools and deepened inequalities in the recipient countries, leaving behind children who cannot afford even low-fee schools”. (CRD, 2016, p.

¹⁰⁰ See, for example: <https://edition.cnn.com/2016/11/25/africa/uganda-schools-zuckerberg-gates/index.html>.

¹⁰¹ The document is available here: <http://bit.ly/biainvestors>. Bridge’s reply is available on the Bridge’s website.

¹⁰² The debate is well summarized in the article “The controversial Silicon Valley-funded quest to educate the world’s poorest kids” by Jenny Anderson, published on January 22, 2018, on Quartz (<https://qz.com/1179738/bridge-school/>).

Alain Guy Tanefo found a difficult financial condition and it took four years for him to be able to address the situation. He had to increase enrolment fees because it was not possible for the company to be financially sustainable at 1 cedis per day (today the daily fee is 3,6 cedis). This means that now the school is harder to access for the households at the bottom of the pyramid, as it was supposed to be according to its founders.¹⁰³

During the interview he gave us, Mr Tanefo mentioned other challenges the company has to face: the high teachers' turnover and the high pupils' absenteeism. Teachers are typically young SHS graduates, without specific qualification, who are trained by Omega school. They spend about one-year teaching at Omega in order to collect some money to continue their studies. Pupils' absenteeism is very high, except at the beginning of the year and when the exams approach; in order to overcome this problem they recently introduced a revision week every four weeks, to allow children to follow the program. The high absenteeism is likely to be linked to the daily payment system.

According to Mr Tanefo, the Omega school model is now financially sustainable because all services (i.e. educational advisors, monitoring and evaluation...) are localised in Accra, and this allows to keep costs low. This makes the differences between the Omega model and the Bridge model, where the digital teacher guides and all other instructional materials are elaborated in the US (Cambridge) so that costs are quite high and can be covered only thanks to donations.

5.2. Tertiary and Vocational Education

The number of private tertiary institutions has considerably increased over time, but they enrol only 16 per cent of total tertiary students. NCTE splits them into different categories: Chartered Private Tertiary Institutions, that confer their own degree, Private Tertiary Institutions Offering Degree/HND Programmes, Tutorial Colleges and Distance Learning Institutions.

Private tertiary institutions enrol a high number of international students: 15 per cent of their students enrolled in 2016/17 came from out of Ghana, mostly from Nigeria¹⁰⁴.

Private tertiary institutions mostly offer undergraduate programs (bachelor's degree) in the areas of business, management, arts or social sciences. A few private tertiary institutions offer master's degree programs, mainly in business or in information technology, and only six offer

¹⁰³ Curtis (2015) conducted an in-depth research on the Omega model and claims that Omega Schools were not affordable for the poorest of the poor even when the fee was set at 1,5 cedis per day. Our calculations differ from the ones published in Curtis (2015). The average annual household income of the first (or lowest) quintile in Ghana was 3,924 GHc in 2012/13 (GLSS 6). If we put it in relation to 315 cedis that represent one year of school if we consider 210 school days in a year for 1.5 cedi per day (that was the cost of the school in 2012), poor households should have spent approximately 8% of their income to enrol one child. However, if we take into account that average household size is 6 and that average per capita income for the lowest quintile is around 664 cedis per year, the sum of 315 cedis seems quite important, indicating that household need to spend almost 50 per cent of per capita expenditure in education.

¹⁰⁴ "The following institutions recorded the highest number of international students i.e. Accra Institute of Technology (1,653), Zenith University College (1,268), Wisconsin International College (901), Ghana Technology University College (505) and Central University College (504)."

postgraduate programs at the PhD level. About 4.5 per cent of students were enrolled in a postgraduate program in a private institution in the 2016/17 academic year, against the 9.1 per cent in the public funded universities (NCTE, 2018 and NCTE, 2018b).

According to Dzidonu (2016), the “non-diversified nature of academic programs offered by the private tertiary institutions [...] is weakening their development base and their potential to grow and expand into highly rated institutions of learning and research. This situation is also congesting the private tertiary education sector and in effect weakening and constraining the student enrolment base of most of the PTIs which in-turn raises issues in relation to their financial sustainability”. According to a functionary of the NCTE, some Private Universities have already collapsed because of the low number of students. He believes that too many institutions, already offer business programs, while the country would need computer science, engineering (civil engineering in particular), medicine and multimedia. Our perceptions are that there are a few high-quality private providers of tertiary education in Ghana. This was confirmed by one officer from the NCTE, who mentioned Ashesi University, Ghana Technology University College and a couple of private medical schools as rare examples of high-quality private universities.

The number of private technical institutes decreased in the last five years from 74 to 58, and a similar trend is observed for enrollment, that dropped from 12,651 students in 2012/13 to 4,678 in 2016/17. This occurred while at the same time enrollment to public technical institutes increased, indicating the low attractiveness of private technical institutions. According to COVTET officers, the quality of private TVTE institutions is heterogeneous; one of the reason is that they are not fully regulated. An accreditation system should be put in place soon.

The problem is that providing technical and vocational education, both at secondary and tertiary level, is very expensive for private players, so that it can be done only at high costs for families. Grants systems are needed to allow low and middle-income students to have access to quality education.

A recent quite interesting phenomenon observed in Accra is the emergence of evening (or weekend) courses for middle-level workers who want to improve in their careers.

Box 2.16. Ashesi University

Ashesi University is a no profit University that was established in 2002 in Accra by Patrick Awuah. At the beginning, the University was located in a rented house and had about 30 students per year. At the same time, the Ashesi University Foundation was created in order to raise funds for supporting the project. The foundation managed to raise millions of dollars, mostly from the USAID American Schools and Hospitals Aboard program, to build a new campus, that was inaugurated in 2011. A single donator personally funded several blocks. The campus has been built quite far from the city centre, where land was available, but it is now suffering from this location.

The University is actually offering programs in business administration, management information systems, computer science and engineering. They now have about 1,000 students in total and they

received about 320 new entrants in 2018/19. Ashesi has been placed under the mentorship of the University of Cape Coast for about fifteen years, but it recently received the authorisation to deliver their own diploma.

Ashesi is a niche University, that clearly puts quality first. Tuition very is expensive: one semester costs more than 4,000 dollars to Ghanaian students. But the University provides scholarships to students who cannot afford to pay that amount. This is possible thanks to the support of the Mastercard Foundation, who recently gave them 21 billion dollars to recruit low revenues students from Ghana and other African countries. Today about 45 per cent of students receive some financial aid and 28 per cent receive full support. A board composed by faculties and staff review the scholarships' applications and, on the basis of students' financial needs, decide to place candidates in extreme need, high need, medium need or low need category. Scholarships are attributed to the best students in each category. Concerning paying students, Ashesi mainly targets middle to upper-income families, most of them already have a family business or small enterprises.

Many teachers are foreign experienced teachers. We talked, for example to Gordon Adomdza, the director of the entrepreneurship program and of The Ashesi Design Lab at Ashesi. He was a teacher at the Northeastern University of Boston before coming to Ashesi. He explained to us that teachers are not attracted by salaries, that are not higher than in other high-tuition private Universities in Ghana, as Lancaster or Webster University. It is the quality of teaching and training that makes the difference for teachers and for students. Teachers are very motivated at the beginning but then it is not always easy for the University to keep them. Ashesi also recruits some very well-known professors that come from abroad to teach for a term and do the same for a couple of years or so.

Mr Adomdza explained to us that at Ashesi they are particularly engaged with innovation in teaching practices. For example, starting from the second year students are not controlled by teachers during exams. In some of their programs, students can select totally different courses during the first year to understand what they are interested in - and only afterwards they are asked to choose for a major. It occurs for example that students go to Ashesi to enrol in business and then they decide to opt for computer science.

The President of Ashesi, Mr Awuah is a charismatic man that does not refuse any interview with the media and has largely contributed to the creation of the Ashesi brand. We remarked during our field study, that everyone knows Ashesi in Accra, the University has now an extremely good reputation. The placement rate of their students stands above 90 per cent. They have partnerships with a few US Universities, where students can go for a semester.

Ashesi aims to be an example for other Universities and for this reason, they recently established Ashesi Education Collaborative, an initiative that brings people from other Universities that are interested in their model and that want to learn from them. According to Mr Adomdza, some institutions are already adopting some of the innovations proposed by Ashesi. He also claims that Ashesi searches to be transparent, adopting an open accounting model.

<http://www.ashesi.edu.gh/> ; <http://www.ashesi.org/>

Box 2.17: Design Technology Institute

Constance Elizabeth Swaniker is the founder and the CEO of Accents & Art facility (<http://www.accents-art.com/live/>), a company that was established twenty years ago and that is specialized in producing quality furniture and interior decoration with a particular attention to innovative design. Ten years ago Accents & Art facility started to host students from polytechnics and other technical institutions searching for a stage and some training during summer. Ms Swaniker then realised that she could create her own training school and she established The Design & Technology Institute (DTI) in 2016, where she offered short training programs in engineering and design.

In 2019, the institute completed a new transitional green campus, where they have established an international technical school for students from JSH to university level. They largely used donated and recycled material in the construction since they are dedicated to modelling innovative reuse of materials in manufacturing and construction in West Africa.

They plan to start classes in September 2019 with about 100 students. They are starting with two curricula for now: a one-year intensive diploma followed by a 2 years program in the industry and a short continuing education series for experienced artisans, for which they have been awarded an SDF grant for curriculum development. They are currently prototyping both curricula with smaller groups. They already have a partnership with Bosch and they are actively looking for other industrial partners. Their teachers are retired teachers from Ghanaian technical schools.

This project has been carried out without any external financial support up to now. They explored a short-term bank loan in order to build the new school, but they found that the interest rate the bank proposed was too high.

The school they have in mind can be classified as a niche school, that focuses on precision manufacturing and the high quality of its training program to grow. The management has a strong ambition. They aim to change the common negative perceptions on technical education, to gain visibility and to create a strong brand that would allow them to establish strategic partnerships. They ask for a tuition fee of about 3500 dollars per year, but at the same time, they plan to enrol at least 50 per cent who cannot afford this fee. They are actively seeking foundation support to pay for these scholarships, particularly to assure gender balance in a traditionally male industry

<http://www.designandtechnologyinstitute.com/>

<https://dti-africa.com/>

5.3. Ancillary players

This section is consecrated to the role of the ancillary education services in Ghana. In the ancillary services category, we include **education technology, e-learning, in-service teacher training or skill training provided by private providers, publishing, and supplementary education**. It is quite difficult to obtain information on all these sub-sector. Here we cover only the ones for which we were able to collect some information or for which we were able to interview some actors.

From the interviews that we realized, we understood that Ghana is perceived as an easy environment for new business and start-up and an emerging market for ed-tech and e-learning.

Publishing

Unfortunately, we did not meet any enterprise working in the sector and our knowledge about the Ghana publishing sector, in particular in the sub-sectors of books for kids and textbooks is limited. The publishing industry in Ghana is dominated by a dozen of large companies. Most important are *Ghana Universities Press, Sedco Publishers, Smartline Publishers, Sam-Woode Publishers, Woeli Publishers, Adwinsa Publications, Winmart Publishers*. These companies mainly publish textbooks and novels for children. Not all companies are registered and most produce only for the Ghanaian market¹⁰⁵.

Textbook production in Ghana started in 1965 thanks to the establishment of the Ghana Publishing Corporation (GPCL), but up to 2002 private companies could not publish textbooks.¹⁰⁶

Education technology.

The market of ed-tech seems to be quite dynamic in Ghana. We have identified several enterprises dealing with education technologies in Ghana, but we might have missed some of them. Below we list all the organisations we were able to identify. Most of them can be also be classified in the **supplementary education** category.

- **CHALKBOARD Education:** a French company, also present in Cote d'Ivoire, that offers mobile learning solutions to universities, secondary and higher education institutions (<https://www.chalkboard.education/>)
- **E-Campus Test Prep,** an enterprise that provides access to standardized materials to prepare junior and senior high school exams via mobile and web technologies (<https://ecampus.camp/about-us>)
- **SORNOKO Academy,** a company that teaches coding to adults and children (<http://www.soronkoacademy.com/index.html>)

¹⁰⁵ "Developing an International Market for the Ghanaian Book Publishing Industry" <https://tkbr.publishing.sfu.ca/pub800/2014/12/developing-an-international-market-for-the-ghanaian-book-publishing-industry/>, Posted December 12, 2014 by Sandra

¹⁰⁶ Carollann Efua Buckle, "The Publishing Industry in Ghana: Ways to Promote Local Authors and Writing", Ashesi University college, Undergraduate thesis, April 2016.

- **ENEZA Education**, an e-learning platform for teachers, students and adults using sms technology, also present in Cote d'Ivoire (<https://enezaeducation.com/>) (see box 2.18 for more details)
- **Blend your learning**, a company offering in place and distance learning programs in marketing, project management or communication, to young professionals (<http://blendyourlearning.com/index.html>).

Besides private enterprises, we can add initiatives by no-profit organisations:

- **Young at Hearts**, a no profit organisation promoting digital literacy and its use as an education tool to improve children' learning. They propose training sessions for teachers, youths and children on digital education (programs **DiggieActs**), they established hubs where children can regularly practice their digital knowledge. They also created **Ananse the teacher**, an app for mobile phones that uses games and folklore to teach Science Technology Engineering Arts & Mathematics and to spread Ghanaian culture (<https://www.youngatheartgh.com/>).

The **MGCubed** (Making Ghanaian Girls Great!) **Project**, promoted by **Varkey foundation** with the financial support of DFID, has installed solar-powered and satellite-enabled distance learning infrastructure in some remote rural communities to deliver interactive learning sessions with the aim of improving literacy and numeracy skills of students, teachers, communities and government officials. Varkey foundation uses the same technology in the **Train for Tomorrow**, a project financed by Dubai Care, that trains school leaders in Ghana's Eastern Region through face-to-face and distance-learning training.

Box 2.18: ENEZA Education – Eneza Ghana

Eneza Education is an enterprise established in Nairobi in 2012 by Tony Maraviglia and by a young developer, Kago Kagichiri. Eneza Education aims promoting access to quality education, to students in rural and marginalized communities, using text messaging. It mainly targets children from 10 to 18 years old, that is in upper primary through to senior high school.

Learners can take lessons on any mobile device. By dialing Eneza's shortcode number, learners get bite-sized lessons, assessment questions with explanations on right or wrong answers as well as the ability to ask a teacher any questions and get responses within 15 minutes.

Today the headquarter of the company is still in Nairobi but Eneza Education is also present in Ghana and in Cote d'Ivoire. Eneza Ghana was established in 2017, after having tested the service in ten schools in collaboration with IDP foundation in 2015 - 2016. The company has agreements with MTN Ghana and AirtelTigo allowing them to cover a larger part of the country. The Country CEO, Rudolph Ampofo, recently received a grant from MIT SOLVE thanks to his idea to use the Eneza technology to providing dedicated support to teachers in order to reduce the time they spend on administrative tasks and increase the time on teaching . As Eneza Ghana prepares to scale the solution in Ghana, they are working with Miller Center for Entrepreneurship in the GSBI Accelerator.

The service in Ghana costs less than USD\$ 1 a month. Although a detailed study on the socio-economic composition of the customers has not been done yet, the CEO believes that they come mainly from low-income families. In terms of regional distribution, customers come from all over Ghana, but primarily from Ashanti and Greater Accra regions.

Eneza Ghana today has a staff of seven people and is aligned with the global mission and operational processes of the Kenya headquarter. Content is developed locally in Ghana with practicing teachers. This helps building good relations between Eneza Ghana and teachers. In terms of marketing, the company mostly uses mass marketing strategies (i.e bulk). The company does not currently have any relationship with the government but understand the importance of working closely with it.

Eneza Ghana is trying to diversify its activity in several ways. The company is establishing partnerships with organizations in the education sector who want them to work with specific schools or groups of people. Moreover, it is working on a dedicated teacher platform that will support teachers and serve as a way of diversifying its revenue generation. Other options the company is taking into consideration are the development of health-related contents, or the establishment of partnerships with private school.

In-service teacher training

There are several initiatives in Ghana that deal with teachers' training. Besides the DiggieActs and the T4T projects mentioned above, we were able to identify: Teach for Ghana (see box 2.19), Practical Education Network (see PEN case study in part 3 of the study) and the Institute of Teacher Education and Development (INTED)¹⁰⁷, NEOGenics Education¹⁰⁸.

All these initiatives are promoted or financially supported by no profit organisations. We tried to understand if there is a market for private teachers training services, or, in other words if teachers or school proprietors are available to pay for these services. Our impression is that it is not the case and that this kind of initiatives needs donors or public support.

In service teacher training provided by external trainers seems quite uncommon in private schools. Some schools benefit from the training offered by no-profit organisations like Edify, Opportunities or IDP Foundations, who ask for school proprietors (and sometimes teachers) to follow their training if they want to be eligible for a loan (see box 2.20 to see how these organizations operate). Otherwise, most private school proprietors provide internal trainers, at least according to Härmä

¹⁰⁷ INTED offers summer intensive courses in pedagogy, peer training and evaluation and support during the academic year. It was founded in 2011 by Kwabena Amporful thanks to the 80,000 dollars received from the Center for Social Innovation at Stanford. INTED more recently received grant funding from the World Bank Skills Development Fund. Despite this, it is hard to find information on this company, the website is down, available videos and information are quite old. We are currently in contact with M. Amporful to understand more about the development of his project.

¹⁰⁸ <http://neogenicseducation.com/>. We have been informed about the existence of two others organizations involved in teachers training, E-A Service in Education and XCEL Education Services, but we were not able to find any information about them.

(2018) who reports that almost all sample schools' proprietors declare providing some training to their teachers, but that only in 28 per cent of cases teachers benefit from out-of-the school training.

Box 2.19: Teach for Ghana

Teach For Ghana (TFG) is a not profit organization that is an independent partner in of the global education network, Teach for All, that is currently present in 48, with a mission of providing an excellent education to all children. Teach For Ghana was founded in 2014 and they currently operate in the Northern Region and Volta Region with plans of expanding to all 10 regions in Ghana by 2023. Before starting operations, they conducted a study in order to identify the main problems of the Ghanaian education sector. As a result of this study, they found that the quality of teachers was very low and they attributed this to the fact that the best Senior High School (SHS) students went to the Universities and did not enrol to the Colleges of education, the institutes where teachers are trained. This is why they decided to set up a program where they recruit the top graduates from Universities, they provide them with initial training of five to six weeks on teaching practices and then they place them in schools to be excellent teachers and provide them with in-service training and support throughout the two-year teaching fellowship. They recruit students from all academic backgrounds, but mostly with a scientific background because they mainly focus on English, mathematics, science, and information technology.

The program lasts two years. Teachers are assigned to a trainer, called Leadership Development Associate, who regularly goes to the schools where they teach, in order to provide them with suggestions on pedagogical practices. Teachers are also trained in leadership skills (i.e. behaviour management, assessment and professionalism), because TFG believes that teachers, head teachers as well as regional or district directors do not currently have enough leadership skills. At the end of the two-year program, teachers are part of the network of Teach For Ghana alumni.

Thanks to a partnership with the University of Cape Coast, Teach for Ghana teachers obtain an official teacher certification after 1 year of teaching.

Teach for Ghana works very closely with the regional and district education offices in the identification of the schools for their intervention: their policy is to target schools that are most in need, the ones who do not perform well, in low economic communities, mostly in rural areas. Once they start working with a school, they remain there for at least six years.

Since the beginning of its operations, the organization has trained 65 teachers that are now teaching in classrooms and graduated 26 alumni working malign in the education sector, influencing education policy. They are currently raising funds to train an additional 100 teachers. They offer teachers the same salary as government teachers, proving that there are many universities graduates that would like to teach and that are willing to accept a relatively low salary and to work in remote areas. Indeed, Daniel Dotse, one of the founder s and the CEO, mentioned to us that they received every year at least 1,000 applications for a relatively low number of posts (about 30 every year). He believes that it is the good brand reputation of the organization that attracts applicants. As mentioned above, Teach for Ghana is indeed part of the global network

Teach for All, that is present in many countries all over the world. Applicants know they will have access to global resources through the global network, that they could benefit from it and learning from other countries, as well as benefiting from strong leadership development programs.

At present, Teach for Ghana only works with public schools because of the close cooperation with the government, that is also paying a part of the teacher salary, but they would be interested in cooperation with low fees private schools.

Teach For Ghana is a small organisation, with ten permanent staff. Its board of directors is mainly composed of people in the education, finance and investment sectors. The organisation is mainly supported by donors, and the government of Ghana. The Teach for Ghana foundation, based in the US, helps with fundraising. There are also some corporates who also contribute to funding when Teach for Ghana intervene in the communities where they are present.

In terms of development perspective, Teach for Ghana aims to expand further its activities and believes that it will allow them to lower costs. Indeed the organisation has already seen the cost per fellow falling down from 12,000 dollars in 2016 to 8,000 dollars in 2018, thanks to the economies of scales and they plan to reduce costs at 4,000 dollars in 2020. However, further development will not be possible without additional funds, and Teach for Ghana is now in a phase of active fundraising.

<https://www.teachforghana.org/>

BOX 2.20. The IDP Rising Program

IDP is a family no-profit foundation, established in 2008. IDP created the Rising Schools Program (IDPRSP) in 2009, in collaboration with a microfinance institution, Sinapi Aba Trust. The idea behind IDPRSP is to provide school proprietors of low-fee private schools “with financial literacy and school management training and access to capital”.

IDPRSP was motivated by the observation that low-fees private schools did not have access to the credit market because of the extremely high-interest rates asked from the banks. The idea behind IDPRSP is to provide school proprietors first with basic skill on finance and management, and, in a second step, to eventually offer them a small loan.

Proprietors’ training involves several subjects, including “accounting, savings, handling credit, human resources management, community relations and registration with Ghana Education Services (GES) as a school and business”.

A total of 584 basic schools, mostly primary schools, have benefited from the program up to now. IDPRSP declares targeting low-fee private schools, but heterogeneity exists in the number of tuition fees asked by the schools that benefited from the program. The average fee is 724 cedis per year, the lowest 70 cedis, the highest 7,000.

After having benefited from the training, some proprietors ask for a loan, usually needed to expand the school. Loans are provided through the microfinance Sinapi Abia in the following form: IDP Foundation gives Sinapi Aba a subsidized loan, that allows the microcredit institution to lend to school proprietors at an interest rate that is well below the market one. The interest rate paid by IDPRSP beneficiaries stands at about 23% per year, while the ones asked by the commercial banks are around 40 per cent. Most proprietors ask for a 2-years loans. The repayment rate is very high, at about 94%.

IDPRS is currently operating in Ghana, but IDP Foundation is exploring the possibility to expand the program to Cote d’Ivoire and Kenya. They experienced some difficulties in entering the space of private schools in Francophone countries.

<http://www.idpfoundation.org/idp-rising-schools>

Remedial Schools

A new phenomenon in Ghana is the **spread of remedial classes** in some Ghanaian towns¹⁰⁹. According to Oduro-Ofori (2014) remedial classes are usually proposed, by some private schools, to secondary schools students. They mainly target students that experience difficulties in preparing the WASSCE. Nevertheless, some of the students are school dropouts and workers who aim to reintegrate the education system. The schools proposing remedial classes also provide secondary school services. Oduro-Ofori (2014) express a positive opinion on the contribution of remedial

¹⁰⁹ <http://www.ghanaiantimes.com.gh/private-remedial-schools-business-booms/> (Published on 07-11-2018)

classes to learning quality. We were not able to gather more information on this kind of ancillary education service during our field study.

6. Policy context and the regulation of private players in education

This section deals with the governance of the system and the regulation of private players. It includes key legal constraints in terms of licensing (licence, certification), operations (curriculum, quality control, teacher training and obligations), investment activities (constraints of ownership, foreign player etc)

6.1. Regulation of basic and SHS schools:

School registration is required in Ghana, but the registration process appears to be quite flexible. Usually, the school is allowed to open, to start functioning and attracting a certain number of students before asking for registration to the District Education Office. Inspectors then visit the school and decide what improvements proprietors eventually need to do in order to receive an official registration. Once inspectors are satisfied, they give their approval for registration. (Härmä, 2018). We did not manage to obtain documents describing minimum operating criteria that are asked to private schools to obtain registration. According to Abdul-Hamid (2015), operational guidelines are not publicly available and can be only obtained through individual requests. He also argues that the requirements can be quite restrictive.

The National Inspectorate Board is in charge of inspecting both private and public schools. Inspections are quite regular in Greater Accra, according to Härmä (2018). Despite this, according to the president of GNACOPS, many schools do not even know that a registration process exists and they do not complain about regulation issues.

The Educational Act 778, which was drafted in 2008 and reviewed in 2015, is the only legal instrument that regulates the activities of education providers in Ghana, both public and private. It consecrates only three pages to private providers. It states that the government should support private schools by providing textbooks, examination fees and in-service teacher training, but is it not clear under which conditions schools can receive these funds. In terms of curricula, private schools need to follow the official ones but are free to apply their own teaching methods. Schools are also free to determine their tuition fees, but they need to be approved by the GES (Abdul-Hamid, 2015) –

Concerning taxes, schools visited by Abdul-Hamid (2015) in Ksoa districts, report paying on average 315 US dollars per year. More specifically, schools declare paying income taxes, property taxes and business operating taxes.

6.2. The Tertiary Education Regulatory Framework

There are two main agencies that regulate Tertiary Education Providers in Ghana: the National Council for Tertiary Education (NCTE) and the National Accreditation Board (NAB). NCTE is in charge of regulating the system (established by the Act 454 of 1993), while NAB is in charge of accreditation issues (according to the Law 317 in 1993 and the Act 744 of 2007).

Education challenges in Madagascar

1. Introduction

Education is at the heart of development challenges in Madagascar. The education system faces a sustained population growth that increases the pressure on all cycles' school capacities. The enrolment rates have been increasing from pre-primary to higher education levels, and basic education slowly heads toward generalization. The population aged from 3 to 24 will grow by 25% in the next 10 years (RESEN, 2016). However, most social indicators are not in favour of the demand for schooling. Poverty and health challenges are endemic in a major part of the country and tend to affect the equity of the education system, by lowering access and survival rates of vulnerable children. Important disparities in access and completion are observed between and within regions, and at the secondary and post-secondary levels, affect girls and young women.

Since 2013, the government efforts on education have been tangible and sustained, accounting for around 25% of public spending and slightly higher than countries with similar revenue. Nevertheless, the reforms and progress in education are fragile and depending on the socio-political context. The hard political crisis that Madagascar experiences from 2009-2013 had considerably affected by the resources allocated to education, and the necessary reforms to improve the education system. But recent alignment and coordination efforts were made with the Sector Plan for Education (PSE) to undertake important reforms for the education sector.

The quality of education has dramatically declined in the last 20 years. Madagascar used to be one of the top performing countries in the 1990s as far as primary education outcomes are concerned. In the last PASEC test (2015), Madagascar stands in the least performing countries with Niger and Chad. Donors and international organizations will play a key role in supporting the government in addressing the so-called "learning crisis" in Madagascar.

Another critical challenge is the difficult socio-economic insertion of graduates in the formal labour markets. In 2014, 155,000 students were registered to the Baccalaureate, 56,000 passed it, 36,000 enrolled in the 1st year of university and only 9,000 completed the licence degree (RESEN, 2016). Thus, access and completion of higher education remain very limited to a small majority of young Malagasy and the TVET sector is barely emerging. Furthermore, many employers and observers denounce the lack of relevance of students' academic experience and skills. The employability challenge affects all education stakeholders and local employers.

The private sector has become an important player in the education system. Private schools account for nearly 20%, 40% and 50% of enrolment in primary, lower secondary and upper secondary education respectively. Private universities are also flourishing, which leads to serious issues of certification and regulation for the authorities. But overall, this increasing contribution

from private institutions to education may constitute an important response to the many education challenges Madagascar is facing.

This section describes in further details the challenges of access, equity, quality and relevance of the education system in Madagascar, and the strategic responses the government intends to provide through the implementation of the PSE. It also highlights the growing contribution of private sector operators, and what opportunities and challenges private schooling will bring on the table.

2. General organization of the national education system

Three Ministers are in charge of the education sector in Madagascar: The Ministry of Education (MEN), which is in charge of pre-primary, basic education and secondary education, the Ministry of Higher Education and Research (MESupReS) and the Ministry of Technical and Vocational Education and Training (METFP). These national bodies are also in charge of the governance of alphabetisation and non-formal education. The fragmentation of this governance between different bodies and structures produces issues of coordination and harmonization, especially to manage the incoming flows of students in each new cycle. MEN is represented at the regional level by 22 decentralized entities¹¹⁰, at the district level by 114 school districts (CISCOs); and at the community-level by 1,591 sub-districts (ZAPs). Other key governance players include the “FAFs” (Fiarahamiombon’Antokaho amin’ny Fampanandrosoana ny sekoly), which are school management committees composed of parents, teachers, the school director and community representatives, and that play a role in the accountability and financing of school operations.

The general structure of the education system in Madagascar is composed of pre-primary education, basic education, upper secondary education, TVET and higher education. Pre-primary education is not mandatory in Madagascar and includes children from 3 to 5 in different structures: public pre-primary centres¹¹¹ and community-based pre-primary centres¹¹². The fundamental education cycle is composed of primary education and lower secondary education. Primary education is a 5-year track for people aged from 5 to 10, terminated by a national exam, the “Certificat d’Etudes Primaires Elementaires” (CEPE). The lower secondary education is a 4-year track of general education for children aged from 10 to 14, with a focus on Mathematics, Malagasy and French.

¹¹⁰ “Directions Régionales de l’Education Nationale” or DRENs

¹¹¹ “Centre d’activité Préscolaire Public »

¹¹² “ Centre d’activité Préscolaire Communautaires”

Box 2.21. Reforming basic education

A new system of basic education will be implemented by 2022, following the PSE orientations aiming to increase the basic education cycle completion and to improve its overall internal efficiency. The future system will be divided into 3 sub-cycles, composed of two sub-cycles in primary education and one cycle in lower secondary education, for a total duration of 9 years. In the first cycle (6-9), the child will learn in Malagasy, a second language will be introduced in the second cycle (10-12), and the last cycle (13-15) will prepare the learner with fundamental skills necessary for secondary education, TVET or for a direct insertion on labour markets.

Upper secondary education is composed of general high schools (under the supervision of MEN) and welcomes children aged from 15 to 17, and technical/vocational high schools (under the supervision of MEFTP) and that welcomes children aged from 15 to 18. The general cycle ends with the Baccaulaureate national exam (with a specialization in Humanities or Sciences). The technical cycle ends with the Technical Baccaulaureate. TVET also includes vocational centres that provide initial and continuous training that aims to increase employability and foster socioeconomic insertion of learners.

- After passing the Baccaulaureate, students may access to higher education, which is progressively organized on the LMD system: Licence/bachelor during 3 years, Master during 2 years and the Doctorate/PhD track. Higher education institutions include:
- Six public universities: directly supervised by the Ministry (MeSUPres): soft selectivity, offer courses in humanities, social sciences, languages... E.g. **Université de Antananarivo**
- Public « grandes écoles », institutions with highly selective tracks usually in sciences, engineering and management, and public institutes, specialized in vocational training: E.g. **Institut de Science Comptable, des Affaires et de l'Entreprise (ISCAE)**
- Private universities and institutions: diverse levels of selection and fees; various disciplines, some are led by confessional organizations. E.g. **Université Catholique de Madagascar**

Two categories of teachers are present in the national system: civil servant teachers and FRAM teachers. The former receive formal training, may benefit the internal promotion and receive salaries from the State. The latter are teachers hired by the community, receive indemnities from parents, and sometimes, from the State as well, but they do not have initial training.

3. General Analysis

Table 2.31. Key indicators concerning Sustainable Development Goal 4

	2015	2022	FEC 2030*	ODD 2030**
GER – age 3 to 5	18%	28%	53%	53%
GER – age 5	23%	35%	83%	100%
Completion rate, primary school	69%	69%	89%	95%
Transition rate, primary to secondary general	83%	87%	94%	93%
Completion rate, lower secondary general	38%	44%	80%	81%
Completion rate, upper secondary general	18%	18%	23%	40%
GER higher education	5%	5%	10%	14%
Illiterate, age 11 to 14	26%	38%	2%	0
Illiterates, age 15 to 45	26%	31%	23%	16%
% of ESH in formal education	2%	15%	38%	100
% of population 25+ with primary education at most	71%	-	-	
% of population 25+ with secondary education at most	29%	-	-	
% of primary school teachers with long qualification (2 years)	24%	53%	53%	70%
% of primary school teachers with short qualification (2 months)	93%	100%	100%	100%
Public spending on education in percentage of GDP	2.1%	3.2%	4.9%	5.8%
Education expenditure on current public expenditure	22%	26%	26%	26%

Source : RESEN, 2016. **Note :** *Scenario that keep constant a constant external financing; ** Scenario that suppose an external financing allowing to attend the OOD4.

Demographic dynamics

Madagascar experiences a dynamic growth of school-age children, but its education system faces critical challenges. The population in Madagascar reached 24 million people in 2015, with a high annual demographic growth at 3%, which is one of the most dynamic rates in the region¹¹³, and a target population at 36 million people in 2030. The school-age population (3-24) will grow from 12.8 million in 2015 to 17.6 million in 2030, what constitutes both a wonderful opportunity for the economic growth; but also a critical challenge for its education system. This growth should indeed increase the pressure on national education facilities, both in the public and private institutions. However, there are still tremendous constraints that impact the performance and

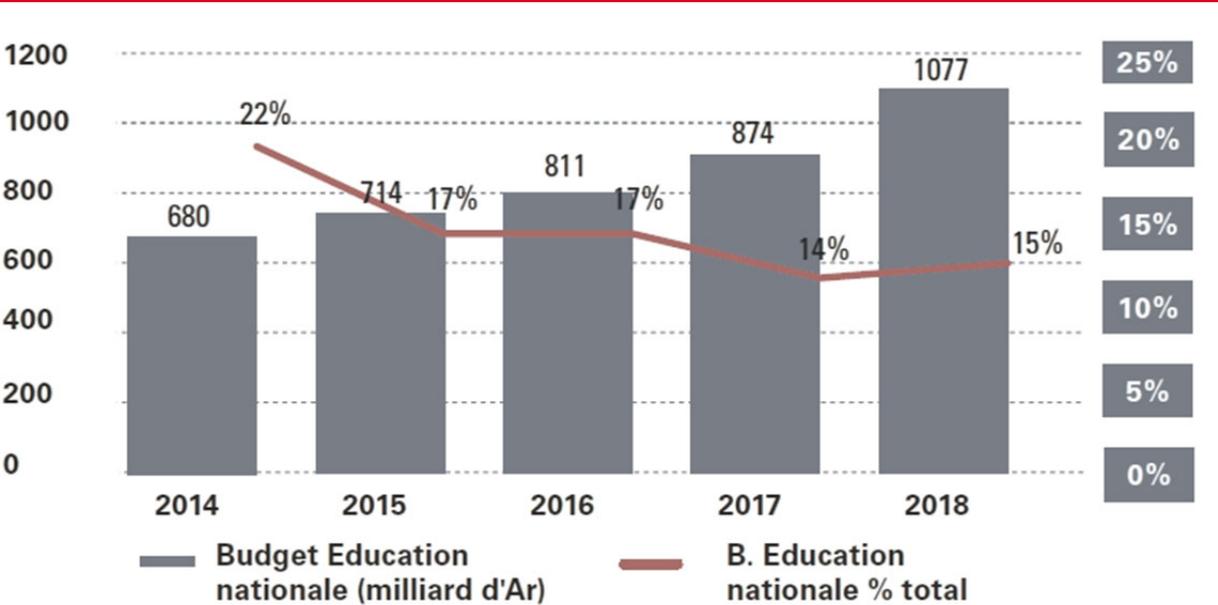
¹¹³ SSA's average demographic growth rate reaches 2.7% and East Africa's is at 2.8% (PSE, 2017).

dynamics of the education system. First, the poverty rate is still very high in Madagascar, as 71,5% of the population lives under the poverty line (RESEN 2016) and as 93% of the population live with less than 3.1 US\$ a day in 2010. The structural poverty is also reinforced by widespread illiteracy among adults that reaches 28% (RESEN, 2015). Other key challenges include the food insecurity that is specifically problematic in Southern Madagascar, malnutrition that affects one child below 5 out of two on a national scale, as well as public health threats and climate disasters that also affects children capacity to attend and learn at school (RESEN, 2015).

Public spending

Education is one of the top priorities of the government, but spending per student is low and focused on the basic education cycle. The part of current expenditures allocated to education (excluding debt service) reached 26.9% between 2004 and 2008, and 25.5% between 2009 and 213 (RESEN, 2015). This contribution is slightly higher than the average of other African governments’ with similar revenue. This spending is essentially driven toward teachers payroll and capital expenditures to education are weak and only represent 15% of total public capital expenditure (PSE, 2017).

Figure 2.20. Public spending in education in Madagascar



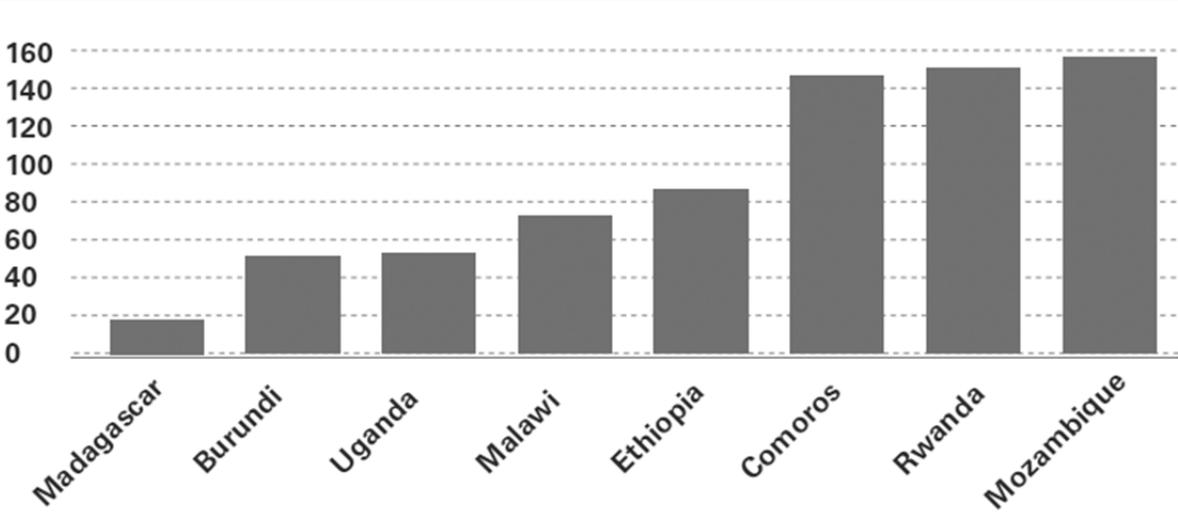
Source : UNICEF, 2018

One major cause of that is the drastic reduction of foreign aid following the political crisis (2009-2013). Furthermore, due to a low fiscal pressure and high informality, the domestic resource mobilization for education is far to be sufficient and education public spending by student (reaching around 20\$) remains much lower than in other countries in the region like Burundi (50\$), Malawi (70\$) or Mozambique (165\$) (UNICEF, 2018). The education budget is largely spent on basic

education (75.7%) and far less consistent for TVET (3.8%) and higher education (20.5%) (RESEN, 2015). Finally, the budget is massively controlled and spent at the central level and only 7.8% of education spending was distributed by the decentralized agencies like CISCOs and ZAPs in recent years (UNICEF 2018). It is also worth noticing that the contribution of households is truly significant: families pay for up to 40% of total education spending (all levels of education included).

We should also mention **key international partners/donors of the government**, and in particular of the Ministry of Education: AFD, Ambassade de France, Agence Universaire de la Francophonie, World Bank, BIT, GIZ, Global Partnership for Education, JICA, Norway Kingdom, Organisation Intertionale de la Francophonie, WFO, EU, UNESCO, UNICEF, USAID and the government of Monaco.

Figure 2.21. International comparison in public spending to education



Source : World Development Indicators, 2018

4. Specific subsectors achievements and challenges

Box 2.22 : A new strategy for education

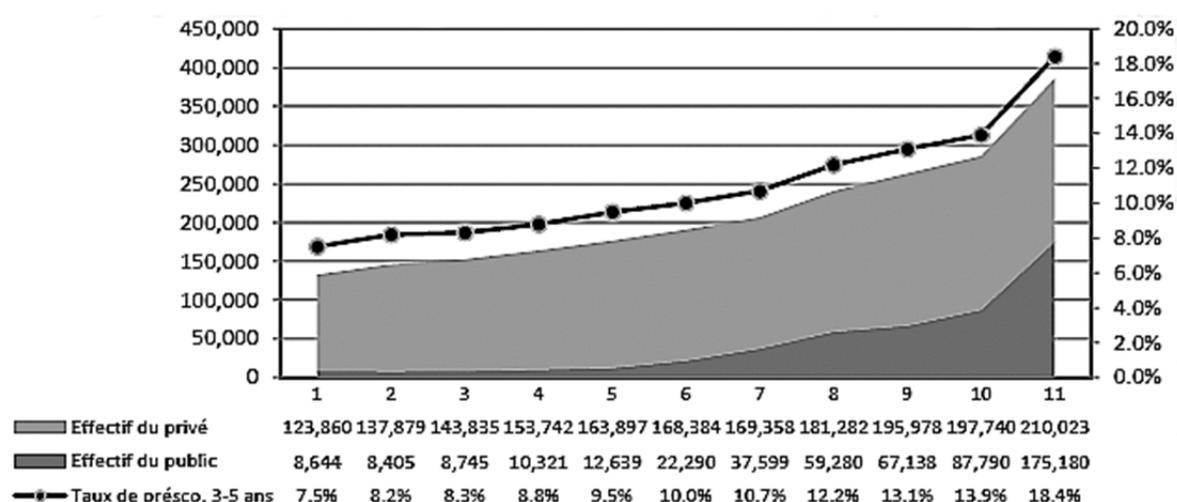
The education system experienced a deep lack of strategic leadership during the political and economic crisis (2009-2013) with a deficit in performance management and with interrupted reforms. Efforts were made through the Interim Education Plan (PIE) in 2013 to mitigate the education crisis and to promote short-term developments of the system.

Since 2017, strong efforts were made to align priorities and strategies through the “Education Sector Plan” (PSE, 2018-2022). This plan was created with the involvement of a wide range of stakeholders, including the Ministries, NGOs, Foreign aid donors and local civil society organizations. It builds an inventory of the situation in every education cycles and provides key strategic orientations to improve the access, the quality and the relevance of the education system.

4.1. Preschool education

Access to preschool education is increasing with an important contribution from community-based organizations. Access to pre-primary centres has steadily increased since the 2010s. The total number of (public and community) pre-primary canters grew from 195 in 2006 to 4882 in 2014. GER has mechanically raised from 8% in 2008 to 19% in 2014-2015 (PSE, 58) and was estimated at 28% in 2016, also led by quick enrolment growth in private pre-primary schools. Parity index shows that girls are slightly more numerous than boys. Children enrolled in private structures have raised from 132 000 in 2004 and 285 000 in 2014 (RESEN 2016), meaning an average annual growth rate at 9% in private pre-primary schools. However, this GER growth is unequally distributed among the regions. For example, GER in last year or pre-primary education reached 30% in 2015 in the Amoron’I Mania region but only 3% in the SAVA region.

Figure 2.22. Evolution of enrollment and GER in preschool



Source : PSE, 2017

However, there is an important lack of training and experienced teachers and a deficit of curriculum, education tools and general equipment in pre-primary education. Most educators and teachers did not receive initial and continuous training. Moreover, their allocation between schools is not necessarily depending on the local needs level: 50% of educators are randomly assigned across the country (PSE, 59).

The main challenge for pre-primary education is thus to strengthen quality and equity, especially in the last year (for children aged 5) in order to boost readiness for primary education and to increase performance and retention in the basic education cycle. In 2015, around 2,500 preprimary class existed in primary schools¹¹⁴

¹¹⁴ <https://www.orange.mg/actualite/education-prescolaire-programme-denseignement-experimentation-0>

A 20m\$ World Bank funding should help the government increase the number of community preschool centres and facilitate enrolment growth in high-needs regions.

Box 2.23. Public strategy for Pre-primary education (PSE)

Key orientations on Equity and access to pre-primary education are the following:

- Increase the enrolment rate of children in Public CAP: target at 35% in 2022, 100% in 2030 (SDG 4).
- Developing a pre-primary class for children aged 5 within the public primary school: starting basic education at 5? (goal: 60% of primary public school starting at 5 in 2022, in order to increase and facilitate the insertion into the basic education cycle)
- Setting up new community-led care centres creating structures (CAP Communautaires) or using current "Espace d'Eveil Communautaire" (EEC).
- Partnering with NGOs, civil society organizations, private schools to reach the most remote areas.

Key orientations on Quality Pre-primary Education

- Harmonization of practices through the creation of a dedicated curriculum
- Training of teachers (2-year training, 200 graduates each year) and educators (short-term training)
- Development of a continuous training scheme and pedagogical support

Other orientations dealing with governance & funding

- Reinforcing the multilevel governance (national, regional, local) and increased dialogue through a sectoral committee
- Finding new funding partners to support the achievements of these goals (ex. World Bank is likely to finance community-led care centres with a 20m\$ funding.)

4.2. Primary Education

Access to primary education has continued to grow in the last decade. Considerable progress was made since primary education was made and compulsory in 2001. In the more recent period, enrolment growth reaches 3% every year over the country, with Gross Enrollment Rate exceeding 140% in 2013 over the whole primary cycle (vs 105% in other African countries with similar revenue) (PSE, 2017). The GER has been superior to 100% for 10 years, but some discrepancies between education and demographic data, as well as some specific methodological challenges, could tend to overestimate this general level of access.

The private sector contribution to primary education has been slightly degraded. In 2004, 3 500 000 pupils were enrolled in the private sector, growing at 4 600 000 students enrolled in

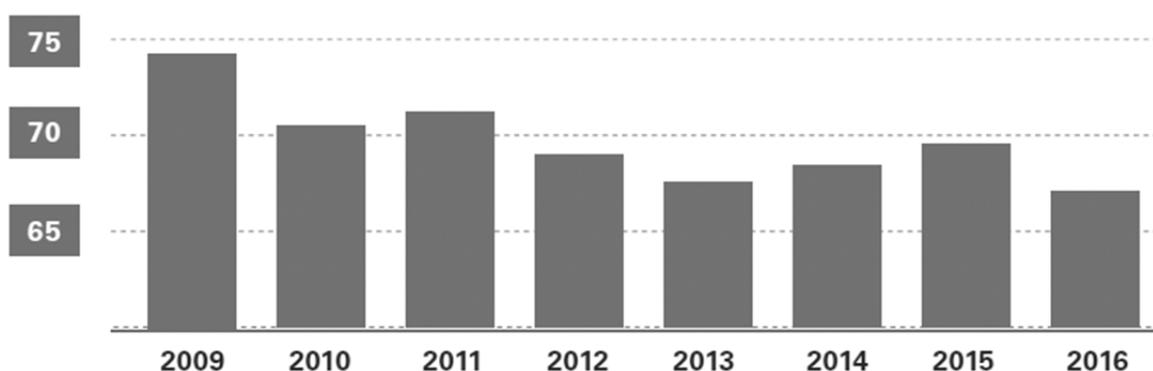
2018, which makes an average growth rate at 2.8%. Therefore, the share of students enrolled in the private sector has a slight decrease over the last decade, reaching 18.6% in 2014 (PSE, 2017).

There is a geographic disparity for access to primary education. A rural/urban divide structures the conditions of access to education which is almost universal in cities while 10% of rural children do not enter primary schools.

Completion and efficiency

Primary education is facing internal efficiency problematic. Primary schools face 20% of repetition rate (one of the most important levels in SSA) and a school drop-out rate of 16% in this first cycle, what explains the very high level of GER registered since 2004. The completion rate in the primary school system has been improving, rising from 60 to 70% between 2014 and 2016 (UNESCO Institute Data), with, again, substantial disparities between cities and rural areas. Around 550,000 children are not in school (UNESCO Institute, 2003).

Figure 2.23. Completion rates in primary school



Source : World Development Indicators, 2018

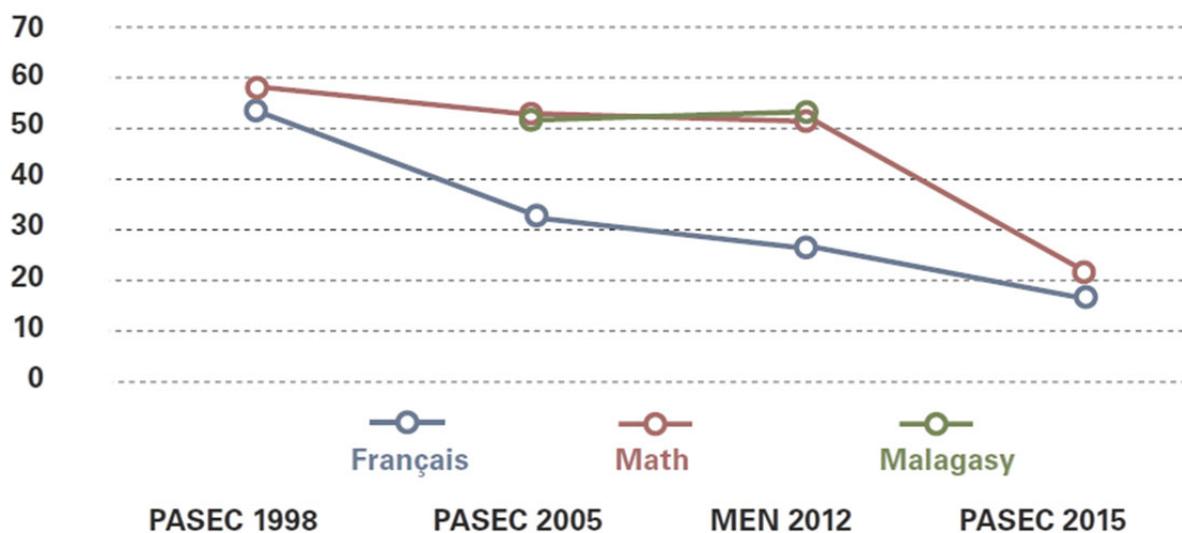
Quality

The quality of learning and teaching in primary schools is alarming. PASEC scores have fallen in the last 15 years: in 1999, around 55% of 5th-grade students had minimal skills level in Reading and Mathematics, while in 2014, this figure dropped at 25% of students. Madagascar belongs to the 3 least performing countries of PASEC tests with Chad and Niger, after being one of the top performing countries in the 1990s. Only 20% of primary education teachers are graduated in pedagogy sciences, and more than half of public and community school teachers did not receive either an initial training or a short training course. The situation is alarming for the community teachers (FRAM) that represented 78% of teachers in 2014 (UNICEF, 2015). Key efforts were made since 2016 to train these community teachers, but around 30 000 teachers still have to complete their training.

Management

There is a general recognition that the education system faces issues of accountability. The implementation of reforms is made difficult by the lack of autonomy of local schools and decentralized administrations like the academies and DREN¹¹⁵. The education budget remains centralized in the Ministers and the regional and local administrations receive a very little allocation of this budget. Consequently, these players which are theoretically in charge of transforming the education system and management lack the resources and prerogatives to implement tailored solutions on the ground. They also lack the capacity and staff to supervise local institutions and monitor their performance.

Figure 2.24. Quality evaluation in French, Maths and Malagasy



Source : UNICEF, 2018

Several factors may explain the learning crisis in primary education: the recurrence of political crises that have led to a serious drying out of international resources allocated to education infrastructures, equipment, and long-lasting health issues (Malaria, Tuberculosis). Other organizational factors do not facilitate learning in schools: teacher absenteeism, a multilevel classroom with one teacher responsible for several grades simultaneously, and the double vacation of classrooms that mechanically limits the learning time of pupils. Rural and remote areas have been specifically affected by these factors.

¹¹⁵ Directions Régionales de l'Éducation Nationale

Box 2.24. The politics of *malgachisation*

The term « Malgachisation » was coined in the 1970s and refers to the active promotion by local authorities of the local culture and language as a movement of cultural resistance against the French influence. Indeed, the French influence in Madagascar after the decolonization was considerable and, for many, sustained by economic, diplomatic and cultural dynamics. This broad policy to support the national identity was also incorporated in the socialist ideology promoted by Didier Ratsiraka from 1975. It included the Educative Linguistic Policy consisting in making the unified Malagasy language as the official language for education, but also in producing new curriculums and programmes that would not be issued or inherited from the French education system. In this context, the French used to be used as an exception, a ‘window open on the world of technical civilization’ (Randriamarotsimba, 2016).

The aftermaths of this voluntarist and new education policy are generally described as negative, or even terrible. “The results can be summarized in a generalized decrease in student achievement, high repetition and dropout rates, a decrease in teacher achievement, and the emergence of a Malagasy-French or French-Malagasy codex alternation” (Randriamarotsimba, 2016). Indeed, the malgachisation had in practice led to a series of inconsistencies, linguistics issues and pedagogic distortions at school that had a terrible effect on the level of students but also on teachers. Teachers’ proficiency in French during this era severely declined, and the return to a bilingual system in the 1990s after the Forum National still constitutes a real challenge nowadays for the whole education system.

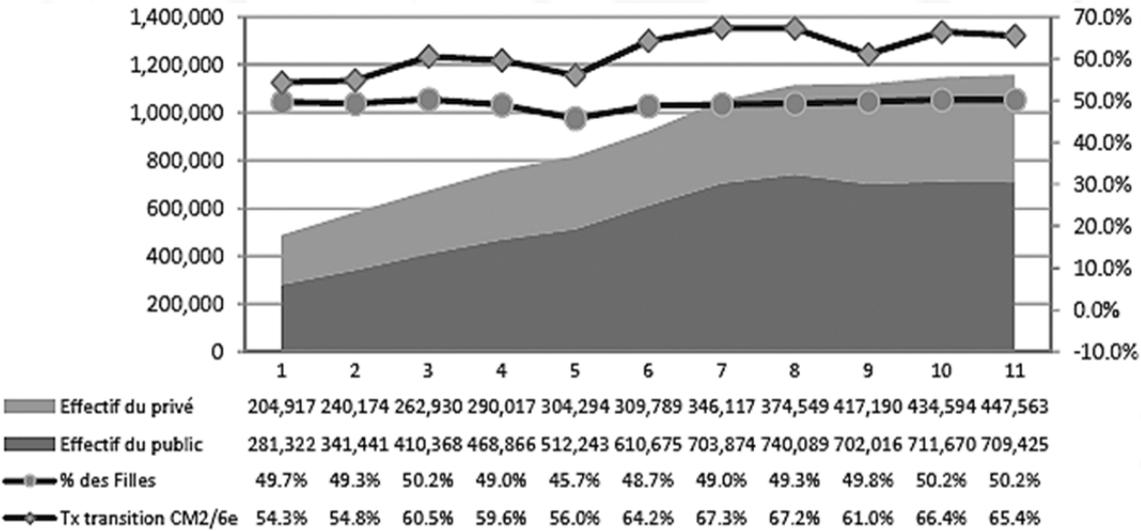
Gender

A gender-based analysis suggests that girls access more than boys to primary schools, complete their primary education more effectively than boys but are less likely to access secondary education. School life expectancy for girls is at 10.35 years (vs 10.47 for boys). Repetition rates reach 20.15% for girls and 22.54% for boys. The gross enrolment rate in last year of primary schools reaches 69.76% for girls and 65.42% for boys. Transition rate to secondary education reaches 72,62% for girls and 73.87% for boys (UIS, 2018).

4.3. Lower Secondary Education

Access to lower secondary school has been substantially rising during the last decade, GER increasing from 27.5% in 2004 to nearly 50% in 2013 -what represents nearly 1 150 000 students - but with substantial disparities within the country (regional GER going from 17% to 78%). The private sector accounted for 38% of students in 2014 (against 41% in 2004) (PSE, 2017).

Figure 2.25: Enrollment and GER evolution in lower secondary education



Source : PSE, 2017

The internal efficiency of lower secondary education is problematic. The general transition rate from primary education to lower secondary education is stable at 65%. Repeating rate and school drop-out rate remain high (respectively at 15 and 11%). One key element explaining the insufficient transition from primary school to lower secondary school could be the delivery of a diploma (“CEPE”) that is considered by families as a signal of education completion and the end of the enrolment imperative.

Key challenges in lower secondary education include important deficits in teacher training and in learning equipment. As for primary education, secondary education faces a clear lack of graduated teachers possessing certification in education, which may influence the overall level of teaching and eventually the students’ performance at national exams. The lack of school books is critical, especially for scientific fields: there is one book for 33 students in Physics and Chemistry, one book for 28 students in Sciences (PSE, 64). Student/teacher ratio reaches 40 in 2016 (UIS data).

The intensity of the quality control in the education system has been decreasing. The Ministry of Education lacks the capacity to monitor teacher performance in public schools because a high number of educational inspectors have left the academies over the last years. A programme launched with AFD will seek to address the challenges by training a new generation of inspectors but a deep reform of the whole quality control system would be necessary to increase public schools’ accountability.

The PSE integrates a series of strategic orientations to tackle the issues of access, equity and quality of lower secondary education. The strategic plan particularly insists on a reorganization of basic education into three 3-year sub-cycles, making 9 years of fundamental education

mandatory for all pupils. Only the last sub-cycle (what equals to lower secondary education) will lead to a national exam (“BEPC”) while the primary education final exam (“CEPE”) will be progressively abandoned.

Box 2.25. Public Strategy for Basic Education

Key orientations to promote access and equitable education

- Increasing the capacity of secondary schools through the construction of new classrooms, the increased use in double shift/vacation, the restoration of classrooms.
- Increased efforts toward free education (support to school lunch and school kit).
- The recruitment of community teachers (“FRAM”).

Key orientations to promote quality education

- Reforming the curriculum with skills-focused sub-cycles and increased coherence with national socio-economic evolutions as well as the linguistic education policy, along with the publication and distribution of new school books and pedagogical guidebooks for teachers.
- Initial training of teachers will be reviewed and improved, with increased capacity for the national training centre (“INFP”).
- Increased teaching/learning time will be targeted to reach international standards
- Increase the use of standard evaluation of academic achievements at the regional level and new inspectors will be recruited and trained.

Substantial funding from Global Partnership for Education (GPE) and the World Bank could reach 100 to 120 m\$ and will support the implementation of these reforms.

4.4. Upper Secondary Education

Access

Access to upper secondary education is increasing but remains very limited and is predominantly granted to students from wealthy backgrounds. Only 12% of pupils enrolled in 1st grade (primary education) reach the first year of general upper secondary education (“la seconde générale”), what represents 320,000 pupils (2014). Thus, only one out of two students completing the fundamental education cycle will access high school.

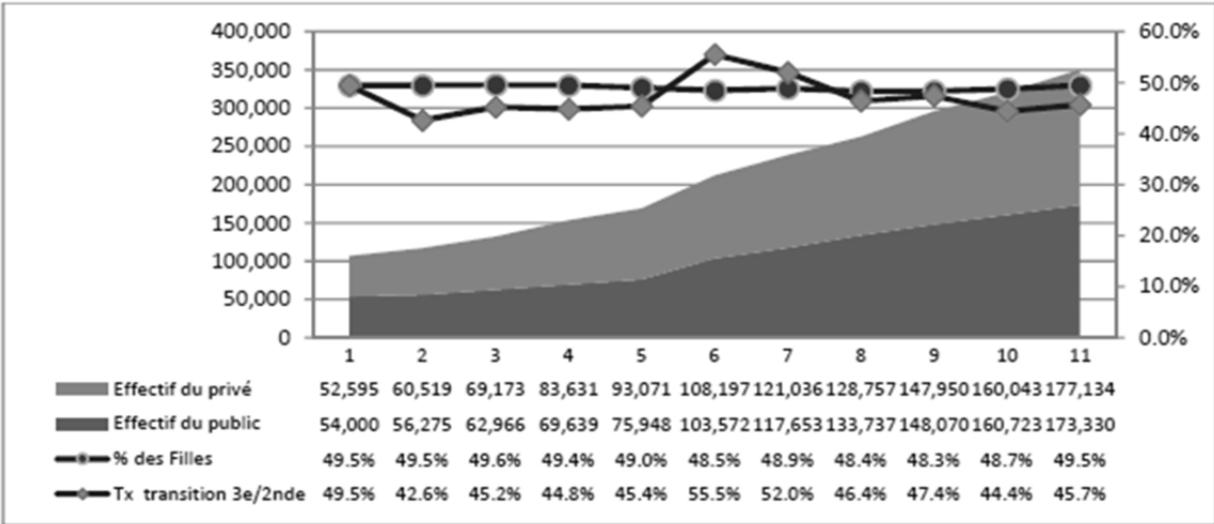
There are fewer girls than boys in high schools. While there seems to be no gender difference in enrolment in basic education, girls are less likely to enrol in high school than boys (between 48 and 49% of students were girls between 2004 and 2014). A possible explanation is that when schooling is no longer mandatory, families do not enrol their daughter for an economic reason. A

second factor could be that for security reasons, families will not send their girl out in remote cities where high schools are found. Finally, sexual health issues and early pregnancy may prevent girls from attending school.

Despite these limits, enrolment is growing: GER has increased at a 13% growth rate in the last decade, due to the opening of community-based high schools and to other local initiatives. The reform of fundamental education and the demographic trend should intensify the demand for this education cycle in the coming years.

The private sector contribution is stagnant, at nearly 50% of students, and gathering 378 general high schools (vs 1050 high schools). 90% of enrolled students in high school come from wealthy families (the top 40% richest families) (PSE, 2017).

Figure 2.26: Enrollment and GER evolution in secondary education



Source: PSE, 2017

The internal efficiency of upper secondary education is to be improved, especially for the scientific tracks of general education cycle. The retention rate is more than correct within secondary education (reaching 80%) but the overall completion rate is only at 16.4% in 2014. The success rate at Baccalaureate exam is quite stagnant at 40% in the last years, but with fewer students enrolled in the scientific track (gathering only 40% of students against 60% in the literature track). This trend may be explained by a diversity of factors including the deficit in science teachers and a massive lack of infrastructure and equipment adapted to the teaching of sciences. Student supervision is also lacking, with a student/teacher ratio that reaches 20 in 2017 (UIS Data).

Box 2.26. Public Strategy for High Schools

The PSE integrates a series of strategic orientations to tackle the issues of access, equity and quality of upper secondary education. Key considerations will focus on quality and are relative to the adaptation of its content to the evolution of higher education requirements and labour markets, as well as on the controlled extension of high school capacity.

Key orientations to promote access and equity in upper secondary education include

- School capacity will moderately increase under the control of MEN, relying on both public and private institutions
- Private sector contribution to the cycle should rise to 60% in 2030, while the enrolment growth in public high school will be maintained at +1.6% yearly.
- The MEN will incentivize the opening of new high schools in areas where the public offer is insufficient, and “referring high school” will be created to
- Merit scholarships should be developing, targeting primarily poor-income families and girls.

Key orientations to improve quality in upper secondary education include

- The curriculum will be reformed, particularly to facilitate the transition to higher education. A bilingual system will be aimed at targeting proficiency in Malagasy and French at the end of the cycle.
- ICT and numeric tools will be introduced to teaching and learning.
- Setting up a guidance/orientation system that will incentivize students to pursue their studies to higher education and to respond to socio-economic needs.
- New modalities for continuous teacher training will be explored and created, in particular on a devolved governance mode.

Unlike the reforms focused on basic education, these reforms regarding secondary education remain mostly unfinanced and thus will require additional funding from external partners. More generally, under the framework of MDGs and the SDGs, foreign donors and partners tended to focus on basic education and provide little funding for upper secondary education.

4.5. Vocational Education

The TVET system is underdeveloped in the country. There are only 50 vocational training centres (“CFP”) and 121 technical and vocational high schools (secondary education). Most TVET providers are concentrated in urban areas while certain regions have almost no active operator.

Access to TVET is very limited across the country. There are only 164 TVET learners for 100,000 inhabitants and TVET operators gather 36,000 learners, which represents 0,6% of total enrolled pupils and students, and 6 to 7% of people enrolled in secondary education. The learners are divided between technical high school students (24,000) and vocational learners (12,000). Most provincial capital cities do not have a technical high school, which are rather concentrated in the main cities.

Regarding technical high schools, the contribution of the private sector has steadily decreased to 36% in 2014, while the overall participation of private sector in TVET reaches 45%.

The lack of adequacy of the TVET system with the economic environment is problematic. Most TVET operators do not have adapted equipment and infrastructure to provide relevant and updated training courses. More importantly, there is a mismatch between the current TVET supply and the needs of local job markets and of the key sectors of the national economy, as pointed out by many companies in Madagascar. The absence of a legal and dedicated framework for work-study programs and apprenticeship is clearly detrimental to the sector. In this context, big local enterprises and foreign companies may face this issue by developing (expensive) internal training processes for their employees, while most local SMEs cannot afford such practices.

The governance of the TVET system has not sufficiently relied on the dialogue with private sector representatives (unions, professional organizations) and did not build the institutional capacity to monitor and assess the skills and certifications required in high-need economic sectors. But a serious reform is seeking to build-up sector-wide committees to assess the qualitative and quantitative needs of skills and jobs, especially in 5 sectors: Tourism, Construction Sector, Strategic Resources, Rural Development, ICT.

A financing fund for the vocational training is also being raised in Madagascar¹¹⁶. It will be financed by 1% of the total wage bill¹¹⁷ of formal enterprises and will serve to fund the continuous training activities of these enterprises as well as the inclusion of informal companies into the formal training system.

¹¹⁶ <https://www.lexpressmada.com/26/04/2017/secteur-prive-un-fonds-alloue-a-la-formation-professionnelle/>

¹¹⁷ And the Fund is also financed by AFD.

Box 2.27: Public Strategy for TVET

The strategy of the government, in particular of the METFP, is based on the general aim of promoting employment as well as improving the skill-based setting of the TVET system.

The key strategic orientations include

Reforming and widening an inclusive TVET system

- Harmonization of practices through the creation of a “National Certification Framework” aiming to boost adaptation of TVET to the economic environment as well as to facilitate the transition from fundamental education to TVET tracks.
- Diversification of TVET tracks based on learners’ skills and conditions through the implementation of different levels of insertions and of certifications increasing access and improving economic insertion.
- implementation of innovative and formalised apprenticeship training schemes
- Construction and rehabilitation of TVET centres and equipment

Fostering the relevance and adaptation of TVET operators

- The governance of TVET will increasingly on the participation of private sector organizations (firms, unions and sector-wide organizations); in particular to reform curriculum and orientate the creation of new training sectors and operators
- **A reform of curriculum will be focused on 5 strategic sectors**¹¹⁸: Tourism, Construction Sector, Strategic Resources, Rural Development, ICT.
- **Improved academic governance and controls will ensure the relevance of TVET offers.**

4.6. Higher Education

Higher education institutions remain accessible to a minority of Malagasy, with a growing part of private institutions in the landscape. The state has historically led and focused its effort on extending the access to basic education while limiting allocated resources to the higher education system in Madagascar. In parallel, donors and external support have also neglected this cycle. In this context of long-standing budget shortage, the gross enrolment rate in higher education remains very low at 5%, compared to 7% in average in Sub-Saharan Africa, and what represents a total of 106,000 students in public and private universities in 2014 (PSE, World Bank). There are 494 students for 100,000 people in the country, which is largely inferior to similar countries of the region (PSE, 2017). The proportion of students enrolled in non-state institutions has risen from 8% in 2004 to 24% in 2014. However, the high level of poverty and the

¹¹⁸ An important work of consultation and co-construction is being made with the representatives of these sectors, and will seek to produce sector-specific skills framework and certifications.

concentration of the higher education institutions in the main cities make the system inaccessible for most families. While the gross enrolment rate in the top quintile reaches 10%, it is almost zero in the bottom quintile (PSE, 2017).

A massive programme of scholarships benefits 2 out of 3 students in public universities but may face critical efficiency issues. Around 45,000 students receive a scholarship to enter public universities in 2014 (Statistics, MESUPRES). 2 out of 3 students of this programme benefit from a 100% reduction of tuition fees, and 1 out of 3 from a 50% reduction. A scholarship programme also exists for national institute of technologies and benefit to 2,000 students nearly. Overall, it means that 70% enrolled in public universities and institutes benefit from public support to access higher education. However, strong limitations may undermine the effects of this policy. First, scholarship funding does not take into account out-of-pocket fees that are generally high at this level of education. As most universities are localized in urban areas, expenses for accommodation and food may constitute a significant part of total education spending per student. It could imply that only beneficiaries with enough resources on the side can effectively attend and complete higher education training. In addition, the lack of supervision may lead to student absenteeism and imply that a part of scholarship-funded student does not complete their education at the university. Overall, we do not find substantial research about to what extent this programme meets its goals.

The transition from secondary to tertiary education remains low and problematic. The Baccalaureate is a barrier for many students as the success rate at this exam does not go beyond 40%. The majority of high school students in humanities tend to overweight the capacity of literature and management in higher education. In addition, mobility between institutions and academic tracks is not clearly established and facilitated, which makes the reorientation of students difficult.

Universities do not provide quality learning environments, especially for incoming students. Over a long period, a majority of public spending in education was allocated to teachers payroll and scholarships, and to a very limited extent, to pedagogical resources and innovation. Most public buildings are ancient and in a bad state, and libraries and laboratories are generally archaic.

Teachers to student ratio are low at university¹¹⁹, and the level of equipment is particularly unsatisfying. Moreover, the quality control of educational content is weak, with very little incentive for universities to adapt curriculum, improve quality and increase the relevance of their academic offer. The challenge is particularly intense during the first year of university. The poor preparation of 1st-year students who lack supervision but also transversal/soft skills required for a good academic performance at university may explain the high failure and repetition rates in License. For 100 students entering a license, only 20 complete it. And repetition rate varies between 10 and 15%, which also requires higher (economic) investment from the student to succeed at university.

¹¹⁹ The teacher to student ratio is one for 44 in 2013 and one for 143 in some universities (PSE, 2017).

The mismatch between universities' offers, students' aspirations and the need for enterprises is another challenge. Public universities built on the French academic heritage lack of practical and need-based courses that would boost the students' employability. According to the PSE, 63% of students want to integrate the public service, while the private sector massively lacks qualified and ready-to-work graduates.

Box 2.28. Public Strategy for higher education

Improving quality

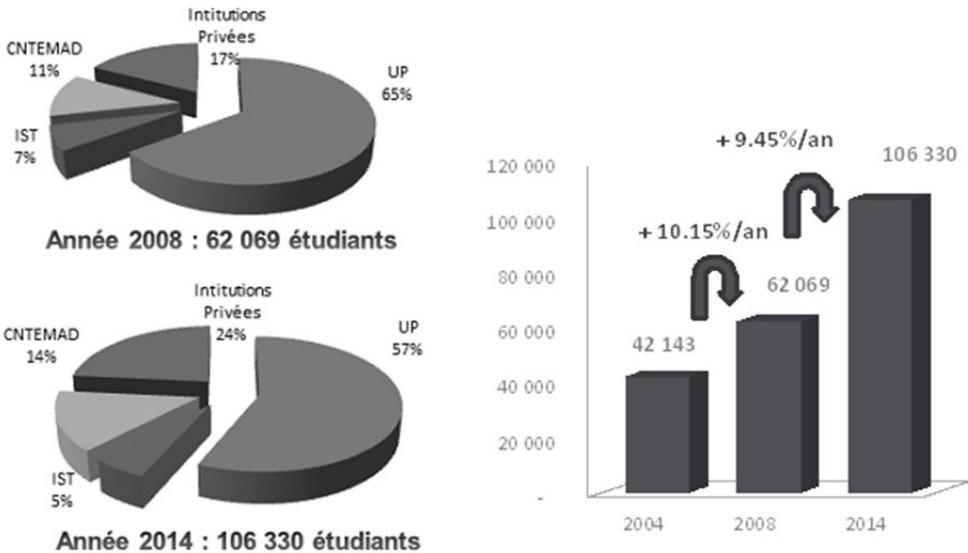
- Transition to the LMD system since 2013-2014 that will be extended to all public and private higher education institutions in Madagascar
- Diversification of TVET tracks based on learners' skills and conditions through the implementation of different levels of insertions and of certifications increasing access and improving economic insertion.
- implementation of innovative and formalised apprenticeship training schemes
- Construction and rehabilitation of TVET centres and equipment

Fostering the relevance and adaptation of TVET operators

- The governance of TVET will increasingly on the participation of private sector organizations (firms, unions and sector-wide organizations); in particular to reform the curriculum and orientate the creation of new training sectors and operators
- **Reform of curriculum will be focused on 5 strategic sectors**¹²⁰: *Tourism, Construction Sector, Strategic Resources, Rural Development, ICT.*

¹²⁰ An important work of consultation and co-construction is being made with the representatives of these sectors, and will seek to produce sector-specific skills framework and certifications.

Figure 2.27: Higher education: distribution of students by type of organization, and enrolment growth



Source: MESUPRES Statistics (2019)

5. The mobilization of the private sector in education

The private sector significantly contributes to education in Madagascar, although we remark a diversity of situations and significance. This section reviews the private sector contribution to the different education cycles enhances key challenges in the development of this private supply in education and provides some information on a few private players to illustrate the diversity of education businesses and challenges.

Table 2.32: Contribution of private schooling in the Malagasy education system

Cycles	# of students in private schools	# of students in private and public schools	% of students enrolled in private schools
Primary (1 st – 5 th)	936,175	5,004,479	19%
Lower Secondary (6 th -9 th)	457,057	1,132,596	40%
Upper Secondary (10 th -12 th)	185,312	363,053	51%

Source: MESUPRES 2017

Table 2.33: Evolution of enrollments and private contribution in all education cycles

	2005/06		2013/14	
	Pupils enrolled	% of private	Pupils enrolled	% of private
Preschool	190,674	88.3	285,530	68.3
Primary	3,698,906	19.3	4,611,438	18.9
Lower Secondary	581,615	41.3	1,146,264	37.9
Upper Secondary	116,794	51.8	320,766	49.9
Vocational and technical education	31,136	42.1	37,699	36.4
Higher education	44,494	7.4	106,330	24.8

Source: RESEN, 2016

5.1. Pre-primary education

The private sector significantly contributes to the supply of pre-primary education in Madagascar, but mostly through community-based institutions. In 2014, nearly 70% of pre-primary pupils were enrolled in private institutions. We should precise that this contribution includes a growing number of community-based centres that are local organizations sponsored and operated by the communities to deliver care and education to the children below 5. We could not find data to determine the part of lucrative players in this private sector contribution but we assume this part is likely to be quite low. The total number of enrolled children in private institutions reaches 285,000 children in 2014 against 190,000 in 2006 (PSE, 2017). As private enrolment grows at nearly 9% yearly, this educational cycle is experiencing a phase of a rapid growth fuelled by the multiplication of community centres but remains largely underdeveloped in comparison with the rest of the education system.

Infrastructures

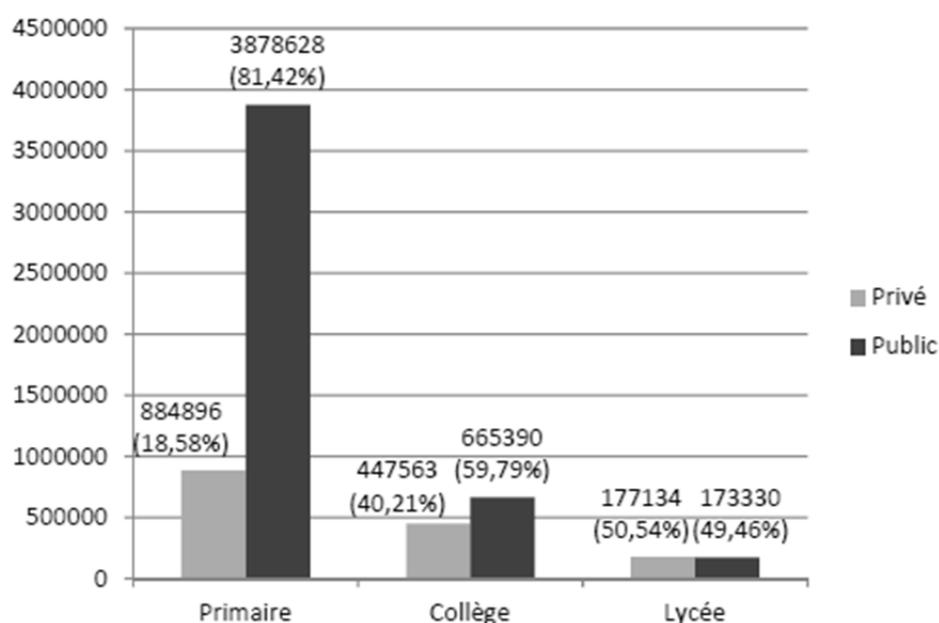
Despite a growing number of institutions across the country, there is a preschool capacity gap that requires additional infrastructures. There were 2.500 private centres in 2015 for a total number of 4.300 pre-primary institutions. Additional 500 centres were built annually between 2006 and 2014

When considering the range of lucrative institutions, the private provision of pre-primary education is essentially an urban phenomenon. If we excluded the community centres, we observe that the majority of private pre-primary centres are localized in urban environments, in particular in the central and eastern regions.

Teacher training and retention

There seem to be no certified training provisions for private pre-primary centres. Our field research suggests that most educators in the community-based and private institutions did not receive any form of certified training from secondary or tertiary institutions. Very little attention from the government is currently made on the quality of preschool education or the harmonization of teaching practices in the private sector. As mentioned earlier, public strategy is rather focused on extending access to public and community preschool centres. The regulatory constraints over private providers seem quasi-non-existent, and there is no sign that deep efforts will make on a near future to improve quality and content within preschools.

Figure 2.28. Public and private enrollments in basic education (2014-2015)



Source : PSE, 2017

Quality and teaching

As a consequence of little regulation and attention provided by public authorities, the quality of teaching and supervision in private pre-primary centres is very unequal and generally poor. The research and monitoring of educational outcomes in the pre-primary cycle are very limited in Madagascar, and a quality analysis would mostly be based on the qualifications of educators and the quality of equipment and infrastructures. Another indicator is the low survival rates of pupils in the primary cycle that may be due to poor pre-primary education that is not sufficiently promoted and supervised to increase children's readiness for basic education.

Pricing and access

There seems to be limited space for sustainable models in the private pre-primary sector. On the one hand, the majority of pre-primary centres are led by community players or belong to the public sector, and consequently, have funded through public funding or support. This large amount of institutions typically provides education to low-income communities and seems not to develop any business perspective. On the other hand, there are a few lucrative players that integrate an offer in pre-primary education. Our research could spot a few education groups that provide both pre-primary and basic education. The ACEEM group, for instance, enrolls more than 9000 learners from preschool to university level, with a presence in Antananarivo and its surroundings (see Box 2.29). However, we did not encounter any network of preschools centres addressing the demand from middle-income and/or wealthy urban populations. There might be several niche actors in Antananarivo that delivers premium pre-primary education to a very wealthy class, but we assume this segment is largely occupied by foreign networks of education, and primarily by French schools. Indeed, the French School network in Madagascar is the 4th biggest country of AEFÉ (the Network of French schools outside France), with local 23 institutions. Overall, there could space for the launch of new private players in this segment, but with a reduced perimeter in urban areas, and with significant competition for the premium/niche market.

Box 2.29. The ACEEM Group

ACEEM was founded in the 1980s and is still chaired by Ratrema William, a former senior official in the administration and former candidate to the presidential election. It is one of the biggest private school group of Madagascar. Its first academic activities consisted of remedial education and were progressively extended to basic education and secondary education, university, vocational education, leisure centres and a cultural radio station. ACEEM teaching is based on the national curriculum and the group delivers certified diplomas, but also promotes French languages and includes additional courses such as IT and Mandarin. ACEEM shows an average success rate in the Baccalaureate exam of 75% vs 40-50% on the national scale.

The group is auto financed thanks to the fees of the 9,000 learners. The managers state it is profitable but with very low margins. ACEEM typically targets (upper/urban) middle-income population with fees in IEF reaching 200.000 Ar. Key financial challenges for this group are the discontinuity of education policies that impose regular changes in the organization of the schools, and the inconsistency between the recurrence of charges (property rentals on 12 months) and of revenues (fees on 10 months). Several partnerships were made with WWF and the US Embassy to deliver specific projects and for school material donation. ACEEM enters in a phase of restructuration with a familial transition to expect in the top management.

5.2. Primary and secondary education

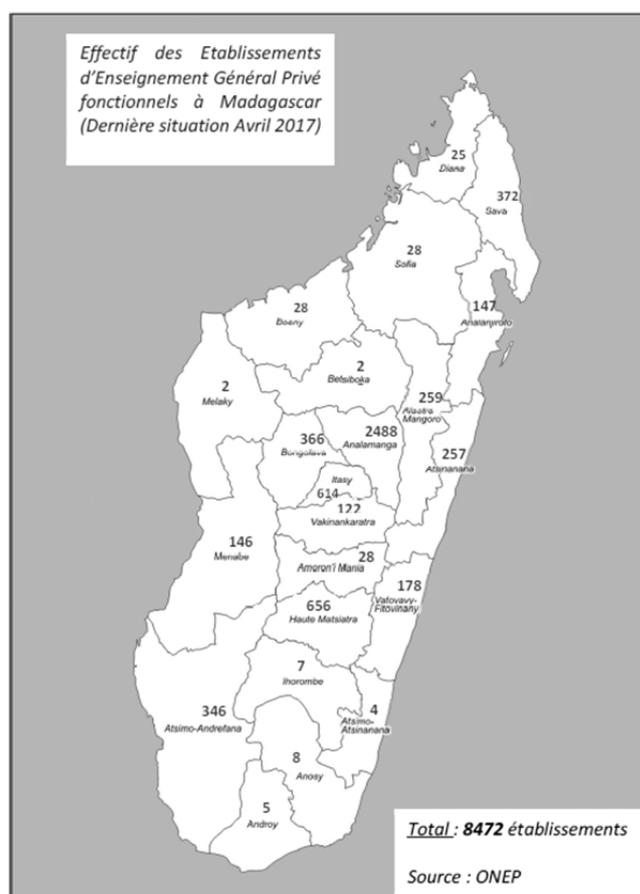
Private operators are significant contributors to primary and secondary education in Madagascar. The private sector accounts for 20% of enrolment in primary education (around 900,000 pupils), but for 38% and 50% of enrolment respectively in middle schools and high schools (450,000 and 180,000 students) (PSE, 2017). This contribution has been slightly decreasing in the period 2006-2014, for all education levels.

Determinants of private schooling results are diverse, but the level of revenues play an important role to access quality education. There are multiple reasons why parents enrol their child in private institutions (quality of teaching, better exam results, proximity, religiosity), but the general orientation toward private providers seems to result from a deficient performance of public primary schools. Important fieldwork was made by D'Aiglepiere (2011) to report and assess these various factors. For the demand side, he highlights the prevalence of revenue and religiosity factors as determinants of parents' decision for private schooling. On the supply side, teacher supervision and results in national exams (CEPE and BEPC) are key information parents will look after to make their decision. As private middle schools offer better supervision rates and higher results in exams, families with more revenues are likely to pay for basic education provision for their child, and in particular for more distant institutions.

Infrastructures

There are 7000 private primary schools, 3000 private middle schools and nearly 1,000 private high schools across the country. These private institutions are mainly localized in the centre regions as well as in eastern coastal regions, in particular, urban and peri-urban areas.

Figure 2.29: Repartition of private schools (basic education) by regions

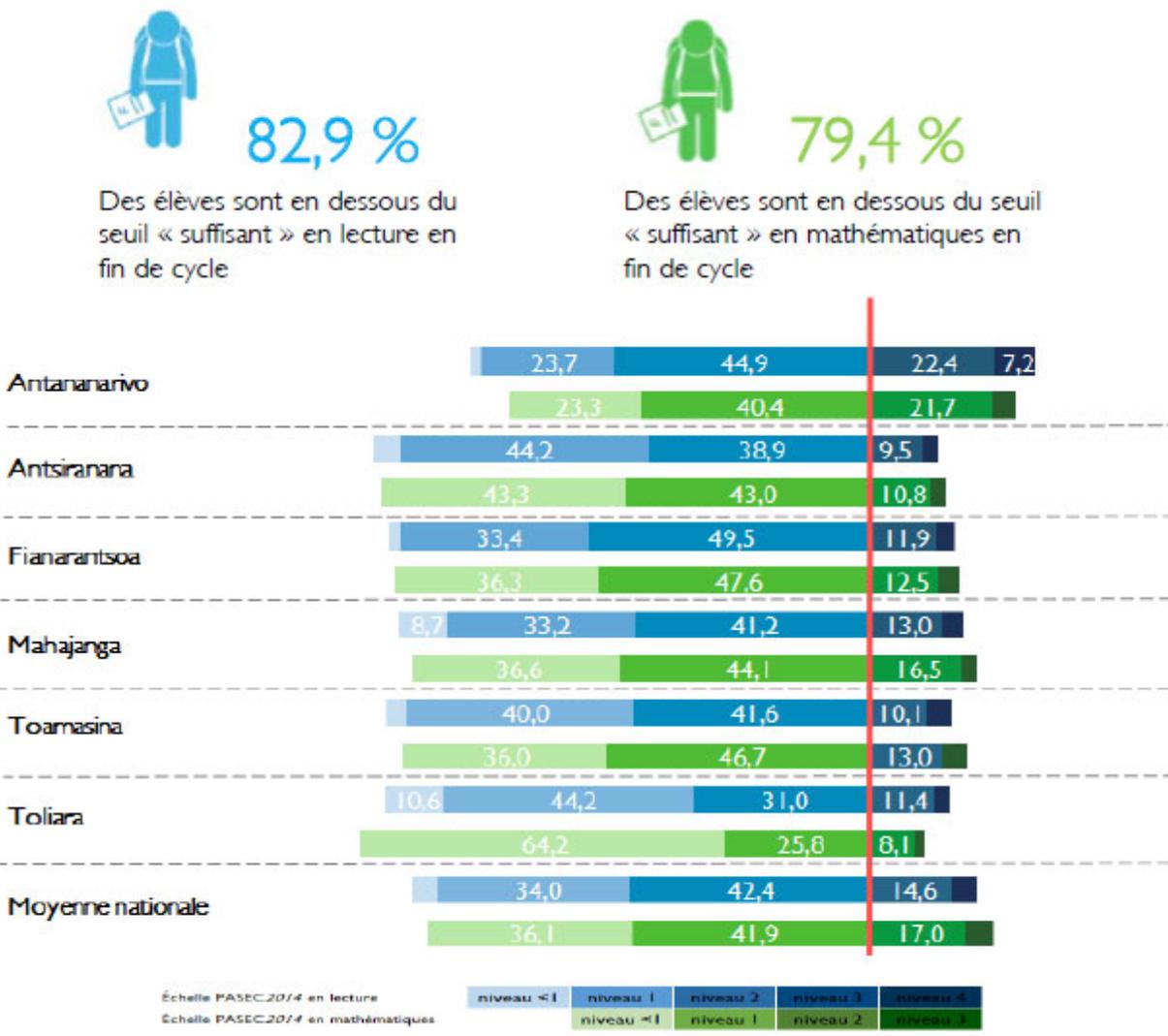


Source: PSE, 2017

Quality

The quality challenge is pregnant and urgent in Madagascar. The 2014 PASEC Study showed that Madagascar is one of the least performing countries in Francophone Africa, together with Tchad and Niger. As shown in Table X, more than 82% of pupils did not acquire the minimum skills level in French while completing primary education. This figure reaches 79% for mathematics. In 1997, Madagascar was ranked first in Maths and second in French. But the general performance of students decreased rapidly in the 2000s, confirming with the 2004 PASEC test the difficulties encountered in primary schools and more generally in the education public policy. Other tests like the EGRA (“early Grade Reading Assessment”) confirm this trend.

Figure 2.30. Share of pupils who acquired the sufficient level of skills in late primary



Source: PASEC, 2014

Box 2.30. The Saint Michel Group

The Saint Michel group is a Jesuit institution founded at the end of the 19th century in Antananarivo. It is a very renowned and prestigious institution in Madagascar with high selectivity of incoming pupils. The group is active on all education levels, gathering a pre-primary, a primary and secondary school as well as a university. 3,500 pupils are yearly enrolled in the group (2,700 enrolled in preschool and basic/secondary education and 750 in higher education). The insertion of graduates is excellent, due to the good reputability of the group.

Tuition fees are generally 2 to 3 times lower than in other lucrative educational institutions of Antananarivo (for instance, they reach 650,000 for one year in high school). Beyond the revenues, the general funding of the school is ensured by a foundation based in Switzerland. The group tend to be accessible to middle and high-income classes but a (small) programme scholarships are implemented and funded by foreign partners such as the government of Monaco.

The group has planned to extend its educational supply and open an agriculture institute on a new site. Additional financing is sought to implement repair work and maintenance on the campus.

Access and pricing

Pricing varies highly in the range of private institutions but remains accessible for the majority of Malagasy people. 5,7 million of pupils were enrolled in the basic education system in 2014, with 1,3 million in private providers. Private local institutions in the basic education cycle have different levels of fees, ranging from 400 to 500,000 ariary, and even reaching several millions of ariary in the case of foreign educational institutions. Unfortunately, little data is available on the private market of basic education in Madagascar. We observe that competition may be intense in urban zones, which may incentivize private providers to increase their differentiation. For instance, the ACEEM group set up additional classes in Mandarin and in IT, what few schools in Antananarivo may provide.

5.3. Higher education and TVET

Private institutions have been emerging quite recently in the landscape of higher education in Madagascar. The first implantation of private players was observed in the 1990s (World Bank, 2014). In a context of limited public spending to the cycle, the development of secondary education and the consequently increasing number of baccalaureate graduates each year has increased the demand for private education providers. The number of high schools graduates have increased from 25,000 students in 2006-2007 to 55,000 in 2014 (MESUPRES Statistics, 2018). These dynamics have been particularly pregnant for the series A baccalaureate holders (in Humanities), passing from 14,000 students in 2006 à 36,000 students in 2014. Thus, the limited public supply and the growing demand in higher education have opened the path for new capacity brought by private players. This situation has fuelled student enrolment in, and development of private universities and institutes which were more than 50 in 2013 (MAE, 2013). The number of students

enrolled in private universities and institutes grew from 3,400 in 2005 to 27,600 in 2014. Private universities are geographically concentrated in a few urban areas, in particular in Antananarivo where 94% of institutions are based (MAE, 2013), where infrastructures, equipment and capacity are most easily found, but where also middle- and high-income population are concentrated.

Private Institutions

There is a diversity of private institutions in the higher education sector in Madagascar, characterized by heterogeneous quality, pricing and size. Most of them are very selective institutes, with strict application progress, and often with a written examination.

- **Université Catholique de Madagascar (UCM):** this university is based in Antananarivo and offers LMD diploma in economics, law, political sciences, philosophy and sciences. Created in the early 20th century to teach philosophy and theology, was progressively transformed into a private university with extended course offer in social sciences, with recognized professors.
- **Institut Supérieur de Communication, des Affaires et du Management (ISCAM):** well-known and selective business school, with the LMD system as well as vocational training in communication, marketing and management.
- **Institut d'Études Politiques (IEP):** political sciences institute with several international partners such as Sciences Po Paris.
- **IT University:** private university specialized in information & technology. Offers a double degree in partnership with the University of Nice Sophia Antipolis.
- **Institut Supérieur de Technologie (IST):** Institution specialized in management, business, human resources. Good reputability.
- **ACEEM:** University based in Antananarivo on several sites, with important school capacity.
- **Institut Supérieur Polytechnique de Madagascar (ISPM):** Well-known private institute specialized in Engineering and IT. Offers vocational training and LMD diplomas
- **Université Privée de Madagascar (UPRIM):** University specialized in paramedical training.

We also mention here several vocational schools that are small-sized institutions specialized in information and technologies, and in tourism and hostelry.

- **Sayna: Sayna** is an early-stage vocational school based in Antananarivo and that provides short-term training in IT to disadvantaged students¹²¹. The model is free of charge for students and paid by companies with which Sayna partners.
- **ESTI:** Institute specialized in IT, has developed the first work-study programme in the sector. Supported by AFD.
- **Havila School:** vocational school specialized in hostelry and cooking, also based in Antananarivo.
- **Vatel School:** well-known international vocational school specialized in tourism and hostelry, part of the VATEL group. <http://www.vatel.mg/>

¹²¹ See more information in the case study section.

Pricing and access

As for post-primary education, the pricing of private institutions within higher education may vary a lot. Some institutions may charge similar tuition fee level than what renowned public institutions do (for instance, the public school INSCAE charges tuition fees of nearly 700\$). Some others may charge substantially higher fees. Tuition fees at the renowned tourism school Vatel can reach 10,000\$, for a masters degree. On average, completing higher education training in Antananarivo would cost around 1200\$ yearly for a student, when including tuition fees, accommodation, food and transports (MAE, 2013). Consequently, the access to these institutions is severely limited for a majority for the population (90% of which lives with 3,1\$ or less a day).

Very few institutions have built capacity to broaden access with a system of student loans and/or scholarships. We should mention the Sayna school that is, to our knowledge, the only private institution in Madagascar focused on deprived students through an innovative model which makes the charge of education bearing on companies instead of on families. Other institutions may have found external funding to finance scholarships (e.g. the government of Monaco for the Saint Michel Group) but this generally concerns a dozen students. We should also mention a population of foreign students (1300 in 2013), mostly coming from Comoros, and divided between public universities (40%) and private universities (60%) (MAE, 2013).

As far as TVET is concerned, access to vocational centres is so far restricted and the private sector contribution is still to be structured and enhanced. Pricing of private operators in the TVET remains unclear as the system is still emerging and dispersed. As mentioned earlier, the rise of a TVET fund could be a game-changer for the structuring of the TVET landscape. The fund for the vocational training¹²² will be financed by 1% of the total wage bill¹²³ of formal enterprises and will serve to fund the continuous training activities of these enterprises as well as the inclusion of informal companies into the formal training system. This could contribute to boosting the demand in training of enterprises (that will finance the fund in all cases) and the supply of training (provided that TVET operators are certified and recognized by the fund).

Challenges for Boosting Employability

Higher education players face strong barriers to design study tracks and pedagogic models that ensure the socio-economic insertion of students. A clear example of this challenge is difficult to experiment and scale up work-study programmes within vocational schools and universities. On the supply side, vocational schools may encounter difficulties to design programmes that are well adapted to the needs of the employers. Generally, schools and enterprises have very little knowledge of this pedagogic approach that is not legally recognized. On the demand side, it may provoke legal risks for companies that accept to enter these partnerships. Furthermore, these models make the firms bear a (substantial) part of the training

¹²² <https://www.lexpressmada.com/26/04/2017/secteur-prive-un-fonds-alloue-a-la-formation-professionnelle/>

¹²³ And the Fund is also financed by AFD.

costs of the students (fees and insurance), which makes it little affordable for a number of local SMEs. Finally, they have the little pedagogic experience to train and supervise students. These different barriers may explain why so few companies use work-study programmes. In this context, the ESTI School is an interesting case study that could give the way to the future development of these programmes.

Box 2.31. The ESTI School: An IT School Initiating A Work-Study Track

ESTI School an early stage IT school based in Antananarivo and that provides licences and masters in web development and in network security. ESTI is an association which was designed and duplicated from a French Model, ITECIA, a French IT school partnering with the Chamber of Trade in Paris. ESTI is funded by AFD to extend its school capacity and improve the equipment. It currently employs 40 teachers of which 5 are permanent and welcomes 120 students as of January 2019. ESTI's revenues are divided between schools fees reach 500\$ in Licence and in 600\$ in Masters and costs paid the enterprises and reaching the same levels.

ESTI has launched the first Work-Study track in IT in Madagascar as a way to boost the adaptiveness of its training to the needs of employers. ESTI partners with a diversity of corporates including local tech SMEs and international IT industries. These partnerships enable the students to spend two weeks a month in the enterprise to gain practical knowledge in IT, acquire soft skills and boost their employability when graduating from school. As the first promotion is graduating in December 2018, data on professional insertions is not available yet.

In civil society, we also met several projects that aim to boost the employability of vulnerable youth and could inspire private sector practices. For instance, the programme SESAME¹²⁴, launched by the French NGO IECD, aims to support young Malagasy in the creation and implementation of a professional project. The programme includes a preparatory year where young people learn to conceive a project, strengthen their transversal skills and acquire the necessary skills for the "student profession". At the end of this year, young people start their studies fully paid for by the sesame programme and follow training courses including meetings with the business sector. The integration rates at the end of the programme are excellent and underline the strength of this innovative academic and social intervention, which makes it possible to give young people from disadvantaged backgrounds a real chance. A similar programme is implemented by the NGO SOS Village d'Enfants Madagascar: the objective is to integrate vulnerable youth populations by increasing youth's interactions with companies, building partnerships with enterprises and civic organizations to conduct training and provide them with internships, facilitating the acquisitions of soft skills and eventually supporting the youth in the insertion on labour markets. We may draw a few lessons from these programmes aiming to support the insertion of vulnerable youth:

¹²⁴ <http://sesame.promesmada.org/>

- Successful programmes required heavy investments in time and human resources to create personalized and long-term support. For instance, SESAME estimated at 2000€ the average cost of the programme per student.
- Strong intervention on soft skills and personal development are the heart of these models
- Strategic partnerships with companies and/or civic organizations are key to increase the exposition of youth to professional actors.

SESAME staff has engaged a reflexion to make the programme sustainable and thus to find ways to raise funding from local players that benefit from the positive trajectory of these youth. It could be interesting to build innovative private sector initiatives that are grounded on these experiences and savoir-faire of these successful programmes.

5.4. Ancillary players

Teacher training

There is a room for a significant contribution of the private sector in teacher training. According to an Education specialist at the World Bank, 40,000 additional teachers will be necessary to address the educational access and quality issues in the primary and post-primary cycles. As the public system only trains 1,000 to 2,000 teachers a year, there is a clear role for the private players to play in this challenge. There is a market-driven demand for private teacher training centres that could give initial training but also life-long training courses to benefit private and public teachers. Vocational schools have also opportunities to develop training for educators that will ensure several functions (child care and health, educational development, nutrition) in early childhood centres. Hence, the state could consider implementing public-private partnerships to increase the offer of these types of training while maintaining control over the number and quality of teachers trained.

Education Technologies

Education technologies are barely emerging in Madagascar. First, the development of distance learning solutions in rural areas is very constrained by the lack of telecom infrastructures and connectivity in the regions. The internet cover is very limited to urban zones, what makes it much harder for start-ups to explore the Ed-Tech models that are rising elsewhere in Sub-Saharan Africa and which provide affordable education content in remote areas. However, there is a growing demand for distance learning solutions in urban areas. E-learning models could provide concrete solutions to increase access to quality education, especially in higher education where universities are not accessible for a substantial part of the population. A significant player of this sector is the CNTEMAD, described in Box 2.32, which explores new models of blended education through a network of CNTEMAD spread across the country. A number of private players intend to duplicate the training delivered by CNTEMAD, which implies issues of quality control and certification.

Several telecom companies also develop e-learning solutions. For instance, Orange Madagascar received in 2016 the support of AFD and AUF¹²⁵ to launch a distance teacher training project (FADEP¹²⁶). This project intending to boost 1000 teachers' skills and motivation. Telma, another big telecom company, has worked with the CforC association¹²⁷ to provide ICT training to disabled persons.

Box 2.32. CNTEMAD AND THE CHALLENGE OF E-LEARNING IN MADAGASCAR

CNTEMAD is a public organization that was born in the context of the higher education crisis in 1992 when most public universities were shut down. The *Center for distance learning of Madagascar* is the most extended organization that offers affordable higher education distance courses in Madagascar. 18,000 students were enrolled in CNTEMAD courses in 2018, in licence and masters classes of law, management, communication, IT, engineering, and social sciences. Each student has access to paper-based course material to learn in autonomy, takes two exams per semester and may find support from contractual teachers and tutors in one of the 44 learning centres across the country. The curriculums are based on the existing courses in universities, so all training courses are certified.

The CNTEMAD is a very interesting organization regarding access to higher education in remote areas. Tuition fees are low: 200,000 ariaries (60\$), and what makes it much more affordable than most public and private higher education institutions. The extended network of 44 centres (localized in 44 of the 119 districts) is a real asset to facilitate access as it does not force the student to move in an urban district as for universities. However, the blending learning model, based upon self-learning at home and access to learning centres (which are not mandatory), is far to be perfect. The success rates in the licence are low, as it is in public universities, reaching 28% in the law licence for instance. The director of CNTEMAD confesses that many students have not the skills and discipline to effectively learn in full autonomy. We have no data about how many of them effectively come to the centres to receive support and guidance.

The main project of development for CNTEMAD is to transfer the course material online to become an e-learning model. The director is currently working with a local tech company to create online modules (MOOC) and insert them on a digital platform. The problem is that connectivity in Madagascar is really challenging and that many students would not have access to the online platform. Thus, the director has launched the construction of a new learning platform that could be accessed without internet connexion. The platform will be operational in 2019. The second project is to upgrade the CNTEMAD centres with internet connection and computers, so that student have access to the MOOC. The upgrading cost is very high (20m Ar, 6000\$) and external funding is necessary to implement it. The third consists of launching an SMS-based information platform that sends information related to exam and classes to the students, but several challenges emerge from a possible partnership with a telecom company.

¹²⁵ Agence Universitaire de la Francophonie.

¹²⁶ <https://www.orange.mg/actualite/lancement-projet-formation-distance-enseignants-primaire-madagascar>

¹²⁷ <http://matv.mg/fondation-telma-et-cforc-formation-des-handicapes-aux-nouvelles-technologies/>

Supplementary education

There are several education groups that offer services of remedial education in addition of core education delivery. This is the case of the ACEEM group which started to provide remedial classes before extending to a traditional schooling model. We did not encounter any organization specialized in the remedial education business. We could make the hypothesis that widespread poverty and low level of revenues in urban areas may limit the capacities of most families to afford additional services in education, but this would require additional analysis for which data are missing. Supplementary education could also be provided in rural areas with the support of education technologies. However, considering the numerous obstacles that hinder the development of Edtech models in Madagascar, we do not observe short-term opportunities for local/foreign solutions to provide such services in rural Madagascar.

Student finance / School finance

There are several microfinance institutions provide facility solutions for schooling. For instance, the ACEP IMF provides “school loans” to families that may be useful to finance the combination of fees and out-of-pocket costs that are concentrated in a specific time of the year (mostly January, for when a new school year begins)¹²⁸. To our knowledge, this type of services tends to be incorporated in generalist programmes of financial inclusion and we did not encounter any organization that would create specific programmes for schools and students, with additional capacity building or non-financing services.

6. Policy context and regulation of private players in education

6.1. Regulation of private investments in education

There is no private investment regulation dedicated to the education in Madagascar. Private investments in education institutions shall comply with the general regulation in place. Indeed, for any investment in foreign currency, it is mandatory to go through the SSOC (Service de Suivi des Opérations de Change) with the Ministry of Finance and Budget, in order to obtain the FINEX certificate (Foreign Finance), which is useful for tax audits in particular. Capital transactions remain free transactions in Madagascar, i.e. there is no obligation to declare them to the SSOC. And so far, there are no regulations against this. On the other hand, it is necessary to detail the distribution of the contributions in the agreements, according to which this amount is injected in capital and this in loan and only the loan is subject to an obligation of certification. FINEX certificates are mandatory for shareholder loans.

¹²⁸ <http://www.acep-mada.com/services-produits/credits/>

6.2. Regulation of education activities

The regulation of private institutions' education activities has historically been very limited in Madagascar. The arrival of private players in the system has mostly started in the 1990s in a context of deregulation and structural adjustment programmes that have severely affected the reach and capacities of public authorities. Regulating the private education sector remains a huge challenge for the authorities. In the last 20 years, the government has seen a multiplication of initiatives led by private players, with little control over school opening and quality.

Some media and civic organizations have constantly criticized this trend ¹²⁹, calling for increased public scrutiny over private players. Some cycles are particularly targeted by these critics, such as private universities in the paramedical sector. In higher education, many institutions have opened their doors since the 2000s and remained informal/without habilitation, and others don't obtain the certification for the diploma they deliver. We observed diversity of situations regarding regulation and certification of private universities and schools and a generally low level of quality control from the authorities. The strengthening of quality control over private universities is a strategic orientation taken by the Ministry of higher education, but no independent agency is so far in charge of assuming this necessary function.

Private universities and higher vocational schools are grouped into two structures: A.E.E.S.P.H.M (Association des Établissements D'Enseignement Supérieur Privés Homologués de Madagascar) and the A.E.F.P.S.A (Association des Établissements de Formation Professionnelle Supérieure Agréés).

Three levels of control structure the regulation and certification process of higher education in Madagascar:

1. Habilitation
2. Homologation
3. Authorization

The third level constitutes a full recognition of the institution and enables the students to enter to apply for civil servant positions

Table 2.34 shows that among the 27,000 students enrolled in private institutions and registered in 2014, an important majority are enrolled in schools that received habilitation but no homologation.

¹²⁹ <https://www.lexpressmada.com/07/08/2018/education-des-universites-privees-non-conformes/>

Table 2.34 : Regulatory status of private higher education institutions, by number of enrolled students

Institutions privées	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Habilitées									15 720	23 922
Homologuées	3 430	3 875	4 361	6 127	6 313	6 292	6 402	6 934	3 251	579
Autorisées			3 827	5 309	8 901	11 141	14 797	14 319	5 050	3 096
Ensemble	3 430	3 875	8 188	11 436	15 214	17 433	21 199	21 253	24 021	27 597

Source: MESUPRES Statistics, 2019

► Education challenges in Morocco

1. Introduction

Morocco has made tangible efforts to improve access and quality of education in the last 20 years, but general education outcomes remain fragile and unequal. After a delicate period of rollback and stagnation for primary and secondary education during the 1980s, rapid progress and numerous reforms were made in the 2000s, under the MDGs framework and with a new national momentum led by the highest authorities in Morocco. The Charte Nationale pour l'Éducation et la Formation (CNEF) in 1999 has given concrete orientations for reforming and improving the national system, for example, with the creation of autonomous universities and of Regional Academies (AREF). In 2013, a Council for Education (CSE) was created as a policy adviser body to foster the modernization of the system and to monitor progress and achievements.

The recent organizational reforms as well as the renewal of curriculums and pedagogic methods are still on process, but they have already given concretes results regarding access to quality education. While the illiteracy rate was at 87% after independence, universal education for children aged from 9 to 15 is now at reach, and gender disparities have been substantially reduced. Key challenges are still to be found in challenges the rural areas where the population, and in particular the girls, have more difficulties to access secondary and higher education access. In general, the internal efficiency in basic education is still to be improved. The quality of learning and teaching has suffered from inconsistent (and sometimes divergent) linguistic policies in the last decades¹³⁰ but also from insufficient investment in modern infrastructure and equipment.

Furthermore, universities and TVET operators do not promote the employability of many young Moroccans. Historically, the state furnished less budgetary effort on the higher education and TVET sectors, but good public universities could form (limited) qualified resources to guide the economic development of the country. Today, higher education remains underdeveloped in comparison with the demographic trend and the needs of the country. The lack of relevance of training courses and the low readiness of students for the labour markets are critical challenges as the youth is more and more confronted with unemployment and/or social stagnation.

The private sector appears as a growing stakeholder of the education system. Private schools enrol 10 to 15% of students in basic education but provide generally quality learning, in particular regarding the bilingual challenge of Arabic and French. Private universities enrol less than 5% of students but are growing, under the reinforced regulation of the sector. TVET is mainly a public-driven sector, but some private players provide very relevant training in specific fields.

This section aims to detail these challenges of access, equity, relevance and relevance of the education system in Morocco. It also gives the concrete orientations of the government strategy to

¹³⁰ See Box 2.34 .

address these challenges. It finally highlights the participation of private sector operators in the different education cycles

2. General organization of the national education system

The education system in Morocco is composed of pre-primary education, a mandatory cycle of basic education, general and vocational secondary education, higher education and TVET. The mandatory path for children aged from 6 to 15 has historically been of the attendance of 9 years of basic education that gathers primary school and lower secondary education (“college school”). However, recent political orientations¹³¹ have introduced the generalisation of pre-primary education as a mandatory component of the basic education cycle. Thus, all children aged from 4 to 6 will have to attend pre-primary schools, through a diversity of configurations (public institutions, community-based institutions and for-profit institutions), aiming to facilitate the child's physical, cognitive and emotional development as well as the development of his or her autonomy and socialization. This generalisation is a long term objective and the transition from the current system to the broaden basic cycle will last nearly 10 years¹³².

Primary education, which lasts six years, is open to pre-school children and, on a transitional basis, to children who have not benefited from it, aged six years or over, as well as to pupils from traditional schools, at the level for which they are qualified. It is structured in two cycles. The first primary school cycle last two years and the second cycle lasts four years. At the end of primary school, pupils graduate to the primary education certificate (CEP).

The three-year lower secondary school (referred to as “college school”) will be aimed at young people from primary school who hold a CEP. Completion of a college education will be sanctioned by a college diploma (BEC), mentioning, where applicable, the field of learning and technical and vocational specialization. Holders of the BEC may continue their studies in secondary education, depending on their choices of orientation and aptitudes. If they chose to move directly into working life, they can still apply to resume secondary education, provided they meet the prerequisites and admission criteria for this level.

Secondary education includes three tracks of training: (1) a short vocational training organized in a cycle of professional qualification; ending with the graduation in “*Diplome de Qualification Professionnelle*” (DQP) or (2) a general high school track or (3) a technical and vocational training in high school. The general field ends with the General Education Baccalaureate (BEG) with a specialization in natural sciences, literature or social sciences, and gives access to higher education. The Technical and Vocational field ends with Technical and Vocational Education baccalaureate

¹³¹ This strategic orientation is mentioned in the 2015-2030 Strategy and was put as a national priority by the King in a recent [Speech](#) made in July, 2018.

¹³² The generalization of pre-primary education is to be completed in three phases by 2027.

(BETP) and gives access to the job market, training centres and, under certain conditions, to higher education institutions.

TVET is composed of DPQ secondary level and of initial and continuous post-baccalaureate training. Initial TVET is largely implemented by public entities, including the OFFPT organism and some technical ministries (Tourism, Agriculture), but also by a limited number of private schools. Continuous TVET to employees and unemployed people is mainly provided by companies in partnership with public and private entities.

Higher education is composed of universities, specialized institutions and *grandes écoles* (whose access may be restricted to students following the *Classes Préparatoires* intensive 2-year track - "CPGE"). Several forms of institutions coexist in higher education: public universities (12), private universities working under PPP framework (5), private and independent universities (5), and finally public universities with private management (1). Since 2003-2004, the whole system is based on the LMD framework which divides higher education into Licence Degrees, Master Degrees and Doctorate Degrees (PhD).

3. General Analysis

The demography of Morocco is slowing down but provides the country with a growing number of working-age youth. Ending its transition, the demographic growth has been declining the last decade and now stands below 1% (BAD, 2013). Due to a declining fertility rate, the number of children from 7 to 12 is now decreasing and the total population is ageing (UNESCO, 2010). The demographic pressure reached its pic around the 2000s regarding the school-age children (BAD, 2013). However, Morocco still benefits from a fairly young population, with a growing active population. As shown in Table 2.35 nearly 18% of the population is aged between 15 and 24, which represents 6 million youth. The demographic pressure is currently impacting the higher education level and the time of professional insertion: the number of baccalaureate graduates has increased from 300,000 to 500,000 in 10 years.

This demography constitutes a considerable opportunity for economic growth and the so-called demographic dividend. Hence, the dependency ratio (working population / school-age children) has been increasing (from 1.6 in the 1990s to 2.6 in the 2010s). Many studies and reports highlight the youth inclusion challenge as the most prominent challenge of the period which also bears tremendous social and political risks for the country (Chauffour, 2018 ; Conseil Supérieur de l'Éducation, 2017; BAD, 2013).

Tableau 2.35: Evolution of school-age groups (1970-2030)

(Milliers)	1970	1980	1990	2000	2010	2020	2030
6-11 ans (primaire)	2 791	3 198	3 948	3 935	3 518	3 550	3 289
12-14 ans (sec 1)	1 139	1 405	1 754	2 019	1 826	1 778	1 715
15-17 ans (sec 2)	952	1 286	1 666	2 025	1 887	1 720	1 736
6-17 ans (a)	4 882	5 889	7 368	7 979	7 231	7 048	6 739
18-59 ans (b)	6 125	8 734	11 719	15 032	18 493	20 551	22 086
Ratio de dépendance (b/a)	1,25	1,48	1,59	1,88	2,56	2,92	3,28
% population rurale	66	59	52	47	43		

Source : UNICEF, 2017

Tableau 1.36 GER evolution in all education cycles (2005-2017)**Tableau 4.02. Tendances des taux spécifiques de scolarisation (en %), 2005-17**

	2005-06	2010-11	2014-15	2015-16	2016-17
Age (Niveau)					
4-5 (préscolaire)	nd	nd	49,2	45,3	49,5
6-11 (primaire)	89,0	97,5	94,9	97,4	99,1
12-14 (collégial)	68,1	79,1	86,4	85,2	87,6
15-17 (qualifiant)	46,0	52,8	70,1	65,3	66,6

Source: UNICEF, 2017

Public spending on education has been increasing in the last decade, with important efforts made on basic and secondary education, but with less attention given to TVET and higher education. The education expenses reached 47 million dirhams, which represents 23% of public spending in 2015, while they were at 16-18% between 2012 and 2014. The budget for education stands at 5.6% of total GDP, which is higher than other countries of the region (UIS, 2018). Following the strategic focus on primary education generalisation since the 2000s, 60 %¹³³ of this budget is continuously spent on basic education, what represents about 20% of GDP/capita (UNESCO Data, 2018). This allocation was made to the detriment of other education segments, such as higher education and TVET that only received a small proportion of education spending, respectively. The budget is massively spent on operating expenditures (including teachers' payroll) and only 5 to 10% of total education spending goes to investments. Decentralisation is very weak, with only 10% of total budget distributed to regional academies (AREF) (MEN Statistics, 2017).

¹³³ This figure needs to be confirmed by an alternative source.

Tableau 2.37 Evolution of education public spending as part of GDP and of total public spending (2012-2015)

	2012	2013	2014	2015
Education				
- en % de la dépense publique totale	17,2	16,4	18,3	22,2
- en % du PIB	-	-	-	5,6
Santé				
- en % de la dépense publique totale	4,8	4,8	5,2	5,3
- en % du PIB	-	-	-	1,4

Source : UNICEF, 2017

Key socio-economic and infrastructure challenges affect the performance of the education system, particularly in rural areas. Although key achievements will be emphasized in the forthcoming analysis, Morocco faces a series of structural challenges impacting the performance of its education system. Despite overall good economic performance in the last 15 years¹³⁴, the situation in rural areas, where 13 million and 37% of the population lived in 2015 (HCP, 2013), has not been improving regarding education conditions and achievements. Poverty and vulnerability ratio is still high in rural areas, reaching respectively 7.2% and 21.2% of the population there. Therefore almost 1 out of 3 Moroccan is affected by poverty or vulnerability in rural areas, against 1 out of 10 in urban areas (UNESCO, 2010). Most access indicators, as detailed below, show difficulties for rural families to enrol their children due to home to school distance and its socioeconomic consequence (security, costs of transport, costs of accommodation for remote education institutions, opportunity cost against economic activities). This situation particularly affects girls from vulnerable families. The state has developed specific policies, with some success¹³⁵, to target the rural population and support them enrol and complete basic education. However, as we see further on, poor rural populations affected by lack of mobility and of adequate infrastructures cannot benefit as much as the rest of population from increased state efforts in the sector (see above), and do not have access to private schooling as an alternative option (CEMPT, 2016).

¹³⁴ GDP/capita increased from 4500\$ in 1990 to 7500\$ in 2014 (in constant dollars, PPP) (Chauffour, 2018).

¹³⁵ Stratégie nationale de développement de l'éducation en milieu rural (1996) - A note on the Tayssir programme is developed further in the analysis below.

Table 2.38 Poverty rate and vulnerability index for children living in urban and rural areas (2015) (in %

	2015
Taux de pauvreté - total	4,4
Milieu urbain	2,1
Milieu rural	7,2
Taux de vulnérabilité - total	14,4
Milieu urbain	9,1
Milieu rural	21,2
Taux combiné de pauvreté et vulnérabilité- total	18,8
Milieu urbain	11,2
Milieu rural	28,4

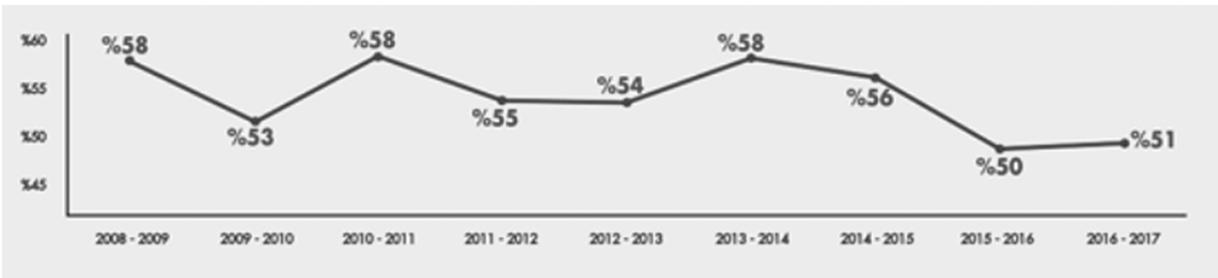
Source: UNICEF, 2017

4. Specific subsectors achievements and challenges

4.1. Preschool education

Pre-primary school enrolment has been declining in the last decade. In Morocco, pre-primary education welcomes 700,000 children and is composed of 23,000 schools (of which 11,000 are in rural areas) and 36.000 educators. The pre-primary system has experienced a worrying setback in the last years, with enrolment rates declining from nearly 60% in the 2000s to 50% in the most recent years for a preschool age population of 1.4 million children. 720,000 children were not enrolled in the system in 2018. The number of schools has also decreased between 2015 and 2017, and the number of children enrolled in traditional pre-primary education has diminished of 80,000 (MEN Statistics, 2017). Despite growing urbanization, the decline of pre-primary education shows that the current system has reached its own limits and lacks a clear regulation and vision to address the generalization challenge.

Figure 2.31 Preschool enrollment evolution

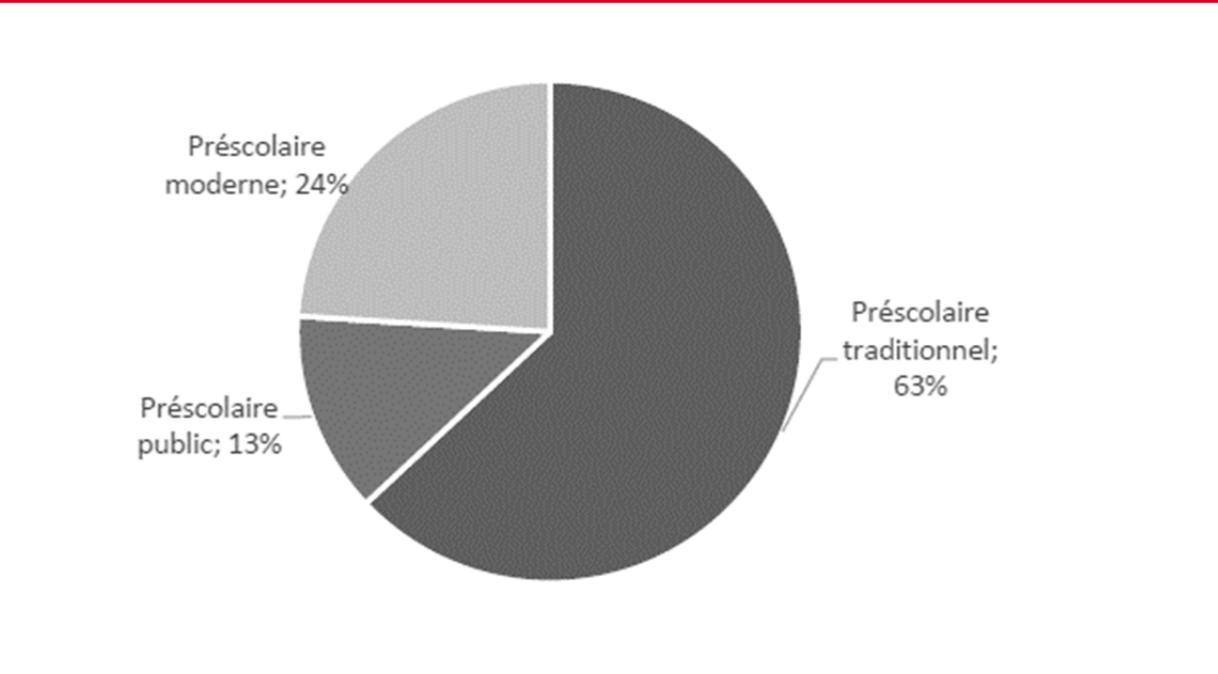


Source: MEN, 2018

The current situation does not ensure equitable access to, and equal opportunities for all in pre-primary education. Although equal opportunity in education is guaranteed by the 1999 Charter and regularly reminded in political speeches, an analysis of equity indicators shows important disparities of access and completion regarding rural areas and gender. The enrolment in rural preschools is very low, reaching 35% in average as shown in Figure 2.32. Gender disparities also reinforce the unequal access to pre-primary education as only 24% of girls in rural areas enrol in pre-primary schools (vs 45% in urban areas).

The pre-primary sector is characterized by a diversity of practices, a multiplicity of players and a lack of state regulation. There are currently three kinds of pre-primary systems in Morocco: traditional pre-schooling (led by communities), public pre-schooling and modern pre-schooling (led by private-sector players, mostly in urban areas). There is currently no centralized regulation of these different systems which have their own dynamics and practices. From this multiplicity of players emerge a diversity of practices in terms of infrastructure, equipment, programmes, pedagogical methods and pricing. They also employ educators with varying levels of qualification and experience (MEN 2018). The lack of harmonization of practices is essentially due to the lack of state intervention, although recommendations were made since 2008 by the CSE to produce a common referential of pedagogic methods with clear goals and determined educational outcomes. There is also a lack of regulation of educator training, with little or no control over recruitment and training of preschool educators.

Figure 2.32 Part of modern, public and traditional preschools (%)



Source: MEN, 2018

Educator training is the most urging challenge to promote equitable access to quality education in preschools.

The lack of human resources in pre-primary educators is huge in the sector: only 40% of the necessary resources are today mobilized in preschools. The gap of educators is likely to reach 50 to 60,000 educators (Abouid, 2018). In addition, the number of educators has declined from 39.00 to 36.000 from 2015 to 2016 (MEN Statistics, 2017). Although some training is provided by the OFPPT, there is a general lack of certified skills training courses for educators and assistants in public university and TVET centres. Private training centres have also a reduced presence in this field, and there is quasi no control over recruited educators in community / traditional preschools either. Overall, the emergency for the sector is double. First, there is an urging need to establish a common referential that includes educational content and pedagogical approaches in order to guarantee the skills and practices of the trained educators in all systems. The adoption of local languages is a crucial strategy to facilitate the transition to primary school. Second, several thousands of educators are lacking in the sector, all types of providers combined.

Table 2.39. Pre primary education

		2014-15	2015-16	
Etablissements	Total	25 026	20 511	
	Rural	14 106	11 151	
Salles	Total	38 780	32 641	
	Rural	14 752	11 161	
Classes	Total	40 722	37 177	
	Rural	16 656	14 004	
Effectifs des élèves				
Préscolaire Traditionnel	Total	Total	482 353	398 792
		Filles	198 071	165 852
	Rural	Total	181 438	133 605
		Filles	53 758	38 756
Préscolaire Moderne	Total	Total	180 126	180 636
		Filles	86 205	86 829
	Rural	Total	4 368	5 328
		Filles	2 001	2 404
Préscolaire Public	Total	Total	73 103	79 361
		Filles	35 458	39 047
	Rural	Total	43 054	48 328
		Filles	20 755	23 624
Total Préscolaire	Total	Total	735 582	658 789
		Filles	319 734	291 728
	Rural	Total	228 860	187 261
		Filles	76 514	64 784

Source: MEN, 2017

Box 2.33: The public strategy for pre-primary education

The recent political push, following the King's Speech last July, 18 of 2018, imposed a series of orientations to concretize the preschool agenda drawn in the 1999 Charter and accelerated the implementation of reforms made in the 2000s. The public strategy currently aims at:

- Revitalizing the generalisation of pre-primary education after the first reform of 2008
- Mobilizing a wide range of stakeholders on a regional and local basis and including civil society organizations, private sector representative bodies, regional academies and foundations.
- Confirming the role of the Ministry (MEN) as the national governance institution, in charge of regulating and coordinating the sub sector and harmonizing all actors' efforts.
- Producing a common referential pedagogic system both for in-class teaching and for training the educators.

The public authorities are willing to rely on the private sector and the voluntary sector at a regional level to accomplish this strategy, but with unclear modalities. The political will to involve private sector players in the development of the education system was already significant in the 1999 Charter, when the government set a target of private enrolment at 20% (for all education levels). In 2018, the ministerial strategy to involve the private sector and not-for-profit players is a key step to reach a generalization of pre-primary school, but also a way to overcome the serious budget constraints¹³⁶. Specific incentives and partnerships (taxes, school facilities) are to be developed to attract private players, especially in the suburban and rural areas (MEN, 2018). However, there is no sign of a clear target. In addition, private universities and vocational centres will be authorized to deliver initial and continuous training and diplomas for educators and teachers.

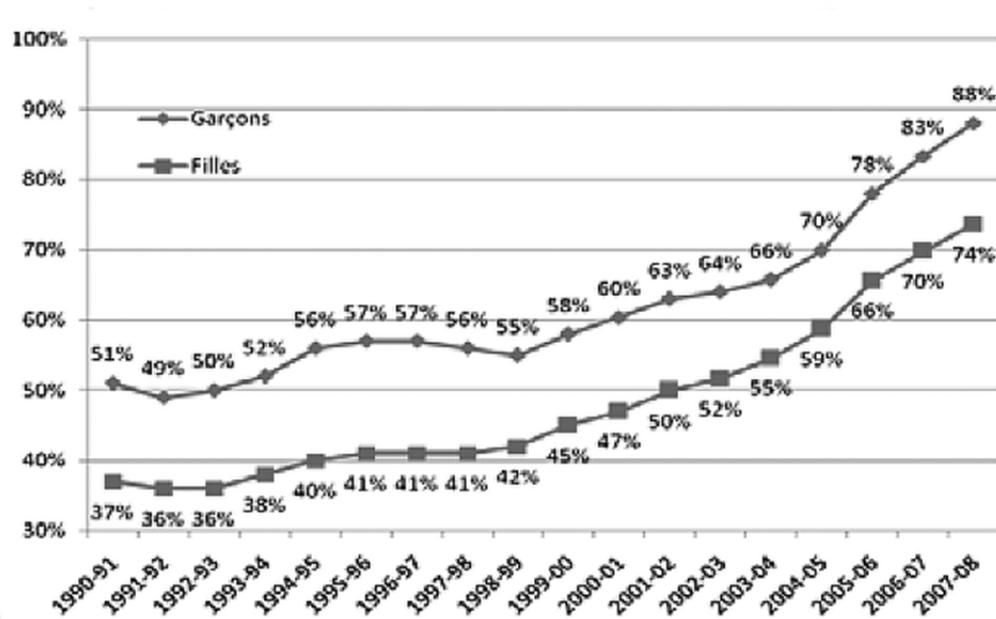
4.2. Basic education

Access to basic education has considerably increased in the last decade but social and geographical disparities persist. Strong efforts were made to reach universal education in the basic cycle where TBS in primary and college education respectively increased from 90% and 67% in 2005 to 110% and to 87% in 2017. Overall, the primary education shows a quite performing internal efficiency: repetition rate is low in primary school, at nearly 10%, and completion rate reaches 94% in this cycle (World Bank Data, 2018). However, there are still 200.000 out of school children in age to attend primary (5% of the target population). While gender and geographical factors have little impact on primary schooling, they affect the general access to college schools. Indeed, enrolment rates drop from 97 in urban areas to 77% in rural areas, and the adjusted gender

¹³⁶ A plan of 3 billion euros in 10 years will support these orientations, but will probably not be enough to reach the objective of generalization (MEN, 2018).

parity index (GPIA) dropped from 0,95 in primary enrolment to 0,85 in lower secondary enrolment (UNESCO data, 2018).

Figure 2.33: GER Evolution in junior secondary school (1991-2008) (by gender)



Source : MEN 2017

Social policies may increase access and completion in rural primary schools, but they are not sufficient to overcome structural barriers to universal education. The State has developed several social policies to support and incentivize most vulnerable families in rural areas to put their children at school during the whole basic education cycle. Social policies may mitigate the structural challenges in infrastructures, transport and affordability of basic education attendance that tend to keep a quarter of rural children out of schools. The Tayssir programme, for instance, is a conditional cash transfer programme that aims to incentive vulnerable families in rural families to enrol their children in public schools. Tayssir impact is quite remarkable and should encourage public authorities to expand its ambition and reach. Public transport may also facilitate school attendance as the remoteness of many schools from villages is a strong barrier, both in terms of security for girls and of costs for the families. The development of boarding schools, school canteens and full scholarships could also limit extra—pocket costs for families and improve completion of children, but there are currently not enough public resources driven to these policies.

Morocco is, as many African countries, experiencing a learning crisis with low and unequal education outcomes systematically registered in basic education. Although the capacity of the

country to monitor education outcomes is far to be maximized¹³⁷, educational outcomes in basic education have been regularly proved to be low. National tests run by the MEN in 2001, 2008 and 2010 have systematically demonstrated low level in mathematics and Arabic and average performance in sciences (compared to minimum proficiency required in the curriculum) (UNESCO, 2010). International tests such as PIRLS or TIMSS also show that the Moroccan pupils underperform in Mathematics and Arabic, compared to other Maghreb countries. As shown in table 2.40, TIMSS¹³⁸ tests have produced key evidence to highlight the deficit in mathematics and sciences for pupils in grade 4 and 8 (UNICEF, 2017). National tests have also shown that girls are better in French and in Arabic and equal boys in mathematics and sciences (UNESCO, 2010). Disparities persist in terms of the rural/urban divide. The average performance of rural pupils is significantly lower in all disciplines at all education levels.

Key factors that explain low quality education include educational content, teacher capacity, equipment, governance and government spending. Several reports deal with the quality challenge and emphasize various explanatory factors for low performance in terms of learning. The curriculum content and approach, that focused more on memorization and less on problem-solving and critical thinking, for instance, has been reformed in the 2000s, introducing more relevant and updated content (UNESCO, 2010). Teacher training has experienced a dramatic rollback during the period of basic education generalisation, when teachers were massively recruited with a very limited initial training and no continuous training (UNESCO, 2010). In addition, it is much likely that teachers without a sufficient initial training face grand difficulties to catch up the minimum level of teachers through continuous training (CSE, 2008). As specified in Box 2.34, the changing linguistic policies in basic education also explains why teachers solely trained in Arabic have most difficulties to teach new disciplines in French. Poverty incidence, living areas and the level of parents' education directly drive families' decisions and ability to provide children with books and computer and impact eventually the level of performance of the children at school. Thus, the 10% most performing pupils tend to come from wealthier families, living in urban areas, and equipped with books and computer, when the less 10% performing have less access to educational equipment and do not practice French at home (CSE, 2018). Other structural challenges include the misallocation of public spending and the lack of accountability in the education system. There is very little decentralized and autonomy is given to regional academia to control local schools and implement context-based support programmes.

¹³⁷ Morocco's score at Learning Assessment Capacity Index (LACI) is only at one (out of five) (LACI Website, 2018).

¹³⁸ The TIMSS is an internal survey that compares the abilities of students in mathematics and science after 4 and 8 years of schooling. The framework and the survey specifications are developed in consultation with international experts in mathematics and science, as well as with local academics.

Table 2.40: Performance in Maths and Sciences in TIMSS Test 2015 (4th and 8th grades) (% of students reaching proficiency at international standard)

	Benchmark avancé	Benchmark élevé	Benchmark intermédiaire	Benchmark inférieur	En dessous du benchmark inférieur
Mathématiques					
4 ^e année - Maroc	0	3	17	41	59
Médiane internationale	6	36	75	93	7
Mathématiques					
8 ^e année - Maroc	0	2	14	41	59
Médiane internationale	5	26	62	84	16
Sciences					
4 ^e année - Maroc	1	5	17	35	65
8 ^e année - Maroc	0	3	17	47	53

Source: UNICEF, 2017

Box 2.34. Languages in Morocco: a challenging diversity

Mastering the learning language is a key condition for a successful education. In Morocco, most children first learn to speak local languages at home, mainly the Darija (a local derivative of the Arabic) and dialects related to the diverse Amazigh languages (from the Berbers). In this context, pupils have to learn in classic Arabic when starting school, as well as French from the 3rd year of primary education. Since they do not all practice these new languages at home, many pupils cannot speak and read properly in Arabic and French, which constitutes important barriers for learning at school. Repetition rates in the early years of primary education express this phenomenon of “semi-illiterate bilingual pupils” (UNESCO, 2010). The CNE has produced recommendations to reinforce learning in French and Arabic, and to introduce local languages in the early years of primary education in order to facilitate the transition from native languages to national languages (UNESCO, 2010).

It is important to note that Arabic has historically been the language of basic education and that French is perceived -and often practised- as the language of technical training and higher education. Morocco has crossed various phases of Arabic expansion (“Arabisation”) to the detriment of the French and other languages, with heavy political debates dividing the society and impacting curriculum and teaching at school. Without engaging in the debate, it is noticeable that these numerous changes have thoroughly impacted the teaching capacity of teachers as well as the learning capacity of pupils, especially for families which do not speak French at home (CSE, 2018). Recently, new policy orientations were taken to introduce French and English in more disciplines, and facilitate the transition from basic education to higher education.

Box 2.35. The public strategy for basic education

- The total budget of the project: €3 billion over 10 years.
- Creation of 4000 classes in 2018/19 with the use of associations to train female trainers. Should therefore reach 100,000 students.
- Dedicated budget allocation in 2019: 1.1 billion for the construction of pre-school classes, and 250 million for operating expenses. Aims for an enrolment rate of 67% in 2021
- Generalization by 2027. Will be integrated into the school cycle.

The social challenges of education

- Develop the cash transfer system conditional on the enrolment of children in rural areas (tayssir programme).
- Develop boarding schools, school canteens and school transport (a major challenge in Morocco!)

The pedagogic reform

- Ongoing curriculum reform (content & method): publishing 23 new textbooks, with new methods: syllabic reading method, teaching error in maths, introduction of NICTs...
- Work on welcoming languages in the pre-school.
- Strengthen foreign languages (French in primary school, English in college)
- Promote school support systems

Governance

Improving the decentralization of education (12 academies, 1/region): more capacity building, the creation of "school projects" for each school and the promotion of school life adapted to the context (citizenship, sport, environment, etc.).

Initial teacher training

Create a teacher training degree course in a selective field with a disciplinary background, language and pedagogy, and a two-year work-study period and internship.

4.3. Secondary education

The access to secondary education is on the right track for reaching generalization, at least for the lower secondary level. The gross enrolment rate in lower secondary education reached at 87% (against 68% in 2005). According to MEN, the GER in upper secondary education is not as high and stands close to 66%, with variable evolution in the last years (70% in 2015, 65% in 2016) (MEN Data). More recent data collected by UNESCO shows a GER at nearly 80%. These dynamics results from the generalization of primary education and to a lower extent to the improving retention of

the education system (BAD 2013). The completion rate of lower secondary education stands at 64% and slightly decreased in the last year (it stood at 70% in 2014) (World Bank Data).

The private sector contribution to secondary education grows but is still a minor player.

There are nearly 1,7 million students enrolled in the lower secondary cycle, including 146,000 in private institutions (what represent 9%) (MEN Statistics). At the upper level, there are 890,000 enrolled students, including 89,200 students in private institutions (nearly a 10% share). Between 2015 and 2016, the additional contribution of private providers represented respectively 9,000 and 4,000 students in lower and upper secondary education.

There are equity issues in the secondary cycle, in particular for the female students in rural areas.

Firstly, there is a gender gap in accessing secondary education. GER of female students is 7 points lower than males'. Gender parity index stands at 0.87 (0.86 one year before). Secondly, and more deeply, there is a rural/urban divide in secondary education. Rural/Urban Parity index is low: 0.56 in 2015 at the lower secondary level. GER in rural areas for this cycle stands at 75% against 98% in urban areas (MEN Statistics). The coverage rate of secondary institutions is low, standing at 65% (+1% in one year). This double gap results in very difficult access to, completion of secondary education for rural female students. GER of rural girls stands at 68% (against 97% for urban girls and 82%). This latter point shows that the problem in rural areas is not only a challenge of infrastructure and coverage but also a socio-cultural challenge.

4.4. Higher education

Access to higher education is low but quickly growing. There were around 850,000 students, including 230, 000 incoming students and 90,000 exiting graduates in Morocco in 2018 (MEN Statistics, 2018). The system is engaged in an expansion dynamic: the GER reaches 33,8% in 2018 against 14% in 2010 (UIS Statistics 2018). The majority of students are enrolled in 12 public universities (Mohammed V in Rabat and Hassan II in Casablanca are the biggest ones) but their capacity is limited. In this context, the private sector expansion has been a crucial element facilitating access to higher education. In 2018, 45,000 students are enrolled in 170 private universities and other private institutions (enrollment grew +10% compared to 2017), that only represents around 5% of total enrollees (excluding the continuous training sector).

Girls are gradually catching up in terms of access to university. In 2017, the student population was composed of 48% of girls with a similar ratio in the new generation entering university. The GER of girls in higher education stands at 33.3% against 34.2% for boys. When looking at the details of disciplines, we observe that the growth of girls' enrollment was particularly strong in sciences and in social sciences, respectively at +2% and +11%, but negative in humanities at -4% (MEN Statistics, 2018).

The low completion rate is a burning issue and highlights the unpreparedness of pupils for higher education. A lot of stakeholders in the field emphasize the difficulty for incoming students to complete the 1st cycle at university. Indeed, transition rates from the first year to bachelor

completion and master completion are quite low, especially from 1st year to 2nd year of university. We do not have disaggregated data between disciplines and between private/public sectors but we presume that this challenge is quite systemic.

Key factors that explain the low completion are at least threefold: the difficulties of student orientation, the deficit in “student skills” and the deficit in French proficiency. First, there is a general lack of information and preparation for the baccalaureate graduates to select the right track, with the right skills and objectives. Information programmes and platforms as well as student orientation support are needed to address this issue which results in a misallocation of students across study fields and tracks. Second, there is quite a gap in terms of pedagogic practices and expectations between secondary education and higher education. The transition between the two cycles is quite abrupt as baccalaureate graduates are generally not prepared and mature to successfully pursue an academic track at university. They tend to lack methodology, practical skills and supervision to bridge this gap and succeed in the first year of university. Third, the lack of French proficiency, the most widespread in higher education institutions, hinders student learning and progression.

The regulation of higher education is improving and facilitates the development of private education providers in the cycle. Substantial reforms have been implemented since 2014 to facilitate the opening and development of private institutions. A dedicated public agency, the ANEAQ, was launched in 2016 to conduct an evaluation of both public and private institutions and deliver the accreditation (see Box 2.36). The first private university to be recognized by the state (meaning that graduate can access civil service entry exams) was the Université Internationale de Rabat (UIR) in 2015. There are now around 30 private universities which are – or in the process to be – recognized by the State (MEN Statistics, 2018) and 130 more which got the authorization to operate from the Ministry.

The development of private higher education institutions and the strategic position of Morocco have attracted top-tier private equity players in the sector. Recent transactions were made by giant private equity players like ECP, DPI or Mediterranean Capital to acquire private universities in Casablanca, Rabat and Marrakech. IFC has also invested in 2013 in the business school HEM before the school was recently more acquired by the Canadian group LCI¹³⁹. This trend shows that some institutions are strong enough to attract financial investors with transactions reaching several dozen million US dollars. Structural factors that explain these dynamics could include the very good reputability of Moroccan institutions and their capacity to attract African students or expand to the southern markets. For instance, the IT vocational group IFIAG¹⁴⁰ has more than 70% of its enrollees coming from Sub-Saharan African countries. This attractiveness is reinforced by the diplomatic orientation of Morocco toward Sub-Saharan Africa and its strategic position between the continent and Europe.

¹³⁹ <https://www.challenge.ma/le-groupe-hem-rejoint-le-reseau-lci-education-101462/>

¹⁴⁰ <http://www.ifiag.ma/>

Table 2.41 Higher education in Morocco: Main features

Nombre d'établissements		
Secteur	2016/17	2017-18
Enseignement universitaire	124	126
Formation des cadres	70	71
Établissements CCP	26	28
Enseignement Supérieur Privé	172	168
Total	392	393
Nouveaux inscrits		
Enseignement universitaire	202 613	210 488
Formation des cadres	8 787	10 189
Enseignement Supérieur Privé*	10 623	12 435
Total	222 023	233 112
Effectifs globaux des étudiants		
Enseignement universitaire	781 505	820 430
Formation des cadres	29 218	25 634
Enseignement Supérieur Privé*	41 555	45 174
Total	852 278	891 238
Effectifs des diplômés		
Secteur	2015/16	2016-17
Enseignement universitaire	95 167	103 173
Formation des cadres	7 572	8 479
Enseignement Supérieur Privé*	7 840	9 814
Total	110 579	121 466

Source: MEN,2017

Box 2.36. ANEAQ : the new regulation body in higher education

L'Agence Nationale d'Évaluation et d'Assurance Qualité (ANEAQ) is a new public and independent administration in charge of promoting the evaluation and quality control standards in higher education and TVET. Its mission is to conduct pedagogic evaluations of public and private higher education institutions and to deliver and renew the official authorization (accreditation). The Agency is recent and has only been active for two academic years.

The development of ANEAQ capacities is to be linked to the global reform of higher education in Morocco and the transition to the LMD system. The ANEAQ oversees the certification process at 3 levels: opening; accreditation ; state recognition of the institution (more details in the regulation section). These levels imply different standards and thresholds in term of staff qualification as well as other regulatory constraints. The Agency has the capacity to withdraw accreditation to institutions that do not comply with these standards.

According to its director, in the long term, the Agency could also play a role in regulating the opening of new training tracks in relation to the needs of labour markets. Alongside the forecasts of the Haut Commissariat au Plan (HCP), the Agency would anticipate the needs in key economic sectors with large job needs and adapt its accreditation policy to new institutions accordingly. With a capacity to deliver more or fewer authorizations to these training sectors, the Agency could, therefore, improve the national match between graduates demand and job supply.

The other central challenge of higher education is its low adequacy to job markets. Research made by Haut Commissariat au plan (HCP 2015) shows that around 20% of graduates from higher education are unemployed, and the rate rises to 25% for vocational training graduates. On average, unemployed people are thus more qualified than employed people. The study also shows that around 46% of the active population is overqualified (their study level is lower than the level requested in their job position). However, the downgrading situation (with job position inferior to the study level requested) is particularly widespread for the youth: 21% of active people between 25 and 29 are in this situation. Overall, the mismatch between job requirements and qualifications highlight several structural challenges in the country: the lack of job readiness for graduates, the deficit in qualified job creation and the difficulty for employers to hire and train the most adapted staff.

4.5. Technical and Vocational Education and Training

The TVET system in Morocco is very much centralized around public entities, in particular, the OFPPT. As detailed in Box 2.37 and Figure 2.34, OFPPT is the main player of TVET in Morocco, serving more than 90% of TVET learners countrywide and employing more than 7,500 instructors. Beyond OFPPT, other public TVET operators include Technical Ministries (Health, Agriculture) which provide training offer in their fields.

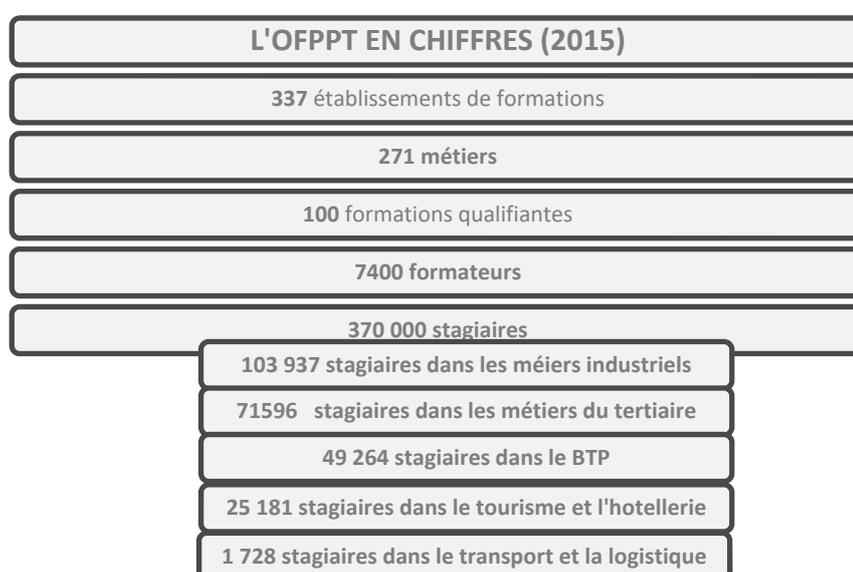
Box 2.37. OFPPT, THE MAJOR TVET OPERATOR

The OFFPT is a giant public body in charge of TVET in Morocco. Created in 1974 and placed under the supervision of MEN in 2017 OFFPT is in charge of a wide range of formal training including industry, administration, tourism, ICT. OFFPT has 7,500 instructors and aims to reach 1 million learners by 2020. The Office regularly develops new training depending on the needs and evolution of the economy, with the expertise of its own training laboratory. Important training fields offered by OFPPT include tertiary sector training in Tourism,

For instance, a recent focus was made on paramedical and care services, and a new initiative is to be launched for pre-primary educators. OFFPT has limited competition with private sector players since its training supply is free and generally of good quality and with possible connections to higher education training.

However, the OFFPT may also meet difficulties to adapt all training to the national economy needs, and may face structural challenges to ensure flexible and relevant training opportunities in all sectors. For instance, several technical fields such as IT and telecoms need to be restructured since their employability rates have decreased in the last years.

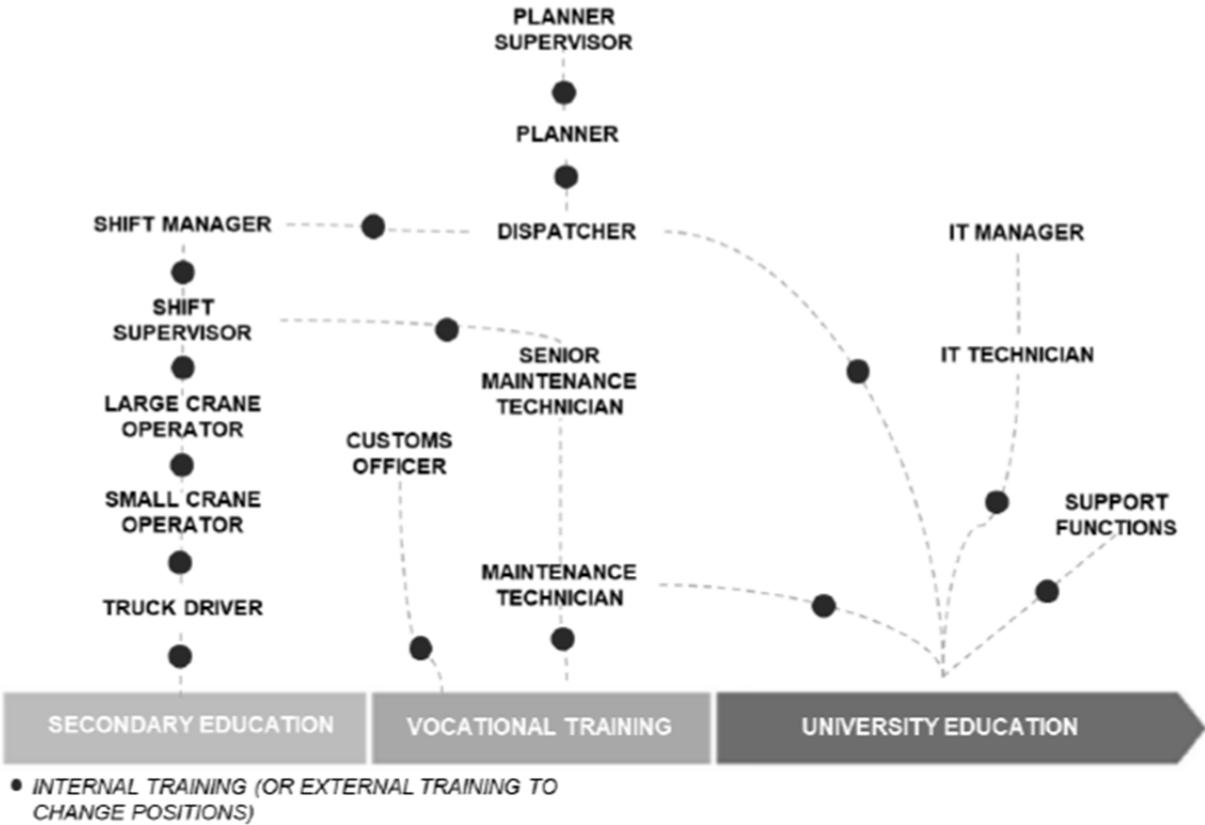
Figure 2.34: The OFFPT, key figures



Source: OFPPT Website

The private sector is a minor player of TVET, but could grow substantially by partnering with a diversity of stakeholders, with strong social impact locally. There are consequent needs and opportunities for TVET private operators in the branches of health, restaurants, construction and maintenance, security. The supply of training is not necessarily assumed by TVET operators due to the heavy costs of investment (equipment, material) necessary for these sectors. In many regions remote from the dynamic Rabat-Casablanca region, there are opportunities to develop TVET in these branches, provided that the operators have access to financial resources to invest adapted equipment and material. In certain branches like care activities, they may supplement the work of civil society organizations. In others, they may partner with companies to position their training in a specific niche that is not filled by public entities. For instance, the needs of skilled workers in the logistics sector in Tanger have largely increased in the last years, at all the levels of the value chain. Figure 2.35 shows the levels of training required in the value chain.

Figure 1.35 Port Logistics Career entry points and corresponding training

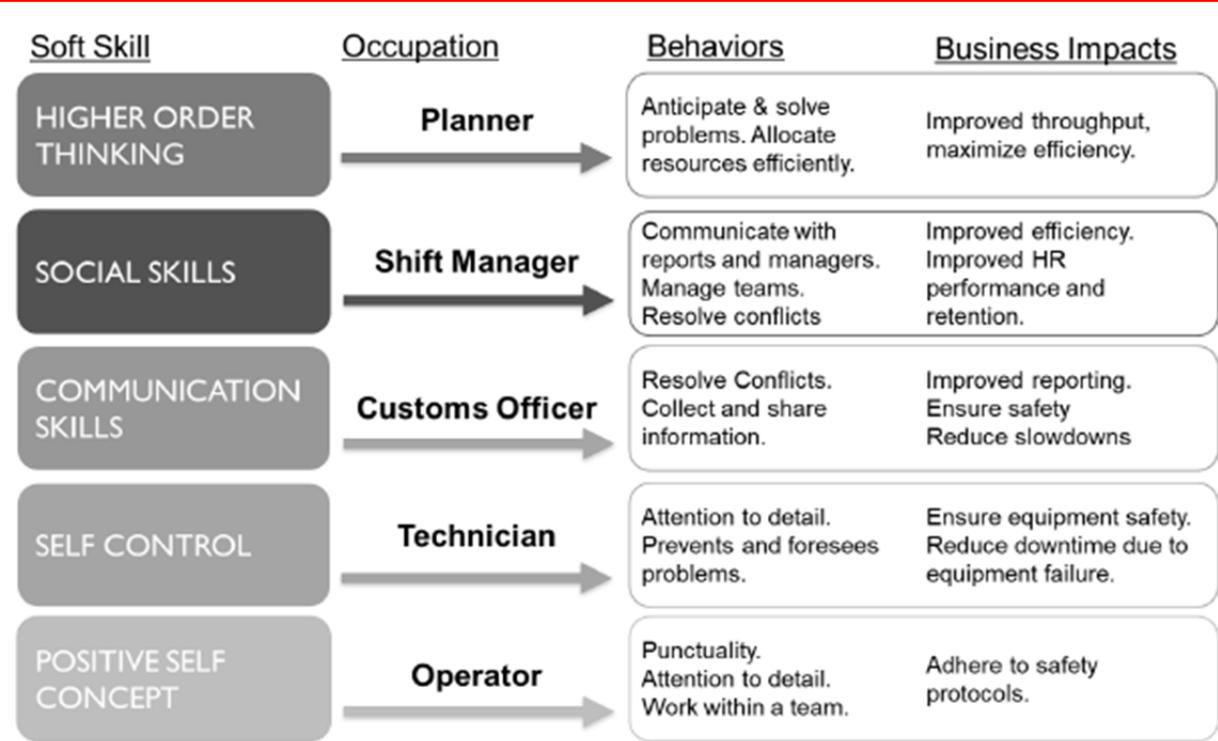


Source: USAID, 2016

In this specific sector, “there are around 120 companies providing over two-hundred training programs in logistical skills covering higher education and vocational training across Morocco. Between 2009 and 2015 the number of people following a logistical training increased from 2,500 to almost 7,500 people, 40% of whom work in the private sector” (USAID, 2016). The role of soft

skills is seen by employers as a strong component of youth employability, as their acquisition leads to strong impact on business capacities. Figure 2.36 emphasizes this contribution of soft skills to business capacities.

Figure 2.36. SOFT SKILLS NEEDED IN LOGISTICS AND BUSINESS IMPACTS



Source: USAID, 2016

Access to TVET services is very unequal across the territory, with insufficient investment in rural and suburban areas. There is an important gap between the Casablanca/Rabat region and the rest of the country. In Casablanca and Tanger, the implantation of large companies and of many OFPPT centres boosts the development of training opportunities in many sectors such textiles, logistics, aeronautics etc. However, other regions do not benefit from this industrial dynamism but still play a significant role in the socio-economic inclusion of local youth.

Vocational centres in these regions (Fès or Southern regions for instance) offer training services in sectors such as health, care, tourism and other tertiary sectors. The learners in these centres are mainly youth coming from low and middle-income backgrounds and who do not have access to higher education institutions. Private small-scale providers tend to be precarious entities that lack access to funding to increase their school capacity and open new training tracks requiring heavy investments in machines and materials. Other models embedded in philanthropic organizations may also very performant in terms of employability but need to build-up new economic models to achieve sustainability.

Apprenticeship, work-study schemes and career centres are underdeveloped in the country and constitute important mechanisms to boost employability in vocational schools. Most experts recognize that it is hard to implement these kinds of the scheme for different reasons. First, the lack of state regulation can produce legal issues for companies at welcoming youth in apprenticeship. Second, companies lack resources and expertise to invest in these schemes and train young graduates. There is an important need to develop partnerships between TVET operators and companies that will help the latter to develop. The USAID experience, described in Box 2.38, shows another kind of initiative to increase graduates' employability. This experience emphasizes the need for higher education institutions to play an active role in the preparation of graduates for entering job markets with dedicated programmes such as Career Centers.

Box 2.38. THE USAID CAREER CENTERS AND THE CHALLENGE OF EMPLOYABILITY

The lack of youth employability was identified by USAID as one of the key education challenges in Morocco. USAID launched in 2014 a career center programme to increase youth socio-economic. This programme (24m€ over 5 years) consists of a pilot project experimented in 3 cities (Casablanca, Marrakech and Tanger) to launch career centers in universities and vocational centers as well as an online career center platform. Inspired by US models, these centers aim to (1) assess private sector needs with sector-specific studies to identify job market trends and the skills required in these sectors and (2) to promote the acquisition of soft-skills ("Najanhi programme").

The career centers also aims to help the youth boost their self-confidence, choose a professional project, increase their knowledge of the "business world" and facilitate their job search. To meet these goals, the centres organize workshops with private-sector representatives, short-term training sessions to work on soft skills, meeting sessions with employers. The USAID Career Centers will terminate this pilot phase in 2019 with the aim to make this initiative sustainable and ensure that the universities will internalize this programme. Contacts with OFPPT and several ministries are on-going and could lead to the adoption of these programmes in the first cycle of higher education public entities (licence).

Several lessons can be drawn from this experience. Firstly, the programme has shown that private education providers have a big interest in this type of initiatives as they see a clear interest in increasing the job readiness of graduates and future employees. Many private operators are developing their own career centers inspired by this programme. Secondly, employers and companies were key stakeholders and also show a big interest (240 partners registered in total) by concretely participating in the workshops and job sessions. There is some risk to see the programme staff in public entities (trained by USAID) being recruited by private universities. Externalizing the programme to other public and private institutions could happen. Private entities could be willing to pay for acquiring the know-how developed in this programme. Finally, the possibility to expand the programme in other regions whose job markets are much fewer dynamics should be assessed. The availability and interest of SMEs to get involved in these initiatives is to be tested, as many partners in the pilot phase tend to be big companies.

A recent reorientation was given by the King last summer (Extrait du Discours, 20 Août 2018) and will impact the organization and content of TVET¹⁴¹. An important conference is to be organized in spring 2019 and should foster the structuration of the sector (governance, regulation, public-private partnerships etc). As detailed in Box 2.39, the restructuring of TVET will give priority to 3 sectors: education & languages, health and tourism and should impact the landscape of vocational centres in the next month.

Box 2.39. The public strategies in TVET and higher education sectors

The most recent declarations of the King show that important restructuring of TVET is to be expected in 2019. In a recent speech,¹⁴² the King emphasized the necessity to promote youth employment and gave the following orientation:

- Restructuring of TVET tracks, and update of content in partnership with employers
- Creation of modern vocational centers, financed by the Hassan II fund, in particular in the sectors of industry, services, construction, agriculture, energy and craftsmanship.
- Increase the attractiveness of technical secondary education through the development of work-study schemes and with systematic student guidance
- Development of mandatory modules of language and entrepreneurship

The current public orientations regarding higher education are the following:

- Strengthen Morocco's position as a regional centre for higher education and scientific research, in particular through encouraging foreign investment in the ES sector, the introduction of a label of excellence and increase openness to African students
- - Encourage the creation of private higher education institutions in a wide range of disciplines and strengthen private sector regulation, with the key role of ANEAQ to establish a culture of evaluation and quality, rank universities, encourage the exchange of good practices.

¹⁴¹ <https://lnt.ma/sm-roi-preside-seance-de-travail-consacree-a-formation-professionnelle/>

¹⁴² <https://www.medias24.com/MAROC/NATION/185346-Discours.-Le-Roi-Mohammed-VI-annonce-une-serie-de-mesures-en-faveur-de-l-emploi-des-jeunes.html>

5. The mobilization of the private sector in education

5.1. Preschool and basic education

The private sector is a historical stakeholder of the national education system, with an important and growing presence in basic education. In Morocco, non-state education institutions are typically composed of religious schools (“missions étrangères”), not-for-profit organisations (foundations) and lucrative organizations. The arrival of private players in the education system dates from the 1980s when the State had few resources to absorb the millions of children in public schools. With no or quasi no regulation at this time, a high number of local private schools opened in small and big cities, along with international schools and religious institutions. It was mentioned in the 1999 Charter (CNEF) that Morocco would progressively increase this contribution of non-state institutions at 20% of total enrolled pupils by 2020. The current contribution of private sector education players stands at 13.6% for all cycles (MEN Data 2018, see Table 2.42).

Table 2.42 Private schooling enrollment in all education cycles

Education Cycle	Proportion of students enrolled in private entities
Pre-primary education (excluding traditional preschools)	27%
Primary education	15.9%
Lower Secondary Education	8.9%
Secondary Secondary Education	9.1%
Higher education	4.3%

Source: MEN, 2017.

7 million pupils are enrolled in formal education institutions, with 1.3 million in private institutions (including preschools). The private sector is mostly present in primary education, accounting for 15.9% of pupils (around 1 million pupils). The allocation to private institutions is much lower in other cycles, reaching around 9% for lower secondary education and for secondary vocational training. In higher education, 4.3% of students are enrolled in private institutions, and less than 1% of TVET students are enrolled in private institutions (Ministry of Education, 2018).

The perception of private education institutions has evolved within the society, along with the growing mistrust on the public system. After independence, access to public schools was perceived as a good strategy for successful studies and social ascension, whereas enrolling in private schools was considered as a second-best option for unsuccessful pupils. In 2019, the majority of pupils are still enrolled in public institutions, but families’ perceptions over public and private institutions have critically evolved. The public sector has experienced real difficulties to

maintain its performance during the period of liberalisation due to teacher strikes and absenteeism, low investment in infrastructure and equipment, and the pitfalls of the *Arabisation* policies. Conversely, the private sector progressively acquired a reputation of better quality education provider than state institutions (CSE, 2018). Therefore, middle class and wealthy families tend to enrol their children in private institutions for primary education, but may enrol them back in public schools for the following cycles, depending on relative reputation and/or performance of local schools.

The growing contribution of the private sector leads to the diversification of the education supply but raises issues of equity across the territory.

In the for-profit sector, education infrastructure and facilities and reputation may vary a lot among schools. Monthly school fees range from 700 DH to 2400 DH and inscription fees from 720 DH to 2000 DH¹⁴³, with a typical fee range at 800 DH monthly. Private schools tend to provide education content with a higher focus on French and/or English and with better equipment and materials, which constitute a key demand from many families. They may also provide supplementary education courses as well as remedial education, which also increases school fees and differentiation (CSE, 2018). Teaching quality may not be systematically higher in private institutions compared to the public sector and many families which enrolled their children in private primary schools may enrol them in public institutions at the level of middle and high schools, especially when proficiency in French was aimed. However, access to private schools has increasingly become a mark of social and economic distinction across society.

The arrival of international investors could lead to increased competition on education provision for the middle class and for elites.

In Morocco, traditional elite schools and international education networks have not invested enough in school capacity to absorb the demand for quality education. For instance, the French education network “AEFE”¹⁴⁴ has seen its investment capacity frozen when facing severe budget constraints imposed by the French Ministry of Foreign Affairs. Responding to this movement, several new investors coming from local financial industries and from other African countries have penetrated the premium education segment. These new players do not hide their ambition to create large networks of schools targeting middle classes as well as wealthy families, with a possibility to benefit from substantial scale economies. For instance, Sana Education¹⁴⁵ delivers top quality education with international degrees in primary and secondary education with schools opening in Casablanca and Rabat, as detailed in Box 2.40. In 2015, Satya Capital (Mo Ibrahim) and TPG Growth investment fund have acquired Ecoles Al Yassamine that is one of the biggest education group in Morocco. They compete with other well-established local groups like La Résidence and are now likely to expand significantly in the

¹⁴³ Respectively from 70 to 240 euros and from 72 to 200 euros.

¹⁴⁴ AEFE is the Network of French Schools Worldwide, under the direct supervision of the French Administration.

¹⁴⁵ <http://www.leseco.ma/business/54486-enseignement-la-lecon-strategique-de-sana-education.html>

region¹⁴⁶. The OCP group also invests in education in the premium segment while the OCP Foundation is one of the major education no-for-profit player in Morocco. The arrival and strengthening of new players from the financial (private equity) industry is a strong signal that education markets in Morocco are matured to see the development of sustainable high-quality education groups, in particular addressing the growing demand from middle classes. Nevertheless, these dynamics remain nascent and it is likely to remain localized in the most attractive part of Morocco (especially the Rabat Casablanca region and to some extent in Marrakech and Tanger).

Box 2.40. Innovations at Sana Education

Sana Education was founded in 2014 by the insurance group Saham and the South African Investment Fund Tana to deliver high-quality education in pre-primary, primary and secondary education. The strategy of Sana is to deliver high-quality education through children-centered pedagogy and with a strong focus on foreign languages. Sana is addressing a growing demand for quality education from the upper middle class and wealthy local and foreign families.

In 2018, Sana had 3 schools in Casablanca and 2 schools in Rabat, delivering either the French Baccalaureate or International Baccalaureate (IB) for fees reaching 3,000 to 4,000 USD yearly in primary and secondary levels.

At Ecole Internationale de Rabat (EIR) where 700 pupils are enrolled from pre-primary to secondary education, Sana built top quality equipment and infrastructure, with several fab labs, laboratories, libraries, computer rooms and an amphitheatre. Preschool classes include “double classrooms”, one for dynamic learning and leisure and one for quiet activities. In primary and secondary levels, teaching is mostly done through inter-disciplinary group projects, and tablets and laptops should be introduced in 2019 for all pupils of secondary levels, under the supervision of an education technology expert.

As the competition for highly qualified and experienced teachers is intensive in Rabat, the retention of the teaching team is one of the key challenges for EIR. Strong investments are made in teacher training and payroll to attract and retain the best teachers. At EIR, teachers have access to continuous training (3 hours a week) and have many opportunities to learn and experiment with new pedagogic practices with their colleagues. Most teachers are recruited locally.

Another key challenge for Sana schools is the certification of the international degrees they deliver. Locally, Sana schools compete with foreign institutions like the Lycées Français or British schools, providing international degrees at a slightly more affordable price. However, in Morocco, some degrees like the International Baccalaureate are not yet accepted by local higher education institutions. Although many pupils aspire to pursue their studies abroad, important work is done by Sana to obtain state recognition and to facilitate graduates' access to local universities.

Sana is also developing a new education offer tailored for middle classes that would be based on the national curriculum. The first school following this new strategy would open in Casablanca.

¹⁴⁶ <https://www.agencecofin.com/investissement/1709-32420-tpg-growth-et-satya-capital-realisent-leur-premier-investissement-au-maroc-dans-les-ecoles-yassamine>

5.2. Higher education and TVET

Private universities grow and expand in Morocco, but face severe constraints. In Morocco, the growing number of baccalaureate graduates¹⁴⁷ has increased the pressure on universities. However, the privatization of higher education has historically been slower and more gradual than in other education cycles). The first policies to introduce private players in higher education were implemented during the liberalization era in the 1980s, but most legal requirements to effectively recognize private universities as legitimate and relevant stakeholders of the system are much more recent. As expressed before, private universities may work under a public-private partnership framework, or under a fully private banner. Currently, there are 5 private universities that are engaged in a PPP framework and 5 private independent universities. The development of these independent universities is largely constrained by state regulation which is detailed in a further section. The main challenge for these universities is indeed to obtain the equivalence of their degrees so that students may access civil service and access all public organizations. An agency of quality insurance (“ANEAQ”) was created in 2016 to ensure a performing and transparent process of control over university management and quality, and now enables universities to guarantee training accreditation and equivalence.

5.3. Ancillary players

Ed Tech

Education technologies could help local education resolve a number of issues in Morocco. In a context of class overload at university, of difficult access to universities for rural populations, the spread of technologies may help students to access education services at home and maximize time spent at learning. Affordable tech solutions may also increase access for low and middle-income populations that generally do not have access to private education facilities. Moreover, while most curriculums are based on teacher-focused approaches and do not help student autonomy grow, education technologies could also foster innovative pedagogies and experiment adaptive learning solutions. It may also facilitate the use of different languages and adapt the content in local dialects in different regions. For all these reasons, exploring the potential of education technologies in Morocco is relevant and necessary.

The local start-up ecosystem is dynamic with a blossoming of tech hubs and initiatives. Morocco was recently ranked as the 9th most dynamic African country for start-up development with total fundraising of 3.9M\$ over the course of 2017 (Partech 2018)¹⁴⁸. This amount is four times what Moroccan startups had raised in 2016 (0.98M\$). The ecosystem side grows and a number of tech hub and accelerators have blossomed in the biggest cities. Organizations like Numa Casablanca, New Work Lab, Enactus Morocco and Jokkolabs should be mentioned. Several

¹⁴⁷ In 2018, the number of baccalaureate graduates has increased of 18% (MEN, 2018).

¹⁴⁸ <https://www.linkedin.com/pulse/another-record-breaking-year-african-tech-start-ups-raised-collon/>

corporates in the Telecom and ICT sectors are very active in this ecosystem and support a number of initiatives and start-ups. A new accelerator, H7, was created in Morocco in 2018 to support impact entrepreneurs and train “African Champions”. Despite this dynamism, Morocco remains far behind the most dynamic African countries and their attractive ecosystem. South African, Nigerian and Kenyan startups have raised 30x to 40x more money than Morocco in 2018. Furthermore, the start-up ecosystem is not necessarily addressing education challenges and has supported other sectors like energy, financial inclusion and health.

The education technology sector is slowly emerging in Morocco as it faces important cultural, institutional and economic barriers. Despite the strong needs enhanced in earlier sections, the Edtech landscape in Morocco is sparse. Several projects emerge in E-Learning but they tend to be funded and implemented by big corporates rather than by start-ups. These big companies have the resources to invest in internal solutions to train their employees on specific topics, and they tend to rely on foreign players that propose a ready-to-use E-learning solution. For instance, the Telecom company Inwi has invested in e-learning solutions for its employees. This configuration does not help the local ecosystem of start-ups to grow and experiment new services and places the focus on employees (and in particular middle management) and much less on students. But local start-ups like Nuppio have emerged to provide companies with e-learning solutions. Another constraint is the public procurement process that is not adapted to innovative companies and does not help start-ups and emerging players to access public contracts and to climb the learning curve. An important difficulty is also grounded on the capacity and willingness of students to pay for educational content outside of schools. Moroccan students are not used to accessing paying content on the internet or via other platforms, as they already pay high level of fees to enrol in expensive schools and universities. Intense efforts to raise awareness and interest of students would be required to increase the demand in these services, provided that they do increase educational outcomes.

The landscape is composed of a few established players that experience difficulties to scale up sustainable BTC models. The exit of numerous upper-class students in other countries (France in particular) deeply affects available local revenues for supplementary education and e-learning models. Due to the poor capacity of middle-class families to pay for Ed-Tech solutions in addition to private schooling, BTC models do not necessarily spread out in the Moroccan landscape. In a sense, the privatization of higher education does not facilitate the emergence of additional private Ed-tech solutions in a context of revenue stagnation and fees inflation. In this context, start-ups may focus on BTB models where they provide education solutions to universities, vocational centres and corporates, and so indirectly to students, learners and employees. The business evolution of a start-up, Education Media Company (EMC) very much symbolizes this dilemma between BTB and BTC models, as it is analysed in Box 2.41.

Box 2.41. THE MAROC NUMERIC FUND AND THE EDUCATION MEDIA COMPANY

The Maroc Numeric Fund (MNF) is a Moroccan investment fund to support innovative businesses in the fields of education, technologies and media. The first fund raised 100m MAD from public bodies (1/3) and national banks. MNF I did 17 investments among which the only one was made in the education sector, the Education Media Company, in 2015. MNF II is being launched and targets a fund size at 200m MAD.

The Education Media Company (EMC) is a Moroccan startup launched by Adama Bouhadma and based in Agadir, aiming to facilitate student orientation after the baccalaureate. The firm manages a reputable online information platform, “9rayti” since 2009. EMC manages 5 different education websites which provides references and information about universities and “Grandes Ecoles”: practical information, the application process, programmes and tracks... (9rayti.com, Concourat.com, PrepaBac.ma, iLycee.com et MaFormation.ma). These websites also provides information about secondary education institutions across the country. EMC raised 250k USD from MNF in 2015, who became a minority shareholder.

EMC has explored different business models to achieve profitability. The current model is a B2B model that is totally free for users (students and their families), and paying for universities and “Grandes Ecoles” which buys referencing and marketing spaces on the websites. They may buy data about the users of the website to launch targeted mailing campaigns, organize student events etc. The Websites benefit from a base of users that reach several dozens of thousands of people but which have to be renewed yearly. However, in 2013, EMC tried to launch a B2C model with e-learning modules for accessing prestigious higher education institutions. This programme failed since free content was already available online and the payment conditions were not optimal. In this regard, finding the right (academic) partners appears to be essential when looking at e-learning modules production. According to EMC, it was very hard to produce qualitative content (with an interactive model) to justify a paying model. EMC has also recently benefited from a grant by CFI (the media group, with France 24) and the EU to produce school orientation videos for the youth.

EMC model is today sustainable but fragile. Important efforts are made yearly by EMC to find new partners and to refresh the users database on different websites and platforms. EMC has managed to maintain the 9rayti platform as the leading platform on the national landscape, which opens new opportunities for additional marketing strategies and B2B models. But the limited market size, substantial school fees inflation and stagnant revenue of middle classes across the country impacts the development perspectives of this promising startup.

Education finance

Our research and interviews show that traditional finance solutions exist in Morocco to access higher education and vocational training. These solutions are generally provided by banking institutions and which can be guaranteed by a public agency like the Caisse Centrale de Garantie¹⁴⁹. Considering the recent fee inflation in the sector, providing additional financing solutions like student loans could boost the competition between traditional providers and enable wide access to higher education. But to our knowledge, and considering the current players' positioning, there is little opportunity to invest in education-dedicated finance/microfinance solutions to impact the demand-side for education like it can be the case in Côte d'Ivoire or Ghana.

Teacher training

Teacher training is one of the key dimensions to address the quality challenge of the education system. Support private organizations to invest in this activity may constitute impactful opportunities to address the shortage of qualified and trained teachers in the basic education cycle. At the pre-primary level, the public strategy of generalization will heavily rely on private-sector initiatives, what opens a window for creating and developing educator training centers. Some early-stage projects are emerging to provide high-quality initial training to educators and teachers, sometimes based on modern pedagogy like Montessori. One key challenge of these projects is to obtain accreditation by building a partnership with a local or foreign institution. Other teacher training projects may be developed internally by existing universities.

Transports

Transportation is a key challenge to improve school access in Morocco. Parents pay a lot of attention to how their children go to school and whether they are in security when commuting from home to school. Allocation of transport is significant in the education budget family. The development of safe collective transport solutions in peri-urban and rural areas can facilitate access to schools, especially for girls and young women.

6. Policy context and regulation of private players in education

In this sub-section, we gather some information concerning regulatory and administrative constraints impacting the opening and development of private education providers in Morocco. To do so, we look at three levels of regulation: licensing, operations, investment activities.

Licensing and operations

The governance of the education sector has been largely improved in the last year. In higher education, there are three levels of control and licensing which are regulated by the ANEAQ:

¹⁴⁹ <https://www.9rayti.com/article/credit-etudiant-maroc>

- opening authorization
- accreditation
- state recognition of the institution

These levels imply different standards and thresholds in term of staff qualification as well as other regulatory constraints. For instance, a HE institution needs 15 to 25% of permanent teaching staff to acquire the opening authorization, more than 30 % for the accreditation level, and more than 50% for the equivalency. In addition, at least 50% of teaching staff should be PhD holders. The evaluation process regarding these conditions is quite strong and includes an administrative process, a self-evaluation step and a field visit and control by the Agency staff. The Agency has the capacity to withdraw accreditation to institutions that do not comply with these standards.

To our information, the regulatory framework is quite similar in other education cycles.

Investment activities

The business environment is very favourable to foreign investments, including the education sector. A number of investors consider Morocco as a business hub to invest in the African continent. Indeed, FDIs increased quite substantially in the last years (+23% in 2018 compared to 2017, reaching 2.7 billion dollars¹⁵⁰), attracted by the pro-business environment, the macroeconomic stability, and a number of structural assets such as the qualitative local banking industry (which is well established in African countries). Among the pro-business incentive policies, we should mention that foreign organizations or persons can start a business without partnering with a Moroccan organization or person. Also, there is no restriction of foreign currency repatriation as far foreign organizations are concerned. In order to drive investment in local firms, the local administration has implemented a new number of fiscal incentives, some of them being specific to the education sector. They include a lower corporate income tax rate during 5 years, the exemption of VAT on all equipment and infrastructure investments for a period of 6 months and the exemption of the business tax (“taxe professionnelle”)

The NBA website provides all the documents that are necessary for a tertiary institution to ask for accreditation, including a roadmap for accreditation.¹⁵¹ The website also and publishes the list of all the tertiary institutions that received accreditation.

¹⁵⁰ See the press article: https://www.lepoint.fr/economie/investissements-directs-etrangers-l-afrique-poursuit-sa-mutation-10-06-2018-2225841_28.php

¹⁵¹ See: <http://www.nab.gov.gh/2014-08-13-14-37-14/accreditation-documents>

PART 3

Investing in education for impact

▶ **Private sector dynamics in African education and possible interventions for an impact investor**

The country-by-country review presented in the previous chapter reveals that our sample countries sometimes share similar patterns, while other times present their own specificities with respect to the education challenges and needs and with respect to the place of the private sector in education. In this chapter, we present the common patterns and the heterogeneities that we identified in our sample countries, by education cycle. We also suggest possibilities of intervention for an impact investor in each of these cycles. When necessary, we also rely on examples issued from other countries.

As a reminder, in the introduction to this study, we have defined impact investments in education as **investments in i) organizations that deploy a sustainable economic model and may deliver positive financial returns to investors ii) contributing to achieving at least one of the main educational challenges** (i.e. access, quality or relevance) iii) and that are **complementary or consolidating**, rather than competing **with, the local educational ecosystem**.

1. Pre-primary

The development of pre-school activities in Africa is still limited and characterized by a diversity of actors and practices, leaving considerable space for new structuring initiatives. In general, our study showed that the pre-primary cycle (2-5 years) has suffered from the lack of long-lasting commitment from the governments. The international agenda has rather focused on primary education for children aged 6 and more. In this context, preschool initiatives have been mainly carried out by community actors, civil society organizations and associations. These players have played a key role in the construction and management of early childhood centres, particularly in rural and disadvantaged areas where socio-economic conditions seem much less compatible with the deployment of the private provision by lucrative actors. Preprimary public centres also exist but often suffer from the lack of resources made available by public authorities and the quality of childcare seems extremely variable. In urban areas where there is an emerging demand from the middle and upper classes for quality pre-school education, the opportunity to develop lucrative provision has gradually increased. Indeed, we see the emergence of early childhood centres that are neither managed by community actors nor attached to a public administration but operated by individuals in the form of private schools. In our sample countries, there seem to be very few examples of the development of large-sized networks, outside official foreign networks (such as French schools). The difficulty in setting up networks is partly due to supply-side challenges such as the hard access to banking resources to finance the installation of dedicated infrastructure. It should also be remembered that many early childhood centres are attached to school groups that also include primary and sometimes secondary education. Hence dynamics of these cycles are often intertwined.

A strategic momentum in favour of pre-schools is likely to expand in the coming years. The universalization of pre-school education is not on the agenda of many African governments. Ghana seems to be the exception in having introduced compulsory pre-school education, and Morocco is also engaging in this direction. Nevertheless, governments seem to be increasingly aware of the importance of pre-school education and are moving towards direct or indirect support for this cycle (e.g. the creation of transitional primary school classes in Madagascar and Côte d'Ivoire). These recent efforts to facilitate the development of supply in this cycle tend in some countries, such as Morocco, to rely on incentives or support mechanisms for private operators entering the market (land or infrastructure donations, subsidies, etc.). Government strategic plans often rely on the mobilization of community and for-profit actors to counterbalance the lack of resources needed to generalize the public offer in this cycle. These plans also call for more investments in the training of educators, which will benefit all stakeholders in the sector, both public and private.

The regulatory context around pre-school education is still quite flexible and should evolve considering the momentum mentioned above. The situation seems to give private operators considerable flexibility to test new educational models (e.g. Montessori pedagogy), but makes the certification process in the local educational landscape more uncertain due to the high heterogeneity of practices. Regulatory differences exist between countries, but the trend seems to be broadly similar. On the one hand, there are regulatory barriers (on infrastructure, school ownership, facilities) to formally declare the school in the local ministry register. On the other hand, there are few constraints on the nature of teaching content and practices as in most countries no official curriculum for pre-school exist, as well as on the qualifications of educators (there is lack of regulation and/or control in the training of educators in private institutions).

Regarding the access and equity issues, available data shows that private operators are hardly able to enrol the poorest segments of the population in their early childhood centres. In fact, private preschools are mainly urban and address the demand of middle and upper classes, while in rural areas, private initiatives seem to be much less numerous, if not almost absent. Nevertheless, the available supply seems not sufficient in urban areas too, even for middle-income populations. There is a need to develop high-quality pre-school education aiming to be complementary to the public one in terms of geographical localization and pedagogical content

The quality of private initiatives is quite heterogeneous, but entrepreneurs who are aware of best practices in learning could be able to bring strong innovations to the sector. These entrepreneurs, some of them having a professional background in education provision, can develop new pedagogies based on children empowerment, games, the discovery of foreign languages and other practices that allow a wider and deeper learning experience. Teaching practices in pre-schools from our sample countries tend to be quite poor, and with inappropriate pedagogies (sometimes more related to the goals of primary education than those of pre-primary education). Thus, there is a large scope for innovation and improvement for the development of evidence-based successful early childhood programmes.

To ensure quality, private providers need to be able to recruit qualified teachers or educators, to keep the pupil-to-teacher ratio low and to invest in decent infrastructures. Faced with these costs, school proprietors need to fill up the classes in order for their school to be economically sustainable. Some pre-schools centres may face high competition in dense urban zones, which makes their business relatively precarious, with limited prospects of scaling up. The expansion of private pre-school institutes could favour the establishment of a divided pre-school system, where children from better socio-economic background go to private pre-schools, while the ones from low-income families at best go to public schools if they find a place. It seems thus very important that these initiatives make an effort to diffuse their innovation and good practices to the local ecosystem.

What windows of opportunity for an impact investor in preprimary education?

The above cycle analysis suggests that access to preschool is limited to a narrow part of the upper-middle urban class and its quality is often low, and this is true in all sample countries. An impact investor will thus find very limited opportunities to play a key role in improving equitable access to pre-primary education as we believe that lucrative provision models are hardly able to integrate the poorest households. Nevertheless, it could have comparative advantages in testing innovative pedagogical practices, that although would first benefit the upper-middle class, because of their costs, could then eventually be disseminated to the rest of society.

Thus, a potential intervention of an impact investor in the pre-school sector should target: (i) **an economically sustainable organization promoting innovative and/or effective pedagogical practices** in early childhood development and learning, with high differentiation from the common practices observed in the country (ii) with a **committed approach to improved accessibility and inclusiveness** and (iii) and able to **generate positive externalities** on the local ecosystem.

On the first point, it seems desirable to support innovative and educational projects rather than to support traditional actors. This means, for example, supporting the establishment of the first Montessori school network in a given country. Impact investment could help to increase the number of beneficiaries of new pedagogical approaches, strengthening the structure of the schools proposing these approaches and even considering the creation of schools' network.

On the second point, it seems important for the impact investor to support a promoter who is sensitized about the equity challenge and willing to take measures to promote access to lower-income communities. Several modalities could be considered, from equalization systems within the same school or between different schools (privileged residential districts, low-income districts, peri-urban areas, etc.) to a subsidy mechanism targeting children from non-privileged neighbourhoods. The investor contribution on this strategic reflection and on the additional resources (e.g. Technical Assistance) to be mobilized could be a driving force to increase access.

On the third and last dimension, it seems essential for an innovative and qualitative preschool model to generate positive externalities on the local ecosystem. We consider indeed that these models should indirectly benefit other schools and/or other local stakeholders. This could be done by implementing an educator training project where the new (pedagogic) practices could be taught and transferred to trainees who will use them in other environments (e.g. public schools). Another dimension could be the funding of impact evaluation to raise awareness about a specific model. Other actions on communication, experience sharing, advocacy and dialogue with public authorities appear as interesting ways to diffuse these innovative practices. The idea behind this intervention would be to produce a demonstration effect that could initiate an evolution of practices from within the system.

Finally, approaching the sector by supporting ancillary activities could also be considered. As mentioned before, one option could be the investment in the initial or in-service training of educators and teachers, especially in the countries where a formal training does not exist. Another investment opportunity could be the development of the editorial offer for early age children.

2. Basic Education

There has been a general agreement for almost two decades on the fundamental need to improve public basic education provision in African education systems. Since the MDGs and then the SDGs, basic education has received a substantial part of African governments and their partners' attention. With compulsory education from 6 to 16 years in most African countries, the State plays a major role in ensuring the basic education of each generation of children. Gross enrollment rates have increased considerably but stand at different levels, with still more needs in the Sahel and in Madagascar. The increase in enrollment sometimes determined a rise in the number of pupils per class that reached alarming levels in some areas. In addition, primary education completion and transition to secondary education remain major challenges, particularly in rural areas. Nevertheless, it seems that the general cursor of public education policies is gradually shifting from the issues of access to the notion of quality education, recognized as the new priority on the international agenda and for which governments are struggling to find solutions at the scale.

The deficit of student learning in government schools leads a part of the population to favour enrolment in private primary schools. These schools are often perceived as providers of better supervision of children (including through reduced teacher absenteeism). Private primary schools are expanding in many African countries and often, due to their number and small size, remain out of sight of education ministries which are often deprived of a strong capacity to control them. With an extremely variable degree of quality, sometimes due to difficult recruitment and retention of teaching staff, private primary schools do not necessarily complement the local ecosystem as they have little or no added value in terms of education access, relevance or quality.

Concerning lower secondary education, most African countries struggle to guarantee universal access and sometimes rely on private providers. In this specific cycle, the need to increase the available supply remains significant, because of the demographic driver and of the generalization of primary education. The private education sector contributes (more or less according to the country) to accommodate a rapidly increasing number of students. In some countries, such as Burkina Faso and Côte d'Ivoire, allocation or subsidy systems have consolidated the private provision of secondary education. These systems of public financial support to private providers increase the available supply and support institutions that are sometimes precarious. However, the allocation of funding may not always be optimal and directed to the most-needed institutions or areas. As public secondary schools also face quality challenges, private schools sometimes appear more attractive, what can lead to forms of social division between the public and private spheres and may contribute to the intergenerational transmission of inequality.

Faced with the difficulties encountered in primary and lower secondary education, public authorities have different approaches with respect to the role of private players. Some governments seem to want to slow down the expansion of the basic private schools and reaffirm the prevalence of the public system, while others plan to rely more on the private sector to expand access to basic education, especially in the (lower) secondary cycle, sometimes through subsidies. To a lesser extent, some governments, such as Liberia's, engage in pro-active cooperation with the private sector through public-private partnerships and delegate a part of their mission to school networks that have demonstrated some experience in managing large numbers of students. All sample countries aim to reinforce the regulation and the control system of the private sector.

Public and private institutions can face common challenges. Both public and private lower secondary schools face significant challenges in recruiting and retaining quality teachers, particularly in science subjects. They also share the challenge of accessing quality school equipment such as updated and quality textbooks and school management software programmes. More generally, the support to ancillary activities providing quality education inputs (goods and services) including technology, to private and public education providers would help to address the overall learning crisis with better materials, and potentially strengthen all types of providers in the education system.

What windows of opportunity for an impact investor in basic education?

Unlike other education cycles, the basic education system is compulsory in all sample countries and more generally across Africa. This implies that the state is committed to guaranteeing all children free access to primary and lower secondary schools, usually up to the age of 16. One implication of this is that private providers, especially the lucrative ones, are sometimes considered less legitimate to directly intervene in this cycle unless the state explicitly asks for the support of

the private sector to comply with their obligations¹⁵². The impact investor should then follow a very cautious approach to this cycle.

Direct support to private schools in basic education could be problematic, given the necessary alignment of the impact investor with local government strategies. As described above, most governments seem committed to stabilize the contribution of private institutions to basic education and, above all, to control it better. Under these conditions, it seems politically sensitive to engage direct and explicit support to private institutions without risking breaking the imperative of alignment but also complementarity with local public actors and their strategies. These concerns seem even more sensitive for investments in low-cost standardized school networks that seem to currently struggle to meet the quality challenge when scaling up their model¹⁵³.

Indirect interventions through the support for ancillary activities are a pragmatic way to help to build effective economic models and to produce diffused impacts on the ecosystem. The provision of education goods and services could benefit the entire educational ecosystem and could have a considerable impact on the issues of quality and access, including in the public system. Nevertheless, these ancillary activities have their own constraints, whether it is competition with an informal sector for textbook publishing or the difficulty of stabilizing a robust business model for the education technology sector. Comprehensive support from the impact investors, in terms of financial resources, technical assistance and strategic coaching, could make all the difference and enable building local leaders in sectors that are often underdeveloped in the country.

Impact investors could also take into consideration the possibility to indirectly support (low fees) private basic schools through school-focused microfinance and capacity building programs, following the example of the IDP foundation in Ghana. This kind of interventions would improve the learning conditions for many lower middle-class students, by increasing the opportunities for these schools to invest in infrastructure and equipment. However, by focusing only on private providers, this kind of interventions risk to induce an increase in the fees required by private schools and thus to increase the gap with public schools. Training programs for managers and teachers of both public and private institutions would, therefore, be preferable to a program aimed solely at the private sector.

¹⁵² The recent adoption of *Abidjan Principles* by many civil society organizations and other education stakeholders show a growing mobilization for limiting and regulating the private provision of (basic) education across the world. See the full text here: <https://static1.squarespace.com/static/5c2d081daf2096648cc801da/t/5caf90114785d3c2ac9b7eef/1555009556517/Abidjan-Principles-Designed-online-v4.pdf>

¹⁵³ Some of them recently received several critics mainly on the standardization of their contents (see box 2.15 in section 5.1).

3. Upper secondary and TVET¹⁵⁴

Upper secondary education, technical education and vocational training (TVET) have historically been less supported by governments and international institutions. Unlike basic education, the international agenda for supporting upper secondary education, especially technical and vocational, has been limited in the last two decades. Access to these cycles is generally very low in the sample countries, where the number of institutions is also very low. General and technical high schools remain inaccessible for a large part of the population, which tends to drop school after completing lower secondary education (i.e. at the end of compulsory schooling). Mostly located in urban areas, high schools and TVET institutions hardly reach children living in rural areas. The situation of technical and vocational high schools is particularly problematic because of severe public under-investment that has lowered the quality and undermined the relevance of this type of education, often making these institutions unattractive to families and students. Private institutions have to deal with the same effects of generalized under-investment and quality degradation. Governments agree on the need to attract more youth to technical and vocational secondary education, but effective solutions have yet to be built at scale.

The role of the private providers in upper secondary education and TVET is very heterogeneous across the countries we visited. Concerning general upper secondary education, in some countries, private providers are not very common and sometimes, like in Ghana, they do not benefit from a good reputation, while in other countries such as in Morocco, high-fee paying high schools are very attractive for the upper classes. The situation is different in Madagascar or Cote d'Ivoire, where the share of high-school students enrolled in private schools is very high.

Concerning TVET, some countries such as Morocco have built powerful public bodies to structure the vocational training sector. In Ghana, where a very low number of students enrol in technical and vocational education, private technical institutions do not seem to be attractive. In Madagascar, a fund for vocational training has been launched, which could facilitate the rise of new public and private players. Other countries have a very different landscape where private institutions host the majority of students enrolled in technical and vocational education, as is the case in Cote d'Ivoire. However, our field studies show that all countries face huge challenges in providing students with quality training that is relevant to the labour market. One of the reasons is the high cost of equipment that is needed in technical and vocational education. Another is the lack of coordination with local employers. This adds to a major shortage of training opportunities in some technical fields, for which equipment and trainers might not be easily available in the country.

¹⁵⁴ These two cycles have their own dynamics but are analyzed in the same section for simplification purpose. Although some countries introduce some technical education at lower secondary school, pupils usually need to select between general and technical or vocational education when starting upper secondary education. So here TVET refer to upper secondary and post-secondary vocational and technical education.

In-service vocational training in our sample countries shows varying dynamics and generally targeting well-established companies, in particular, large and/or international companies. These companies develop their own initiatives with internal resources, sometimes by working with local vocational centres. Collective funding systems of continuous training programmes were also established (like in Morocco and Côte d'Ivoire) or are barely emerging (Madagascar) but often struggle to benefit SMEs and to provide them with relevant and updated training opportunities. In the most dynamic zones, vocational players enter the sector to work in close collaboration with local employers in order to provide them with tailored training solutions, sometimes grounded on e-learning or blended education.

What windows of opportunity for an impact investor in technical secondary education and vocational training¹⁵⁵?

The analysis of the dynamics and challenges in these cycles shows that the contribution of the private sector to develop the supply, relevance and quality of training can be crucial, especially in technical and vocational education. Direct support for technical institutions in strategic sectors can have a significant impact on youth employability. It may bring value to these types of training schemes through enhanced quality and attractiveness, in a context where the role of the State is, in fact, less predominant. However, the likelihood of finding sustainable economic models in these technical sectors remains unknown; we will come back on this issue later. At this stage, we only point out that the use of technologies may enable technical training projects facing significant upgrading costs to find more sustainable development models. Indeed, technology may lower the costs of education provision, as well as significantly extend the users' base. More generally, it seems desirable to support TVET projects that succeed in including employers in curriculum construction, that focus on students' job readiness (through apprenticeship and work-study systems) and that make substantial efforts in job placement.

Training support for entrepreneurship in job-creating sectors such as in construction services (plumbing, electricians, and masons) also appears to be an important way to improve the integration of young people through self-employment. Support for ancillary activities would also be relevant, particularly in the area of teacher and trainer training.

4. Higher education

The student population growth in higher education raises a major access challenge in many African countries, in a context where the capacity of public institutions is reaching saturation. The increase in annual cohorts of incoming students is the result of several factors: a demographic effect (as in Madagascar), institutional reforms at the secondary level (as in Ghana) and an overall increase in students' school life expectancy (as in Morocco). As a result of these

¹⁵⁵ We do not focus in this section on opportunities to support upper secondary generalist education as we already deal with lower secondary education (in the previous sector) which provides quite similar opportunities and challenges.

dynamics, public universities are now overloaded in many contexts and struggling to adjust their capacity to the rising number of new entrants. Moreover, despite this increase in demand, higher education is still far to be accessible to lower social classes. The need to expand access to the higher education system calls for urgent reforms to improve the efficiency of public institutions, but also for a more inclusive private sector.

The private sector expansion in higher education has indeed largely contributed to increasing the supply for new generations of students, but it also raises issues of quality and equity.

There is a common dynamic in our sample countries: the proportion of students enrolled in private institutions is rising. This occurs at different degrees across countries since each of them presents specific characteristics. In Morocco, the proportion of the population enrolled in private education remains low and is explained by the rise of school fees, which makes these institutions inaccessible to many households. In addition, student migration to Europe limits the growth of private universities in the country. In countries such as Burkina Faso, Ghana and Madagascar, the private sector has increased more significantly and now accounts for a quarter to a third of the student population. In Côte d'Ivoire, the phenomenon is even more significant and now half of the student population enrolled in private universities. This expansion has been encouraged by the subsidies' system that is sometimes poorly calibrated or allocated. The expansion of the private sector in higher education calls for the development of efficient regulation systems, in contexts where regulatory capacities are often very low. Some governments have already established regulatory bodies that are in charge of controlling the quality of private providers.

The employability crisis in higher education is the equivalent of the learning crisis in basic education: the alarming situation affects all institutions and stakeholders, but solutions at the scale are still not available.

The mismatch between skills provided by the educational institutions and those demanded on the labour market characterizes, at different degrees, all African countries. This seems to occur for several reasons. First, most students enrol in general and theoretical tracks, particularly in humanities, that offer poor labour market opportunities. It is unclear if this occurs because of the students' preferences or because of the poor supply in (high-cost) scientific programs that are more in line with the labour market needs, like computer science, engineering or medicine. It is a fact that most governments struggle to reorient students towards the scientific programs, but it is also true that most private providers offer programs in business, management, arts or social sciences, where school equipment costs are lower.

Another reason for the skill mismatch is the difficulty for higher education institutions to constantly align their programs with the changing realities of the economic environment, which also creates few formal job opportunities. A constant connection and dialogue with potential employers would be necessary in order to make training more relevant, but these efforts are not always provided, either because of lack of resources or lack of incentives. The capacity of institutions to invest in training updating and student monitoring and coaching is very uneven. Finally, the lack of training in transversal (soft) skills (e.g. communication, adaptation, etc...) penalizes graduates when

searching for a job or in the pursuit of career paths. These difficulties affect both public and private higher education institutions, but to varying degrees and in different economic environments.

What windows of opportunity for an impact investor in higher education?

In view of the analytical elements presented above, it seems that several strategies allow the impact investor to support the emergence of high-quality, accessible and relevant private institutions.

Support for scientific training courses (e.g. medicine, agronomy, engineering, IT) or niche professions (e.g. architecture, design), in accordance with the strategic priorities identified by governments, seems to be a priority. This strategy would make it possible, on the one hand, to strengthen the complementarity between public and private higher education and, on the other hand, to contribute to match the provided training with the needs of the local economy. This intervention strategy may require significant investments to renew or build appropriate infrastructure and an important increase in the number of students to strengthen the economic performance of institutions with additional revenue and stabilized pricing. The provision of subsidies to set up scholarships or other mechanisms to allow (at least a partial) access to low-income students would be very beneficial to increase social diversity.

Investment in generalist universities or business schools seeking financial support to build infrastructures can be considered, but caution must be given to the real additionality of the impact investor. Generalist universities with high volumes of students are most likely to have a sustainable economic model, but not necessarily a positive impact performance in terms of employability. Impact investors aiming to support them could probably combine financial and strategic support with technical assistance and action-research efforts to improve the employability of graduates. In some cases, big-sized generalist private universities may be directly competing with public institutions. This raises the question of whether supporting them strengthens or weakens the public sector. In countries with very few investors (typically fragile countries) and with heavily overloaded public institutions, investing in generalist universities that focus on the quality and the relevance of the programs they offer could be a valid option for an impact investor. Conversely, in countries where commercial investors are already able to provide funding and assistance, it might not be recommendable to use impact investing to support these types of universities.

It also seems important to consider an indirect approach to the sector by supporting the deployment of ancillary activities, particularly in the field of distance learning technologies. The support of distance learning technologies and other valuable services to the students (loans, remedial education, job placement platforms etc.) may be of great impact on the local ecosystem, even more, when there is no direct investment opportunity in core education provision.

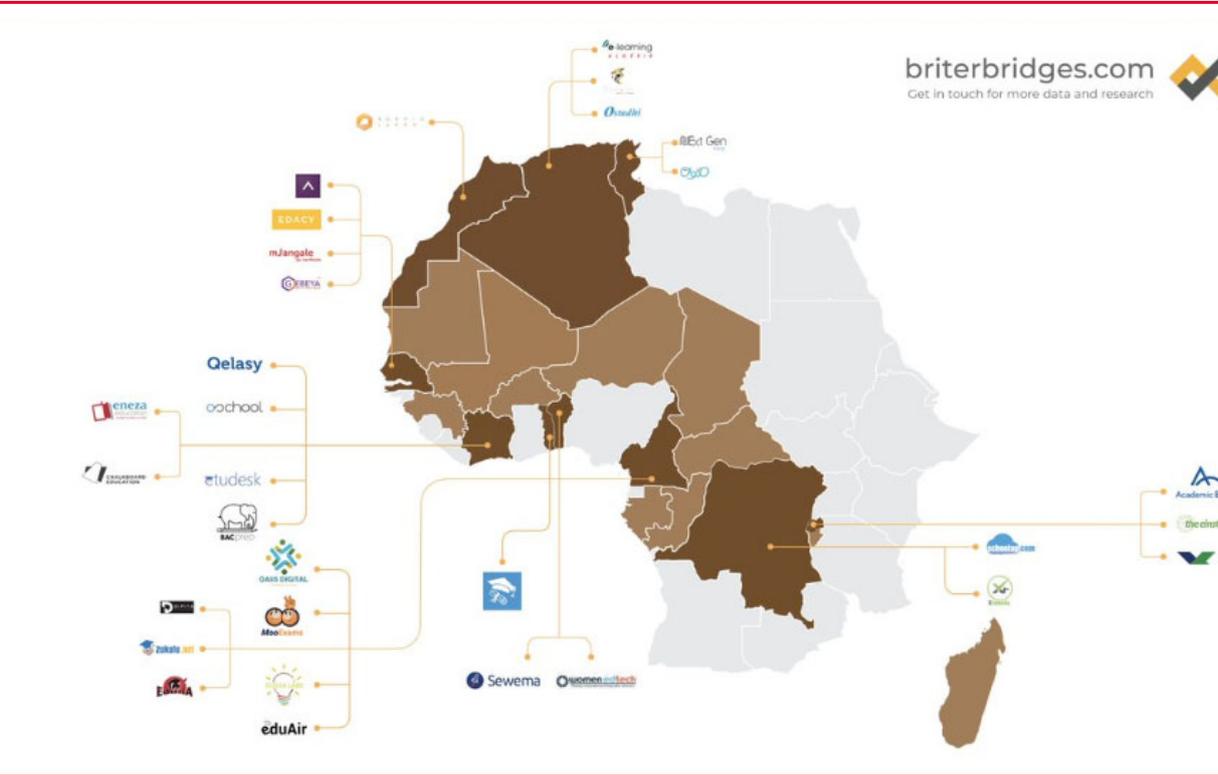
Education technology initiatives are particularly relevant for higher education where the access and quality imperatives are not sufficiently tackled by local governments, donors and other

investors. They may be relevant for the other education cycles as well. The sector seems particularly interesting for impact investors: this is why we consecrate the next section to highlight the opportunities and challenges it may provide.

5. Education technologies: a range of ancillary activities with strong impact potential

A diverse sector of education technologies is emerging in Africa, but with a significant gap between Anglophone countries and the rest of the continent. This geographic gap seems to be linked to economic factors (average income of the country, quality of telecommunication infrastructures), institutional factors (business-friendly environment, promotion of technologies) and perhaps socio-cultural factors (openness to, and awareness of technologies). There are a large number of technology initiatives in Kenya, Nigeria and South Africa, while the Burkinabe and Malagasy landscapes are much more sparse in this respect. Figure 3.1 shows indeed that most Sahelian countries, as well as countries in Central Africa, are deprived of ed tech models. However, there is some dynamism in Côte d'Ivoire, which could be, with Senegal, the gateway to French-speaking Africa for innovations that have emerged in the English-speaking countries. This is probably due to a better quality of infrastructures, to a more dynamic growth trajectory and to a larger domestic market than in neighbouring French-speaking countries.

Figure 3.1. Ed-Tech Companies in Francophone Africa



There are multiple technological models of education that can produce significant changes in pedagogical approaches, information flows and organizational modes of educational institutions. Distance learning models are the most visible part of these innovations and consists of technological platforms storing educational content provided to different types of beneficiaries through Internet websites and apps (e.g. Etudesk in Côte d'Ivoire), tablets or SMS exchanges (e.g. Eneza Education). These models may disrupt core education provision by being delivered to large numbers of beneficiaries through remote access, provided that there are local suited infrastructure and equipment to access them as well as (cultural) acceptance to use them. The learning outcomes of distance learning are variable and would depend on different factors: quality of content, adaptive learning tools, diversity of media support, playful dimension. More broadly, the use of new educational media (audio books, web TV) and platforms (Apps, MOOCs, etc.) can also substantially multiply the number of learners and produce education outcomes. These models should be seen as complementary education providers which can help students and learners acquire relevant skills missing from traditional curricula. We observed, in our field study, that these models tend to include more and more direct supervision or contact with a tutor/teacher/coach or use peer-learning opportunities and group-based work to boost the learning experience. Blended learning models which combine distance learning with direct coaching or team-work project delivery have risen as one type of solution to this challenge (e.g. African Management Initiative in Kenya). Other technological models do not serve the learning function but include information programs and platforms that can facilitate the search and comparison of institutions (e.g. Education Media Company in Morocco), of programs and curriculum (e.g. Chalkboard in Ghana) and of job opportunities (e.g. Talenteum in East Africa and the Indian Ocean). Finally, the provision of software to manage student flows, school records, examinations and school staff management can also significantly improve school performance (e.g. Totem in Niger). These information and management systems can also facilitate the organization of courses and enable parents to better monitor their children's progress. They also improve and facilitate the organization and coordination of the management of teaching and administrative staff in big-sized structures.

Several types of economic models underlie these innovations and allow more or less space for generating returns and scaling up. From our understanding, it appears quite difficult for many ed-tech companies to stabilize their business models. Initial enthusiasm for some innovative ed-tech models has been confronted with the imperative to strengthen revenue collection and increase differentiation from open-access education platforms and from foreign established ed-tech companies. We observed various models where the final clients were the platform user, her parents, an educational institution, a third party organization (such as NGOs), the government, a company or others. One leverage for differentiation is to directly work with businesses and other organizations in B2B models to provide them with tailored value-added education/training content¹⁵⁶. Rapid expansion strategies (in one or more countries) are generally envisioned by ed-tech startups to compensate for the small size of domestic markets and/or pursue volume

¹⁵⁶ We come back to this point in the next subsection.

strategies. These strategies are not easy to conduct and require strategic alliances with (regional) telecoms agencies and other technical partners and capacity to adapt the model to different institutional and socio-cultural environments. To date, there seem to be few initiatives that reach significant client base, revenue in a multi-country setting, as we could observe in the mobile money and off-grid solar energy kits that constitute other waves of tech-focused businesses.

What windows of opportunity for an impact investor in education technologies?

It seems essential for investors to closely follow the evolution of the education technology sector and to support the most promising initiatives, particularly in French-speaking contexts where early-stage investors are scarce. Finding viable business models seems possible, provided that organizations have time to test their approach, proof the (pedagogical) concept and build the right strategic partnerships. The potential for impact at scale is then considerable. While the quality of e-learning models varies, they have a major interest in extending access to educational content to a wider audience, in a context where public universities are overloaded and where very few TVET institutions are present in rural areas. In terms of vocational training, there are many possibilities, as many start-ups will contribute to making training courses more playful, more flexible and above all more adapted to each learner. It should also be stressed that these technologies can contribute, through volume effects, to drastically reducing the cost of contents and thus provide a response to the need for equity in any education system. In addition, the impact investor has a fundamental role to play in technology transfer from one country to another, particularly if it has a regional or even a pan-African scope of intervention. By being able to address public, community, philanthropic or for-profit educational institutions, these initiatives have significant consolidation potential for the local ecosystem. For these many reasons, the impact investor must be positioned as a precursor and strategic sponsor of the sector, with long-term support for these models of educational innovation.

6. Conclusions

In this section, we provided key guidelines on whether and how to intervene as an impact investor in each education cycle and in the ed-tech sector. These guidelines are based on the transversal analysis of private sector dynamics and education challenges in our sample countries and need to be contextualized in order to be used in a specific country. This section did not present the types of education businesses that could be found in the different education cycles. This is the scope of the following section.

▶ The models of education businesses: analytical tools

General dynamics and context-based analysis are crucial to understanding what role may play an impact investor in education. But enhancing the role and the dynamics of private education providers is essential to understand what contribution each institution may have on the education challenges in Africa. In this section we make a zoom in the education space, looking at the key characteristics of private schools and ancillary services.

In this section, we use the term ‘private school’ in a broad sense and as a synonym of the private education provider. We include in our analysis all private education providers operating in all education cycles, from pre-primary to higher education and training. Our scope of private schools focuses on **independent and for-profit education providers**¹⁵⁷. The scope excludes non-state schools which are managed or substantially influenced by either (local or foreign) public administrations), confessional groups or other philanthropic organizations. We thus exclude from the typology not-for-profit schools as well as foreign private schools which are directly or indirectly governed by foreign ministries/associations as well as confessional schools which are fully operated and owned by religious associations.

1. Private education providers

1.1. Relevance and objectives of a new typology

During our field visits, interviews and research, we observed high diversity of private education providers. Education businesses are growing in most African countries, and so is their participation in the local education systems. Research about the different types of education businesses that form the very heterogeneous African private education sector is scarce. Most reports use the education cycles to differentiate the private operators (Dalberg, 2015) and sometimes include a variable of pricing, for instance separating low-cost from premium K12 education (Caerus, 2017). Other analyses rely on the main asset of education businesses and differentiate investments in human capital, infrastructures, technologies or ecosystem activities (Dalberg, 2013). We find these typologies very useful to approach the sector, and to some extent, complementary to each other. However, the business models within the same education cycle or asset-focused group may be very different, in terms of economic and impact performance. From an impact investor perspective, we consider that a new typology is needed to answer two crucial questions:

- What is the general economic model behind a private school?
- What is the impact potential of a private school?

¹⁵⁷ We also include “social business”-style private school which are not necessarily for profit but seek financial sustainability through commercial activity.

With this in mind, we believe it is important to select a limited number of key criteria to segment education providers in several homogeneous groups. We thus built our typology to make sure that each group tends to have common features in terms of economic model and impact perspectives. We grounded our typology (criteria selection, construction of groups) on the numerous interviews we had with school directors and project holders, as well as on desk-based research on their model. The new typology introduced in this section aims to inform on the types of business models education providers may rely on and on the constraints and the opportunities of development they face. In addition, the typology intends to assess what kind of educational impact these schools may deliver (in terms of access, quality, equity, relevance...). Finally, the typology seeks to understand what interventions (financing instrument and needs, type of support) could help these organizations improving their economic and impact performance.

1.2. Design of the typology

The business of core education provision in Africa implies a diversity of economic models, size, strategies, regulatory context as well as varying entrepreneurs' profiles and ambitions. Within the same education cycle and the same city, we encountered very different models, from international schools providing high-quality education, to affordable big-sized schools with attractive branding, to small-scale schools accessible to low-income families. We have chosen three main criteria to segment private education providers and assess their economic model and impact performance/potential:

School pricing

School pricing is a crucial factor for the quality and positioning of private schools. By school pricing, we mean the level of tuition fees (and additional cost to enrol) typically paid by the students. The pricing determines the level of school revenues and may be used as a proxy for the unit cost of student enrollment. Thus, it influences the ability of the school to deliver quality education, attract good teachers, invest in equipment or/and innovation, and serves as a signal on the market.

The pricing also influences the school capacity to reach different categories of populations and beneficiaries (elites, middle classes, low-income classes). It is an important impact indicator as it may enable/prevent the access of certain group of population. However, the pricing criterion per se function does not necessarily presume the type of beneficiaries that can access the school. Some schools may be costly but develop policies of scholarships to attract good students and increase social diversity.

Overall, we have observed at least 4 broad levels of pricing (high, moderate, moderate/low, low) chosen by the private providers we met. Due to the diversity of situations and systems in our sample countries, these levels may refer to different price ranges. The characterization of "low-cost" school is in itself a big debate within the literature where scholars use different methods and criteria (see for example Tooley and Longfield, 2016). For our study, we used data issued from

direct observation, interviews and sectoral analysis to position each school in a corresponding category of pricing.

Innovation

Innovation in education is a fundamental challenge to improve quality and increase school attractiveness. By innovation, we mean all qualitative improvements in pedagogy and teaching practices, in pedagogic materials and equipment including technologies. We also integrate into our definition of innovation the organizational innovations that impact the school performance (teacher management, fee-paying process, information systems etc). We also look more broadly at factors of differentiation that constitute a comparative advantage for a school in competition with others. This may include additional services or modules provided by the school (remedial education, IT classes, languages).

We believe that innovation, with this very broad definition, is a key and relevant criterion to segment education businesses. It should be noticed that innovation is inherently connected to the pricing function. High pricing provides revenues for the school to invest in new teaching practices or in modern equipment. Conversely, innovation may increase the economies of scales, improve school processes, allow the school to be more competitive, and eventually impact the pricing strategy.

We distinguish different type of innovation models:

- i. Disruptive innovation** refers to innovations that are extensively education technologies-based and/or concern organizational aspects. Disruptive innovation in this sense is usually associated with standardized educational content and teaching, as well as new payment processes (e.g. Pay As You Go model). These innovations could be characterized as access-oriented innovations as they seek to drastically lower the fixed costs of the business model.
- ii. High quality-oriented innovation** refers to a set of innovations targeting high standard of teaching, with heavy investments in teachers, equipment and infrastructures. They may also include internationally certified training and diploma or innovative pedagogy.
- iii. Incremental innovation** designates a range of small innovations that enables progressively the school to be more competitive and attractive. These innovations are not necessarily sophisticated education content or practices but constitute factors of differentiation that are appealing for the students. It may include a specific course (ex. teaching of Mandarin), a modern campus, a career service or a partnership with a North American University.
- iv. Limited innovation** generally results from schools that have little capacity to invest and to experiment with new practices or equipment. These schools follow the traditional education model (generally duplicated from other players in the system) and, sporadically, infuse some new contents and modules when they have the (financial) capacity to do so.

Growth strategy

There are various growth strategies implemented by private schools. By growth strategy, we mean the willingness of entrepreneurs or school managers to expand the school capacity/number of schools according to a specific plan. In other words, the growth strategy designates the aptitude of the school management to increase and improve its provision of education services. Thus, while pricing and innovation are crucial to understanding the demand side of education businesses, growth strategy would consist of supply-side characteristics.

The magnitude and speed of growth targeted by the manager tend to follow different patterns:

- i. Strong growth strategies:** quick and high expansion targeted (typically through the opening of new sites in the country, or in other countries), with an entrepreneurial mindset
- ii. Moderate growth strategies:** progressive expansion (typically through the opening of additional training curricula)
- iii. Low growth strategies:** limited expansion (typically aiming at building a few new classes).

Additional criteria for segmentation

We believe that the three criteria illustrated above are the most important when assessing the economic model and the impact performance of private schools. But other factors may be very relevant to understand the model of private schools. We consider at least 5 key additional criteria which are the education cycle, the maturity, the infrastructure component, the certification of degrees and the exposition to public resources.

- iv.** Schools differ according to the education cycle they operate. This has important implications for the complexity of teaching and learning (impacting the student/teacher ratio for instance) the pricing the family is willing to pay, the distance to school the children will be willing to accept, and many other features of the schooling model.
- v.** The infrastructure strategy also helps to differentiate across schools. Each school defines its infrastructure strategy that generally consists of a building acquisition (construction) or a rent strategy or a mix of both. This strategy will substantially impact the business model, the financing needs and the risks taken by the manager.
- vi.** The certification of degrees impacts the attractiveness of the school, the future of its students, and the relation to the public authorities. Some schools do not deliver certified training and are not subject to the regular control of public authorities. Some schools comply with the national certification system and make sure graduates can pursue to the next cycle/find a formal job/join the civil service. Other schools decide to provide international curricula that are generally more costly and may provide broader opportunities for the students.
- vii.** The exposition to public resources: private schools may rely on public resources to thrive and do so through different schemes (PPP, subsidies, transfers of students from public schools). These different configurations provide opportunities but also imply different risks in terms of funding (payment delays) and integrity (quality and administrative control).
- viii.** The impact policy: some private schools are aware of lack of equity and social diversity in their model and want to address these challenges with voluntarist scholarship

programmes, equalization fee model and other social initiatives targeting population groups that hardly access the school.

These additional criteria will be used in the typology to produce a sharper analysis on each group of schools and possibly to build subgroups of schools.

1.3. The four families of private schools

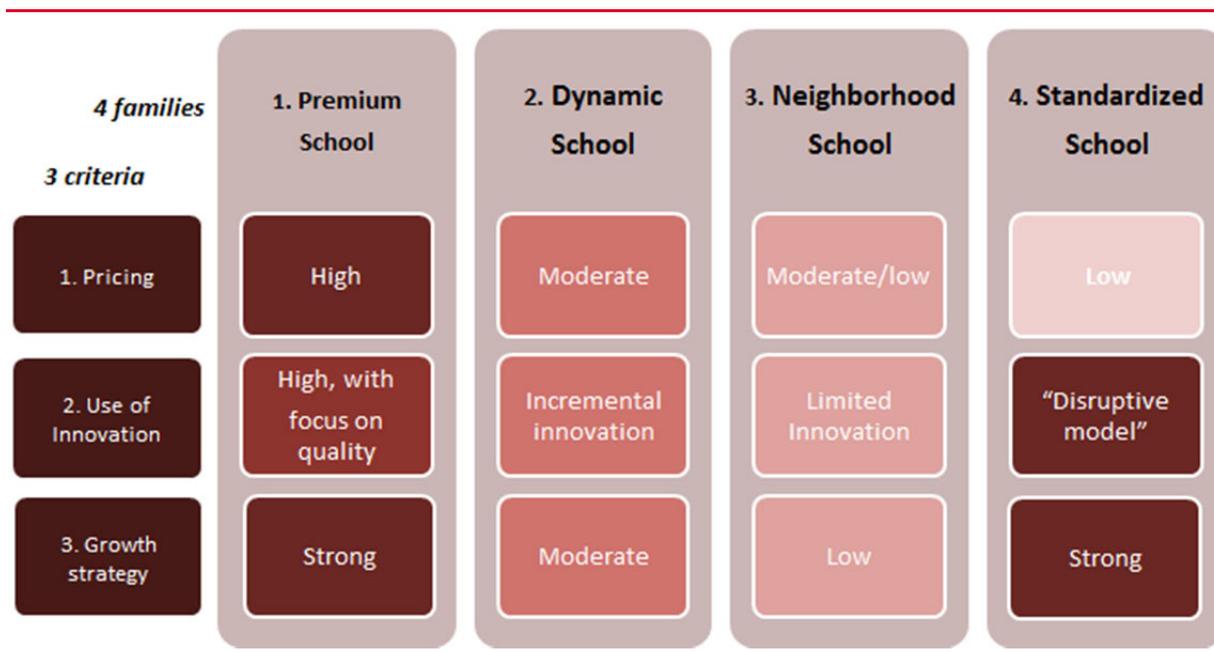
Basing our analysis of education businesses on the three main criteria we identified, we distinguish four families of private schools in the African education space: premium schools, dynamic schools, neighbourhood schools and standardized schools.

Each family of private schools is characterized by:

- A range of pricing
- Specific use of innovation
- A strategy of growth

We describe the main features of the 4 types of schools in this sub-section.

Figure 3.2. A typology of education businesses



1.3.1. The Premium School

Premium schools are a group of private schools characterized by:

- **High-fee paying model**, generally targeting high-income populations but may provide merit scholarship to widen access and social diversity (see below).

- **High quality-oriented innovation**, with an important focus on the quality and standards of infrastructures, equipment and teaching. Pedagogic innovation and/or international certification may be key differentiation factors for these schools.
- **Strong growth strategies**, which are usually grounded on the duplication of the model in other cities or countries, once the proof of concept is achieved, or in certain cases in the extension of the school capacity.

These schools are competitive because they provide high quality education and often supported by a recognized brand name. We observe that many premium school projects are integrated into strong growth perspective, on a national or international scale¹⁵⁸. In many cases, this rapid extension seeks **economies of scale** as some support functions are costly for the economic model (e.g. curriculum design, qualified staff in the administration, marketing costs, management wages¹⁵⁹). Among these premium schools, we understand that the analysis of business models and impact perspectives could be sharpened by at least three additional criteria.

Certification of degree

Some premium schools may be fully integrated into the local education systems and provide nationally-certified degrees. Conversely, other premium schools tend to be internationally-oriented and will provide international certifications and standards.

As introduced earlier, this component affects the business models as international certification usually require heavy investments in infrastructure, equipment and teacher training, and eventually increased the fixed costs of the model. Furthermore, the impact perspectives may differ between the two subgroups. National certifications ensure good insertion of the graduates in the local education system or labour market. In contrast, international certifications allow students to pursue their studies abroad, so they may contribute to increasing the brain drain phenomenon.

Infrastructure management strategy

The growth strategy is inherently associated with the infrastructure management strategy. We observe in general two infrastructure management strategies. The first strategy consists in building-up new infrastructures or acquiring existing ones to enable an expansion of school capacity. The second strategy consists of renting infrastructures.

The investment strategy in real assets may be influenced by investors' preferences (time horizon, cash-flow expectations, liquidity). In addition, depending on the education cycle and the pedagogic project, more or less flexibility is needed to adapt and customize the equipment and

¹⁵⁸ In this sense, premium schools differ from private schools which are run and/or funded by foreign administrations and apply foreign curriculum (typically French or American schools). This last type of schools, that is not part of the perimeter of our study, is generally not involved in fast-growth strategies.

¹⁵⁹ International networks of premium schools may bear additional costs, as holding costs, or foreign exchange market fees.

facilities. Quick school capacity expansion may be associated with rental operations that provide more flexibility, and require less cash-flow.

Impact policy

Premium schools are by nature very costly with a pretty high level of tuition fees. They are hardly accessible for a majority of the population in most African countries if not all. But the premium school managers may have a different approach to the equity challenge.

We understand that some premium schools are very aware of the necessity to increase social diversity and to attract brilliant students from low-income backgrounds. These premium schools may find mechanisms to broaden access, for instance by self-financing scholarships or finding philanthropic partners to do so. They may also set up equalization policies in their models to make sure low-income households may enrol.

Other premium schools are less likely to provide concrete solutions to the equity challenge. They may follow a specific marketing strategy targeting elites which give little space for social policies.

From the economic perspective, these impact-related choices may affect the cost-structure and the types of external investors that could invest in the premium schools.

Examples of African premium schools

- Asheshi University (Higher Education - Ghana)
- Enko Education (Secondary Education - Pan-African)
- Ecole Internationale de Rabat (Basic Education – Morocco)
- International Bilingual School of Africa (Basic Education – Côte d'Ivoire)
- Design and Technologies Institute (Vocational Training – Ghana)

1.3.2. The Dynamic School

Dynamic schools are a group of private schools characterized by:

- **Moderate pricing**, with a level of tuition fees that generally targets low and upper-middle-income classes, and may belong to a mass market strategy.
- **Incremental innovations** to improve education quality but also the attractiveness of the school. These innovations may consist of: remedial education services, multiples choices of academic courses, of foreign languages, extra-academic activities, niche field of studies, academic partnerships with foreign schools/universities, modern infrastructure and equipment, good staff qualification, use of technologies, partnerships with local employers, policies for internships). They constitute comparative advantages for the school and send positive signals to prospective and enrolled students and their families.

- **Moderate growth strategies**, generally focused on the national market, with a progressive expansion of school capacity (multi-sites schools or centralized campus with building land)

Dynamics schools are very important players in the private education system. They tend to be or become big-sized structures with a **high level of enrolment**. They are very visible players and have a strong interest in complying with regulatory constraints. A major challenge for them is to develop their **brand name** because they often operate on **competitive markets** and need to differentiate their offer (and justify higher pricing). In comparison to premium or neighbourhood schools, dynamic schools tend to research **volume strategy** to strengthen their economic model but do not neglect the quality of education.

Beyond these common features, the business models of dynamics schools may vary according to additional criteria:

Education cycle

Dynamic schools in different education cycles face different types and levels of constraints and opportunities. For example, the construction or acquisition of new infrastructures does not imply the same costs in higher education or in basic education and may depend more on external funding for universities and on self-financing for basic schools. The education cycle would also impact the types of requirements and compliance in terms of local certification. The size of the local market also depends on the level of education.

Certification

The same opportunities and constraints as for premium schools apply here regarding the delivery of local or international curriculums. However, Dynamic Schools may be more incentivized to invest in and deliver local curriculums since they tend to maintain a strong national anchorage and do not necessarily target enrollees seeking to study abroad.

Exposure to public resources

A key factor that impacts the business model of the dynamic schools is their exposition to public resources. Private schools may engage with the State in different types of partnerships to access to public funding. We observed that dynamic schools may enter these configurations to increase their revenue and enrollment and therefore stabilize their model. The participation to PPP and to student transfer schemes may also unlock additional funding from local banks, which is a key challenge for early-stage dynamic schools.

We also remark that such partnerships could become risk factors as public funding may be delayed or subjected to strong administrative control and potential corruption risks. These risk factors will be variable, depending on the government, education cycle and partnership configurations. In

contrast, some dynamic schools would rather make the choice not to be exposed to public resources, or may not have the capacity to do so for various reasons (regulatory status, size, cycle).

Infrastructure management strategy

The same opportunities and constraints as for premium schools apply here regarding the selection of the infrastructure management strategy (rental vs acquisition). However, we observed that the more the dynamic school becomes important and established in a given context, the more it may become interesting for this school to invest in estate and own its own infrastructure¹⁶⁰.

Examples of African Dynamic Schools

- Université Privé de Fès (Higher Education – Morocco)
- Institut Supérieur de Technologie (Higher Education – Burkina Faso)
- Education group ACEEM (Basic education and HE – Burkina Faso)
- Université Aube Nouvelle (Higher education – Burkina Faso)

1.3.3. The Neighborhood School

The Neighborhood Schools are a group of private schools characterized by:

- **Moderate/low pricing**, which tends to target low and middle-income classes.
- **Limited innovations** within a traditional education model and with little resources to invest in innovative practices or to upgrade or to build successful branding. May improve differentiation in selecting low-competition sectors/ in partnering with other organizations.
- **Low-growth strategy** due to scarce access to external funding and usually limited to small-scale projects. May accelerate through the support and networks of the entrepreneur.

Neighborhood Schools are generally small-size providers that have a **strong local anchorage**. Low pricing and proximity are two important assets for their beneficiaries. These schools have quite **precarious education models** (low-skilled staff or a limited number of skilled staff, little access to premium education inputs) but may invest in visible inputs which are not always related to the quality of teaching but constitute positive signals for students (school equipment for instance). These schools tend to rely on **fragile economic models** (low revenue, enrolment variability, weak profitability, no/little access to external funding).

Neighborhood schools may be **affordable** for large segments of populations (in comparison with other types of school) and may provide education in specific contexts where other institutions are

¹⁶⁰ That is what we observed in higher education in particular: many universities as they grow seek to build and own their campus for several reasons including dependency to local landlords with rental strategy and scarcity of adapted infrastructures for rent in most African cities.

scarce (remote area, niche training). In the end, their educational impact can be significant but it is also often constrained by their economic fragility.

Additional criteria may be used to sharpen the description and segmentation of these schools.

Education cycle

The capacity of neighborhoods schools to innovate and gain attractiveness on the local scale depends to a certain extent on the education cycle they belong to. Differentiation opportunities may be stronger in complex education activities, typically higher education and vocational training cycles. Beyond the proximity advantage, neighborhood schools may be more attractive when they offer programs that are difficult to find in the region/country. Such differentiation opportunities are poorer for basic education providers. Thus, growth perspectives of neighborhood schools may be more important in the higher education and TVET cycles.

Exposure to the public sector (PPP, student transfers)

As for dynamic schools, the exposition of neighborhood schools to public resources may provide interesting opportunities for the business model, but also risks and challenges. Therefore, those who enter or not in these public partnership configurations have different perspectives on development and impact.

We should mention here that many of these schools are not necessarily formalized and recognized by the Ministry of Education. Some schools have no resources to upgrade and to comply with the sector regulation. However, neighborhoods schools may also purposefully remain informal to escape any regulatory constraint to be more competitive, which may raise serious issues when it comes to education quality and outcomes. In all cases, these informal structures have little chance of entering into PPP to access to public funding.

Infrastructure strategy management

Again the infrastructure management strategy is crucial to understand the business model of any private school, including neighborhood schools. The same differentiation could be made between acquisitions versus rental strategies. Besides, the maturity of the infrastructure project will impact the types and levels of risks taken by investors, the amount of funding needed, and eventually the profit perspectives for external investors.

Examples of African Neighborhood Schools

- Michele Yakice School (Vocational training – Côte d'Ivoire)
- ISTH Tourism School (Vocational training – Morocco)
- Intellect Afrique (Basic Education – Côte d'Ivoire)
- ISTD Dental School (Vocational training – Morocco)

1.3.4. The Standardized School

Standardized schools are a group of private schools characterized by:

- **Low pricing**, (and low-cost structure) that purposefully targets low and middle-income populations
- **Disruptive innovation** which stands at the heart of the business model, and oriented toward the standardization of the model (standardized education processes/practices, education technologies), and based on organizational innovations (PAYG model for instance).
- **Strong growth strategies** that tend to be on a multi-country scale.

Standardized Schools tend to be grouped in **networks**. They were born with the explicit purpose to make private education accessible to low-income populations. Standardized schools tend to be managed by (international) entrepreneurs seeking to provide **cost-effective and innovative education solutions** to a large number of beneficiaries. The standardization of education content and processes may ensure an equalized learning at scale, in contexts where the staff may have the low qualification and little experience to do so. **Education technologies** are often used in this purpose, with more or less sophistication to adapt their content to their users. Thus, in some cases, the standardization of the model becomes excessive and threatens the quality of education. For this reason, some standardized schools have faced strong **reputational risks** and, according to many observers, did not necessarily contribute positively to education challenges. The business model of the standardized school is typically based on a large volume of beneficiaries, with lost cost school facilities and learning processes. In vocational training, alternative business models emerge and (partly) rely on the financial participation of employers¹⁶¹.

The analysis of standardized schools would be sharpened with additional criteria.

Education cycle

We observed that standardized schools are often found in the basic education cycle, but also in several fields of vocational education such as information & technologies, and could be probably developed in preschool models. The education cycle has a great impact on the mission of the standardized school network. In basic education, standardized schools may directly compete with

¹⁶¹ This type of business model is discussed further in the case study section with the example of Sanya in Madagascar.

the public system at a large scale but provide no guarantee to do better than government schools. In other cycles such as vocational training, the landscape is completely different and the entry of standardized low-cost schools could be very relevant to increase the available supply of training.

Exposition to public resources

The relation with the public sector is an important factor of analysis. In some context, standardized schools enter in public-private partnerships with the government, which enables them to grow faster and gain legitimacy in the national landscape¹⁶². Other standardized schools remain fully autonomous and provide an alternative to public schools (e.g. Omega Schools in Ghana) and may sometimes not comply with local regulation.

Infrastructure management strategy

As for other school categories, the infrastructure management strategy is crucial in the business model and the growth strategy of the standardized schools. We observed both acquisition and rental strategies in this category, with different implications for the shareholders and prospective investors.

Examples of African Standardized Schools

- Bridge Academies (Basic Education – East Africa)
- Omega Schools (Basic Education – Ghana/Liberia)
- Sayna (Vocational training – Madagascar)
- Rising Academy (Basic Education - Liberia/Sierra Leone)
- Silver leaf Academy (Basic Education – Tanzania)

1.4. Conclusions

We have shown in this section how diverse private schools can be in Africa. The private education sector is composed of institutions subjected to different dynamics, opportunities and challenges. Our typology demonstrates that identifying several types of private schools can lead to a better understanding of this space. We do not pretend that any African private school would fit perfectly to one of these four types of models and some schools are probably in-between. Nevertheless, we expect this typology to provide general guidelines for an impact investor wishing to invest in private education providers as it is suggested below.

Premium schools are the private providers which are best placed to explore innovative models of education and to shift the learning innovation frontier in a given country. However, premium schools rely on expensive equipment, human resources and know-how, what increases their pricing and make their model affordable only for a high-income population, except when scholarships can be funded by the school itself or by a third-party. The impact investor can support

¹⁶² We saw this happened in Liberia to the private chain Rising Academy for instance.

the growth of this type of schools but also help them to implement the mechanisms that could make the model more inclusive. Moreover, the impact investor could support the premium schools to produce positive externalities on their environment, as a way to diffuse their innovation and consolidate the local ecosystem.

Dynamic schools are significant players in the education space. They provide quality education, attract a high volume of beneficiaries and are generally economically sustainable. However, even if they are not elitist, they are still not easy to access for the lower-middle class. This raises issues about how more equitable access can be guaranteed, as for premium schools. The impact investor may invest in dynamic schools in particular when seeking to combine relatively mature business models and pedagogic projects. In higher education, where dynamic schools become attractive institutions for a growing number of learners, the impact investor should help these models to better suit the socio-economic environment and to complement the public provision of education.

Neighborhoods schools are probably the biggest category of the typology, in terms of a number of institutions. With low perspectives to growth, a fragile economic model and little innovation potential to improve quality, neighborhood school may not be tailored for an impact investing, at least with equity funding. Nevertheless, one should remember that they have a very important role in expanding access to education, in particular in fragile countries or in remote areas where the public provision of education may be insufficient. Moreover, some neighborhoods schools propose relevant programs in vocational training that are not provided by the public sector. The impact investor could thus consider providing direct or indirect support to these schools, under specific conditions, with the aim to help them to improve their economic and impact performance.

Standardized schools are emerging as ambitious schools networks, in particular in Anglophone African countries. They aim to lower their fees as much as possible in order to make private education accessible to the largest part of the population. Some models have been more successful than others at scaling-up while maintaining a decent level of quality. Investing in these schools in the basic education cycle can be risky because they need to achieve rapid and extensive scaling-up, often with a multi-country strategy, to achieve break-even. In other cycles such as in TVET, these schools could constitute a relevant contribution to the education challenges, although just a few examples seem to exist today.

2. Ancillary activities in education

2.1. A better understanding of how ancillary businesses in education deliver impact

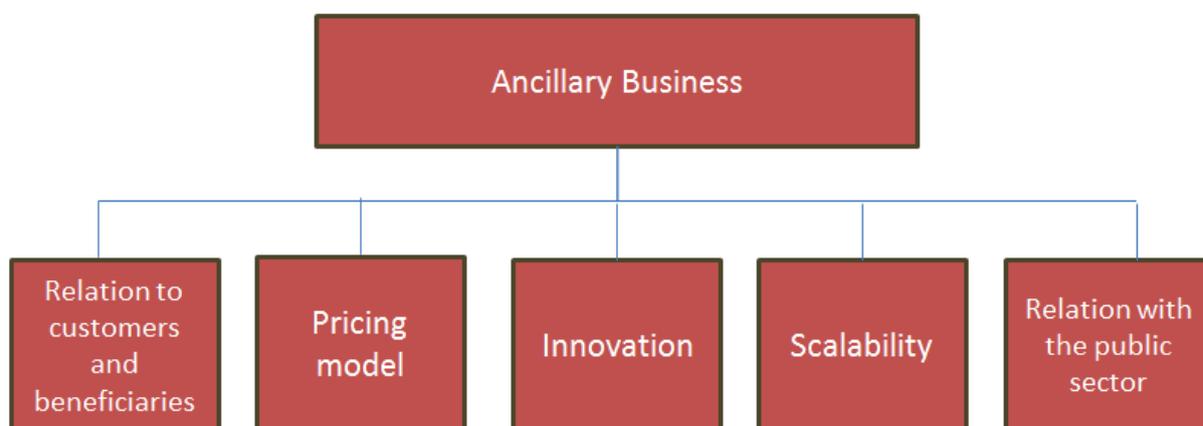
Ancillary activities refer to a wide range of economic activities furnishing goods and services to education providers. They represent a diversity of businesses, economic models and dynamics and may serve different education cycles. These ancillary businesses are generally divided between providers of education “goods” (typically school books, school equipment, computers etc.) and of education “services” (teacher training, capacity building programs, student financing etc.). They may work with education providers or, in some occasion, provide supplementary educational content themselves to complement the provision of education by traditional providers.

Our field studies suggest that African education systems may face a critical shortage of these ancillary activities. The challenges of education quality, access and relevance are intrinsically linked to the low provision of quality and updated textbooks, of student financing services, of teacher training programs and so on. The development of ancillary businesses appears as much essential as the development of educational institutions, as both are necessary to provide system-wide responses to these education challenges. Investing in ancillary businesses could be therefore very impactful complementary to support of direct education provision. A good understanding of these businesses and their dynamics is, therefore, necessary to provide the impact investor with guidelines for intervention.

This section aims to assess key drivers of financial and impact performance of ancillary activities. Since this category of education players is very diverse and varied, we do not intend to provide a typology as we did for the education providers. We rather propose key criteria for the analysis of the business model and of the impact potential of ancillary services. Some criteria are very similar to those used for the typology of education businesses. Others are more specific to these ancillary businesses as they address their relationship to schools, beneficiaries and other stakeholders. Thus, we expect to facilitate the understanding of the nature of these ancillary activities by providing conceptual and practical tools that highlight the drivers of economic and impact performance.

2.2. Criteria of analysis for ancillary education businesses

Our analysis of ancillary education businesses is grounded on five general criteria of analysis:



We describe each of these criteria and illustrate them with ancillary activities we met in several African countries.

The relation to customers and to beneficiaries

The financial and impact performance of ancillary businesses is partly defined by their interactions with customers and beneficiaries. When we look at private education providers, we observe that a vast majority of them are contracting with customers who are also beneficiaries (or their legal representatives). Indeed, parents pay tuition fees in order for their children to enrol, so that families are both the school's clients and beneficiaries. As far as ancillary activities are concerned, this similarity "customers-beneficiaries" is not necessary the golden rule. Editing companies, ed-tech start-ups, school loans providers or teaching advisors may provide services to a diversity of buyers (learners, families, school, ministers, NGOs, companies), for a diversity of beneficiaries (learners, teachers, school headmasters, school institutions as a whole). We count at least 3 configurations of relations as shown in Box 3.1. These configurations can be intertwined within one business model, but still, suppose distinguished types of opportunities and constraints.

Box 3.1: The reach of buyers and beneficiaries by an ancillary business

➤ **“Business to Business” (B2B)**

The ancillary business provides an education service to a company or an education provider. This service supports or strengthens the institution as a whole and is not individually distributed to beneficiaries.

E.g: the software company sells its school management system to a university.

➤ **“Business to Beneficiaries” (B2Be)**

The ancillary business directly provides an educational service to the beneficiaries, with no intermediary.

E.g: the start-up provides learners with educational content on an e-learning platform.

E.g: the microfinance institution provides the student with a loan (and parents may guarantee the loan).

➤ **“Business to Business to Beneficiaries” (B2B2Be)**

The ancillary business contracts with a business to provide a service to its beneficiaries on an individual basis. The reach of beneficiaries fully depends on who is the buyer and what kind of beneficiaries he is related to. It should be noticed that this business could be a government or an NGO which is in relation to education beneficiaries.

E.g: the teacher training company contracts with a school to train its teachers.

E.g: the publishing company contracts with the ministry to furnish textbooks to public primary schools.

E.g: the ed-tech platform contracts with an NGO to provide local youth with online entrepreneurship programmes.

Why do these kinds of configuration matter? Contracting with businesses and institutions (rather than directly with beneficiaries) impacts the corporate strategy, the cost structure and the marketing model including distribution channels and salesforce. Thus, it impacts the economic model of the ancillary business, defining the costs and returns of its growth trajectory. But these configurations also structure the relation to the beneficiaries (typically the learners) and the kind of education impacts we can expect from the ancillary business.

Ancillary businesses following a **Business to Business model (B2B)** typically provide goods and services that will improve the economic and impact the performance of an educational institution as a whole. By having schools as clients and beneficiaries, they must make sure that their service/product is relevant to them and bring value to the development and the attractiveness of the institution. It induces a corporate marketing strategy where the business development efforts are generally high. In the end, the business needs to have a good knowledge of school networks, associations and representatives.

Ancillary businesses following a **Business to Beneficiaries model (B2Be)** directly provides their services to the final beneficiaries. They can be either a supply-side education player or a demand-side education player. In the first case, the ancillary player furnishes a service/good to an education provider (e.g. schools manuals or teacher training services to private schools) or to other organizations (e.g. capacity building programmes for companies, ministries of education). In the second case, the ancillary business enables the beneficiaries to access education, should it be with a technology solution (or a transportation solution) or a financing service.

At last, ancillary businesses following a **Business to Business to Beneficiaries model (B2B2Be)** typically provide goods and services to institutions which are then transferred or distributed to the final beneficiaries. These institutions serve as intermediaries but do not consume the product/service per se, and the final beneficiaries cannot always provide direct feedback to the ancillary business. In terms of economic performance, it means the ancillary businesses need to adapt business development and marketing strategy to two kinds of stakeholders (institutions and final beneficiaries), what may bear additional costs.

The pricing model

The costs in education in a given ecosystem are partly defined by the costs of education inputs provided by ancillary businesses. The pricing of education inputs are defined by various factors, some of them depending on the type of relations with users and customers as shown above. Other key factors include the type of activity and sophistication of product, the cycle of education and the types of clients.

We enhance here three general categories of pricing: premium, mid-priced and low-cost services. The pricing model is a sector- and context-specific dimension of analysis. It allows comparing different players of the same sub-sectors in the same context (e.g. remedial education providers in urban Burkina Faso). Premium ancillary businesses show a pricing model which is relatively higher with respect to its competitors. Mid-priced ancillary aligns their pricing to competitors whereas low-cost ancillary players may have a larger volume of clients due to competitive pricing.

As for education providers, the pricing variable may structure both the economic model and the impact performance. It is directly correlated to the revenues of the ancillary businesses and its economic model (volume strategy, quality strategy). The pricing also affects the impact of any ancillary business. Indeed, premium services may not be accessible to a wide part of the population and low-cost education services do not necessarily meet the education quality challenge.

The innovation component

Innovation is an important dimension of ancillary businesses, driving business and impact performance. As in the previous section, we mean by innovation an extended range of interventions that improve the attractiveness of a service or a product, should it imply

technological and technical improvements or improvements related to the marketing and/or distribution channels (and client service quality. To better understand the key characteristics of education service or good, and the extent to which it may impact the education ecosystem, we believe that innovation component is of great interest.

Some ancillary activities are more likely to invest in, or benefit from innovations than others, depending on their activity and their environment. It is evident that education technologies are based on innovations as they typically seek to change the way we access educational content and learn through digital technologies. In other business such as school equipment providers, innovation is more likely to affect logistics and distribution channels. All ancillary activities may more or less rely on some innovation that may improve their economic and performance. In our study, innovation is a context-based concept. An education business may be innovative compared to its contenders, at least on a national basis. The unequal deployment of education technologies in African countries shows that a very innovative education platform in urban Niger may not be such innovative in rural Kenya. Thus, we will integrate the national environment as a dimension of innovation analysis. Therefore, we distinguish three general categories of ancillary activities: 1) disruptive businesses 2) innovative businesses 3) businesses with limited innovations.

Disruptive ancillary businesses may transform the education ecosystem as they provide a new category of education services. The disruption is embedded in the characteristics of the service: a new modality of accessing and exchanging educational content, new support to provide learning tools, a new way of organizing in-class teaching through technology. Again, a range of educational technologies is most likely to enter this category. As mentioned before, the disruption is to be assessed in its context. Providing the first agronomy training course by SMS to rural farmers in Senegal would be disruptive if the only contending solution belongs to another category such as a traditional vocational centre. By enabling a disruptive innovation to be commercialized through an education business, an ancillary player may structure a new space and achieve substantial economic and impact returns.

Innovative ancillary businesses may significantly improve the education ecosystem as they provide education services and goods that already exist in the market, but they aim to do it better. The innovation helps these businesses to differentiate their activity from what the contenders propose. This type of innovation may consist of the characteristics of the product or service. For instance, a company proposing an e-learning tool that may be accessible off-line after the first connection, enabling students to study in the bus while stuck in a traffic jam without consuming their credits, could be considered as innovative in a context where such a tool did not exist yet. The innovation may also be organizational or distribution-related. It could consist of a microfinance institution providing school loans at a lower interest rate because of a stronger organization of distribution channels or a partnership with a local player. Innovative ancillary businesses may, therefore, increase their economic performance due to a competitive advantage as well as improve their impact on their beneficiaries.

Low-innovation ancillary businesses are little likely to disrupt the access to and quality of the education landscape but may still improve the education ecosystem. There is a wide range of ancillary activities where strong innovation perspectives are limited because of the nature of the activity. We may think of an editing business providing textbooks or a catering services company delivering daily meals to urban public schools. The restricted potential for innovation may also be due to the context: the lack of (or absence) investment due to credit shortage, public procurement legislation, the market dynamics... Ancillary activities are still crucial to the ecosystem but can indeed be stuck in (informal) very competitive markets (strong demand and strong supply) or in very underdeveloped markets (weak demand and weak supply). Because of internal or external characteristics, these ancillary businesses tend to struggle to capture innovations and substantially reinforce their economic and impact performance.

The potential for scaling-up

Scaling-up in the education space means to achieve substantial growth of revenue and impact (with no depreciation in quality and performance) and eventually to play a leading role in a given market. The growth trajectory of ancillary businesses may follow very different patterns. We distinguish different levels of scaling-up potential that characterize ancillary businesses: rapid scalability, progressive scalability and limited scalability.

Growth patterns are structured by a wide range of factors such as the entrepreneurial mindset, the innovation component, the market dynamics and the socio-economic context. This diversity of factors and conditions implies that no ancillary business can achieve scalability. But the scale-up potential appears as a critical factor to understand to what extent these ancillary businesses can achieve a strong economic and impact performance.

Ancillary businesses with rapid scalability are very dynamic and performing projects driven by a strong entrepreneurial mindset, a strong innovation capacity and a close adaptation to changing environments and dynamics. This type of scalability is not necessarily widely diffused yet in education ecosystems facing strong challenges and underinvestment. There is a series of African business with a strong component that has achieved rapid growth and substantial revenue increase by forging a business on disruptive innovation in an enabling environment. We may think of Jumia in the trade sector, Gifted Mum in the health sector or M-Pesa in the mobile money space. Their technologies are likely to support this strong expansion (sometimes in several countries simultaneously) as their marginal cost may approach zero. We believe that similar trajectories are likely to happen in the education space, although this sector is still composed in the majority of very early-stage projects.

Ancillary businesses with progressive scalability are composed of projects with a medium growth pattern, opportunities to increase sales and revenues through innovation but in a competitive environment. Many performing ancillary businesses tend to evolve in this category as they have moderate growth perspective but very limited space to scale-up rapidly. Some of these

businesses have strong asset-based activities with important fixed costs and thus require important investment to increase production capacity. Editing companies such as Vallesse Editions (Côte d'Ivoire) or Editions Afrique Lecture (Niger) could enter in this category. Other businesses widely rely on human resources (large staff or multiple contractors) and thus also need important investments to achieve progressive growth. Microfinance institutes providing loans to students or to schools and teacher training programmes could be mentioned here.

Ancillary businesses with limited scalability are projects anchored in low growth patterns in difficult economic environments. Providing certain services to education ecosystems may be particularly difficult. Some contexts are particularly not enabling ancillary activities to thrive and expand. It can be simply due to bad conjunctures, in particular regarding public procurement. For instance, in a context of budget cuts, it is likely that a ministry of education does not renew the public schools' equipment during a few years. The dependency on public providers as clients may make these activities quite fragile. In other contexts, the equipment can be imported from abroad at cheaper costs, which makes the development of local capacity quite challenging. The widespread informality in certain sectors like school books' distribution may also affect the growth perspectives of main players. Low-quality services and goods, with easy replication by contenders, may finally be more subjected to limited scaling-up potential.

The relation to the public sector

As we extensively described in earlier sections, the role of the public sector in education provision is central, which produces opportunities and constraints for most ancillary businesses. Given the diversity of ancillary activities, they may have a very different relation to the public sector. In the term "public sector", we include the public education providers and the public administrations in charge of managing the education system.

We distinguish four types of non-alternative relationship with the public sector. The ancillary business may be related to the public sector as (i) a client (ii) an academic or technical partner (iii) a regulator (iv) or maybe not related at all.

The ancillary business contracts with a public sector entity as a client. In this first type of relation, the business provides the public administration with an education service or goods. For instance, an editing company furnishes textbooks to a local administration which then dispatches the books to local schools. This relation addresses the space of public procurement which is both a big opportunity and a challenge for many ancillary activities. Contracting with a public actor to furnish the public education system with goods and services may be very valuable for the ancillary business since it can ensure high-volume and recurrent demand. However, it may consist of a challenge to be dependent to the public sector: public procurement is not always easy to access to, payment delays can occur and integrity risks are able to affect the commercial relation.

The ancillary business contracts with a public sector entity as an academic partner. In this configuration, the ancillary business does not enter in a commercial relationship with a public

administration but solely in a technical or strategic relation to developing its business. We can think, for instance, about an ed-tech start-up partnering with a public university to test a new product. Such partnerships may bring new opportunities to develop the activity but also increase its credibility and relevance to local education stakeholders.

The ancillary business contracts with a public administration as its regulatory body. As shown in this study, the state is a regulator of education providers, although in different ways and to variable degrees. Many ancillary businesses at working with education providers, should they public or private, can be required to comply with the state regulation. For instance, an ed-tech platform may have to obtain a certification from the Ministry of education to deliver complementary education content to public schools. The compliance with regulatory constraints may be more or less strategic for an ancillary business. It can bear substantial costs in the short term but may broaden the opportunities to work with public actors and achieving scaling-up in the medium or long term.

2.3. Conclusions

Ancillary businesses are multiple and diverse but play an important role in African education ecosystems. They deal with education providers and affect directly or indirectly the learning experience of their beneficiaries. The five variables we introduced in this subsection substantially affect the economic and impact performance of ancillary businesses. They facilitate or hinder their strategic development and thus impact the potential financial returns an impact investor may achieve by supporting them. They also contribute to the performance of education ecosystems at all stages. We could have mentioned other factors, such as the types of assets or the need to acquire infrastructures. But we believe these five factors are general and strong enough to describe a good part of an ancillary business' trajectory. Combined with the typology of private schools, these factors help understand the dynamics of education businesses in various contexts and to what extent they can deliver impact and contribute to improving the African education systems.

► The models of education businesses: six African case studies

Building on the business typology, this section consists in an in-depth analysis of six business models from the education sector, with a focus on the economic performance (and challenges), as well as the key dimensions of impact. The analysis of each organization includes the key elements on revenue and cost structure, financial sustainability, strategic development.¹⁶³

We have selected four education providers:

- A Premium School: **Enko Education**, a pan-African network of high schools
- A Dynamic School: **Institut Universitaire d'Abidjan** a large university in Cote d'Ivoire,
- A Standardized School: **Sayna** in Madagascar, a digital vocational school
- A Neighborhood School: **Institut Spécialisé En Technologie D'Art Dentaire**, a vocational school in Morocco

And we also include two cases of ancillary activities:

- A project in teacher training: **Practical Education Network** in Ghana
- An education technology company: **Etudesk** in Côte d'Ivoire

In what follows we aim to understand the general model of each organization, its dynamics and potential for impact, using the criteria identified in the previous section.

1. Enko Education, a pan-African network of premium schools

Organization	Enko Education
Localization	South Africa, Mozambique, CI, Burkina, Senegal, Mali, Cameroon
Field	Premium Secondary Education (and Primary Education in a couple of schools)
Disciplines	Curriculum based on the International Baccalaureate and on international standards
Population	1,800 pupils in 13 schools
Annual schools Fees	3,000 - 3,500 \$

¹⁶³ All data and information for each case study are extracted from an interview with the entrepreneur as well as strategic and financial documents provided by the entrepreneur. They can be accessed with a special request to the authors. Most of this information is confidential and will be deleted before any public release.

1.1. Introduction

Enko aims to democratize high-quality education for the middle class in Sub Saharan Africa and increase its access to world-leading universities. Enko is building one of the largest networks of private schools in the region by partnering with or acquiring high-potential, existing private schools and helping them to accelerate their growth and improve their operations. In the first model, Enko is the school operator but do not own the facility. In the latter, Enko both owns the school and operates it directly.

Eric Pignot and Cyrille Nkontchou decided to launch Enko Education in 2013, with the ambition to create a pan-African network of schools. The first school in which Enko started to operate was La Gaieté International School in Yaoundé, Cameroon. Enko schools then expanded to South Africa, Mozambique, Côte d'Ivoire, Senegal and Burkina and now control 13 schools for a population of 1,800 students. I&P and Proparco co-invested in Enko in 2016 as minority shareholders, along with Oiko credit which invested in 2017. These new investors will support Enko's ambitious growth objectives on the continent.

Enko also developed a **shared service centre** to offer its schools economy of scale, access to world-class educational resources and services that they could not afford individually, such as **shared teacher training centre**, a shared procurement platform, and **partnerships** with International Baccalaureate Organization (IBO) and Library Without Borders (LWB).

Key challenges in the Enko model are varied: opening new schools in different countries, maximizing schools occupancy rate, managing a network of 13 schools in 7 countries (budget control, management cost), hiring and retaining experienced teachers in these different countries.

1.2. Enko, a model of premium education

Pricing

Annual schools fees in Enko schools typically range between 2000 and 3000\$ in 8th and 9th grade and nearly 3500\$ in high school grades. To our understanding and considering this range of fees, the school seems accessible to the local upper middle and upper classes. Enko targets this segment of the population which has the willingness to pay for quality education but has little access to elite schools (French School, British school etc) whose price can be up to 3 times higher. Enko schools are typically localized in capital cities or main cities in Francophone African countries as well as in Southern Africa.

Revenue collection has been a challenge for Enko in the first years of operation as some schools had fee collection rates of only 60%. Strong measures were taken in 2017 to strengthen the fee recovery rate which is now above 90%. Enko has diversified its sources of revenue by providing additional services to students (e.g. summer camps, school material) and to education ecosystem players (advisory services representing 100 to 150,000 euros).

Innovation

The Enko education model provides three main innovations.

Enko seeks to offer international programmes and degrees recognized around the world.

Most Enko schools follow the curriculum based on the international baccalaureate (I.B.) certification (which may be taught to 3 to 19 years old students)¹⁶⁴. Nearly 4,000 educational institutions offer the I.B. Diploma which is recognized by more than 2,000 universities in 75 countries. It implies strong standards of teaching practices, locally-adapted international curriculum and a bilingual program. Enko schools also offer the Cambridge International Examination¹⁶⁵.

Table 3.1. The levels and content of International Baccalaureate certifications

I.B. Levels	Curriculum content (as described by IB)
Primary Years Programme (age 3 – 12)	The PYP curriculum framework is adaptable to state and national standards and guided by six transdisciplinary themes of global significance.
Middle Years Programme (age 11 – 16)	The MYP curriculum framework comprises eight subject groups, providing a broad and balanced education for early adolescents.
Diploma Programme (age 16-19)	The Diploma Programme (DP) curriculum is made up of six subject groups and the DP core, comprising theory of knowledge (TOK), creativity, activity, service (CAS) and the extended essay.

To this date, Enko schools in Yaoundé, Maputo, Abidjan (John Wesley), Douala, Dakar are IB-authorized schools for the IB Diploma programme. Enko Riviera (Abidjan) is recognized for the IB Middle Years programme. Enko schools in Ouagadougou and Bamako are applicants to IB Diploma Programme. Finally, Enko in Tete (Mozambique) is an applicant for the Primary Years of the IB.

Enko provides high-level university guidance for their students. Enko staff advise the students on the identification of the universities offering the best programmes (matching their skills and ambition), with high admission rates and interesting scholarships programmes. They provide the student with knowledge of admission processes and help them to build their application. They also identify scholarships offered by universities and foundations to finance their HE studies. In 2018, Enko graduates enter many top tier universities including Sciences Po, Hult Business School, Lancaster University, University of Toronto, University of Ottawa, University of Nottingham, African Leadership University and Yale University.

Finally, Enko enhances the learning experience of students with a strong approach to the learning environment and international mindedness. As a condition for delivering Cambridge

¹⁶⁴ <https://www.ibo.org/programmes/diploma-programme/>

¹⁶⁵ <https://www.cambridgeinternational.org/programmes-and-qualifications/cambridge-advanced/cambridge-international-as-and-a-levels/>

Examinations and IB Diploma Programme, Enko staff is highly qualified and experienced in teaching in international schools. Teachers receive up to 100 hours of training yearly. There are 24 students maximum per class in Enko schools. The learning of languages is also central for the Enko model. IB Programmes are taught in French or English as a first language, and other languages can be offered (Chinese, German, Zulu, Portuguese). Progressive bilingualism to English is applied to schools where students do not have English as a first language. In terms of technologies, Enko schools have media centers where students can access computers and wifi; they also have access to a science lab. Finally, Enko schools value the diversity of both African cultures and the possibility to operate in a globalized world, building their programmes on local curricula and international frameworks.

Growth strategy

Enko pursues a fast growth strategy across Africa. The updated business plan on which Enko and I&P agreed (in 2016) consists in the opening of 22 schools in 5 years¹⁶⁶ for targeted revenues of 12 million euros. This Business plan objective is on a good track to be met according to I&P’s Investment Manager. In 2018, 3 more schools were open: in Mali (90 pupils / green field), one in Burkina Faso (35 pupils/ green field) and one in South Africa (IPC / acquisition). Thus, Enko currently reaches its revenues and enrolment objectives at 90% with nearly 1,800 students in total. Ultimately, Enko aims to open more than 30 schools in some 20 countries, mainly in French-speaking Africa, as well as in Southern Africa.

Table3.2: Enko’s progressive expansion in Africa

Year	Network Expansion
2013	Enko is created.
2014	1 st school in Yaoundé, Cameroon
2016	Enko in Mozambique (Maputo), Cameroon (Douala) and Côte d’Ivoire (Abidjan)
2017	Enko in Mozambique (Vilankulo)
2018	Enko in Senegal (Dakar), Mozambique (Tete) in Mali (Bamako), South Africa and Burkina Faso (Ouagadougou)

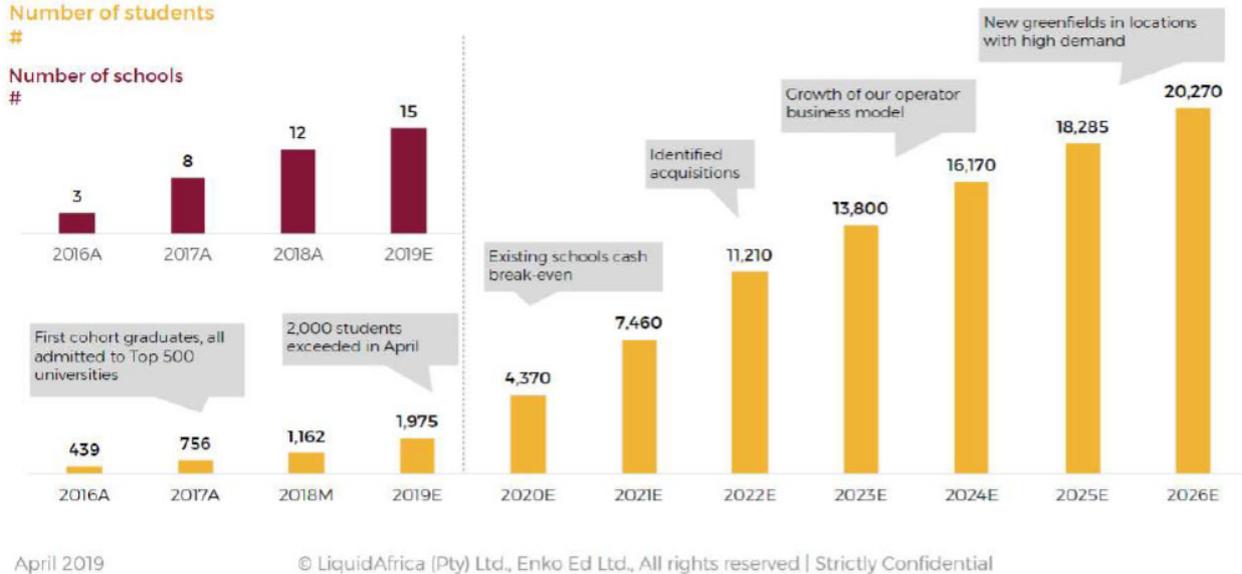
There has been a partial strategic shift in Enko expansion strategy, raising more opportunities and new challenges. Initially, Enko had planned to launch green-field schools in a dozen African countries. In general, Enko schools achieve break even with an enrolled population of 200 students. Launching costs for a new school reach 400 to 500,000 euros. These greenfield

¹⁶⁶ The general ambition of Enko has been reduced as the initial business plan shared by the management with I&P was to reach 34 schools, 6,250 students for 20m€ of consolidated revenue.

projects are quite expensive, risky and may take more time to break-even compared to existing schools which already have a local “track record”. The regulatory constraints are also less strong with existing schools. At the same time, Enko is regularly contacted by school owners in various countries (e.g. WACA in Senegal, IPC in South Africa, Northfield in Mauritius). In this context, Enko is more and more inclined to consider school acquisition as the prevailing strategy. This new strategy raises other issues as the alignment with, and integration of the existing school into Enko’s network may be complex (local curriculum vs IB curriculum, high schools versus basic schools etc). Enko management could consider the establishment of different standards (like in the hostelry industry) to better suit the local context and demand. Indeed, the current pricing model is quite homogenized between Enko schools although local purchasing power may differ strongly. Enko could decide to differentiate pricing and programmes in the different schools, cities and countries.

With this double strategy, Enko now considers a new strategic expansion plan for 2026, targeting 20,000 students, both with green-field projects and acquisitions. This strategy will require a new fundraising round that could reach 25 million euros (see figure X).

Figure 3.3. Enko’s new expansion plan



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1.3. Additional criteria

We consider Enko a premium school network, we thus apply the additional criteria we believe more appropriate to analyze this type of schools.

Certification

Enko schools are all certified (or in the process to be) to international standards, including the IB Diploma Programme as well as Cambridge Examination. These certifications enable the best learning conditions and achievements for Enko Students and facilitate the application to

world-leading universities with a visible, recognized and renowned curriculum. At the same time, the international certification is not necessarily recognized by local higher education institutions, thus raising an issue of integration of Enko schools in the local ecosystem. Even if Enko students aspire to join renowned foreign universities, it seems important to carry a locally-recognized diploma, and if desired by the student, to integrate a local university and eventually the local job markets. Enko claims to encourage students to come back to their countries after their higher education and participate in the local development (“give back”) but we do not have data on this challenge¹⁶⁷. Enko management advocates for a recognition of IB in their countries of operation but such efforts could take time to change the current situation.

Infrastructure management

As far as infrastructure management is concerned, Enko has deployed a mixed approach with an asset-light model and a school acquisition strategy. The asset-light model consists of a strategy with reduced up-front investments and flexible approach to local demand. This typically includes the renting of school facilities and the ability to change the location while the school population increases. This approach enables Enko to limit investment costs in the opening of new institutions but its feasibility depends on the local real estate markets and availability of facilities¹⁶⁸. Enko also follows a different strategy in countries when it can acquire existing projects (land + infrastructure) with a good reputation and experience. In 2018 for instance, Enko assessed the opportunity of acquiring Northfield school in Mauritius included the facility and real estate components for a total of 5.8 million US dollars. Enko and Northfield owners could not agree on a price and the deal was not done. In other conditions like in Senegal with the WACA school, Enko acquired the school and rebranded it in Enko WACA school.

Impact

The educational impact of the Enko is focused on education quality and access to worldwide top-tier higher education institutions. Enko aims to provide high-quality secondary education in sub-Saharan Africa and to support the African middle class’ access to the World’s Top Universities. Enko alumni study at Yale, Sciences Po and other prestigious universities in Europe and in the US. Some of them also access to top African universities such as the University of Cape Town. Enko also trains dozens of teachers to international standards (I.B.), some of them coming from other regions to work in Africa.

Enko provides quality education to the upper middle class with contained levels of fees and competes with elites schools. Enko programmes are not affordable for a majority of the local population but they are for a part of middle classes which typically cannot afford elites school.

¹⁶⁷ According to Prodigy Finance, a financial institution granting loans to students (mainly coming from developing countries) so that they can access the world’s best universities in Business and Sciences, 60 to 70% of students come back to their countries after graduation. <https://prodigyfinance.com/get-a-loan>

¹⁶⁸ For instance in Burkina Faso, Enko’s School Launcher found it hard to find a building with big sized rooms that could be turned into classrooms and eventually found a building which used to be a vocational training center.

Thus, there is an impact in terms of access although it does not benefit all segments of the population.

Enko envisions broadening the accessibility of its model by providing merit scholarships to pupils from a disadvantaged background to a limited extent. Currently, scholarships were granted to 11% of Enko students (as of May 2017, including partial and full scholarships). They were fully funded by Enko and directly subtracted from its revenues¹⁶⁹. Scholarship allocation conditions are based on the financial situations of families and student results in exams. Enko management seems willing to work with I&P and other stakeholders to broaden this mechanism, maybe by working with a foundation, but with no strategic priority seemingly. With this policy, Enko stands at an intermediate level in terms of inclusivity of premium schools. Some premium schools do not consider scholarships programmes at all and follow marketing positioning that makes no doubt about their willingness to serve elites or expatriates only. Some other models like Ashesi University in Ghana function as a non-profit organization with substantial levels of scholarships (up to 50% of enrollees). Enko appears as an in-between player since they do accept to lower their profitability with self-funded scholarships although this does not appear as a core mission project for the management.

The Entrepreneurs

Cyrille Nkontchou is the chairman and co-founder of Enko. He serves as managing partner of Enko Capital Management LLP, an Africa-focused asset management firm with offices in South Africa and Great Britain. He is also the founder and executive chairman of the pan-African investment bank LiquidAfrica Holdings Limited. He started his career as a consultant with Accenture in France and worked as a banker with Merrill Lynch in London. He holds a BA in Economics from Sciences Po Paris and an MBA from Harvard Business School. Cyrille was nominated as Young Global Leader 2006 by the World Economic Forum.

Eric Pignot is the co-founder and COO of Enko. Eric worked at BearingPoint, a management consulting firm. As an Engagement Manager, he helped his customers to improve their performance and scale. Eric is French, holds an MBA degree from the MIT Sloan School of Management, where he focused his MBA experience on understanding how digital technologies will transform education in Sub-Saharan Africa.

¹⁶⁹ Unfortunately we do not have disaggregated data by country, age or gender for the scholarship programme.

1.4. Financials and projections

Table 3.3. ENKO - Key financial figures and KPIs (2018)

Fiscal Years	2016/2017	2017/2018	2018/2019 (e)
Revenue (K\$)	1400	3100	5000
EBITDAR ¹⁷⁰ (K\$)	-1100	-1600	-1300

Source: Financial statements provided by Enko to I&P team (2018)

According to the information we have, Enko is on a good track to achieve its targets issued from the 2017 business plan (BP). In 2018, Enko had revenue of 3,1 million US dollars and EBITDA of 1.6 million US dollars (negative). The differences between the BP and actual revenues were caused by the occupancy and fee recovery rates which are slightly inferior to the levels expected and while operational costs are mainly fixed.

The expected revenue in June 2019 (end of the fiscal year) could reach 5 million dollars and 1.3 million of EBITDA (negative)¹⁷¹. This level of revenue and EBITDA is quite close to BP's hypotheses as the network expansion has been well successfully implemented in 2018.

As new schools take 3 to 4 years to break-even, the consolidated EBITDA should continue to be negative next fiscal year but would become positive in 2021 provided that the revenues exceed 10 million US dollars as planned.

1.5. Conclusions

Enko is a promising network of premium schools. In a few years-times, Enko gained a strong capacity to deliver high-quality education certified by IB in seven African countries and to compete with well-established elites schools. The network of Enko is expanding at a good speed with a soon-to-be recognized branding (in particular in Francophone Africa) and the management shows capacity to meet its business plan objectives. The social ambition of Enko to support students in entering top-tier international universities seems successful so far (according to the data on the first cohorts).

The role of an impact investor in supporting Enko's development seems critical. First, the capacity of the investor to assist Enko in its deployment in many countries makes the cases for a pan-African fund grounded on several local offices and networks. Second, the support in building a functioning platform for the whole network as well as a good branding strategy can be essential to explore the potential of an education network. Third, the impact investor may help the premium school to make the education model more inclusive with an ambitious programme of scholarships and help

¹⁷⁰ EBITDAR: Earnings before interest, tax, depreciation, amortization and rents.

¹⁷¹ These figures are estimated by I&P for the landing in June 2019.

the entrepreneur respond to several questions: What is the funding mechanisms for these scholarships? What is a sustainable level of subsidized students for the model? What partner could Enko work with to implement this programme?

2. Institut Universitaire d’Abidjan: A Dynamic University in Côte d’Ivoire

Organization	Institut Universitaire d’Abidjan (IUA)
Localization	Abidjan, Côte d’Ivoire
Field	Tertiary Education
Disciplines	Sciences, Law, Business
Population	4,200 students
Annual schools Fees	1200 euros (licence) to 1500 euros (masters)

2.1. Introduction

IUA is a private university¹⁷² which was created in 2004 and is now one of the biggest private higher education institutions of Côte d’Ivoire. IUA is an Abidjan-based private university which started with the first cohort of 27 students and welcomes now more than 4,200 students and a diversity of academic tracks, one of the sole university providing higher education diplomas in various subjects such as engineering, law, political sciences and management. IUA aspires to develop a technological faculty and increase its offer in technical tracks as well as moving to a new campus with modern and adapted facilities.

IUA is developing in a context of intense competition in Abidjan. Several international business schools establish in Abidjan (e.g. HEC, EM Lyon) and constitute attractive institutions for local students. Local universities such as IUA tend to invest in better infrastructure and equipment to remain competitive, develop more partnerships with local employers and explore the potential of technologies for pedagogic purposes as well as increasing access to education.

IUA envisions being the leading private university in Côte d’Ivoire as well as a significant player in the sub-region. IUA was ranked 5th best private university in Côte d’Ivoire in 2013 and 3rd best university in 2014 out of 44 legally recognized tertiary institutions¹⁷³.

¹⁷² See the official website: <http://www.iua-ci.org/>

¹⁷³ See the list of tertiary institutions that are legally recognized at: <http://www.enseignement.gouv.ci/files/UNIVERSITES%20PRIVES%202013.pdf>

2.2. IUA, a model of the dynamic school

Pricing

IUA offers bachelor and master degrees with fees ranging from 800,000 (about 1,200 euros) to 1,000,000 (about 1,500 euros). With this range of fees, the university is affordable for middle classes and competitive¹⁷⁴ on its market¹⁷⁵. It also targets local elites who do not wish to study abroad. In addition, students may benefit from state allocation subsidies which reach 450,000 CFA per student. There is a very limited scholarship policy within the university.

Table 3.4: Pricing at IUA (2018-19)

Academic levels	Annual Fees
Licence 1	800,000 CFA Francs
Licence 2	850,000 CFA Francs
Licence 3	900,000 CFA Francs
Master 1	950,000 CFA Francs
Master 2	1,000,000 CFA Francs

Innovation

IUA has a traditional education¹⁷⁶ model but developed several incremental innovations that contributed to improve the learning environment and to differentiate the university from its competitors.

First, IUA developed a diversity of academic tracks and programmes which makes it very attractive on the local market. IUA is organized in four faculties: Political Sciences and Law, Social Sciences and Economics, Sciences and Technologies, Arts and Humanities. Through these faculties, IUA offers a wide range of bachelor and masters in varied topics such as management and finance, economics, political sciences, ICT, mathematics, engineering, law. These diplomas are certified by the Ministry and labelled by CAMES (*Conseil africain et malgache pour l'enseignement supérieur*). IUA is also a research organization¹⁷⁷ as it has three active research labs in Social sciences (CRSD), Economics and Finance (GREFIQ) and in Management (CRGE). More research institutes are

¹⁷⁴ This range of school fees is described as “competitive and social” by IUA’s management.

¹⁷⁵ The range of fees at the licence level for universities stands between 650,000 CFA Francs (Groupe Loko, UNISAT) to 1200,000 CFA Francs (FUPA, IUGB).

¹⁷⁶ Traditional model of education in the sense that it does not use technology or any other source of strong innovation to disrupt the provision of education.

¹⁷⁷ <http://www.iua-ci.org/page/les-unites-de-recherches>

expected in the next months, in particular in law and political sciences and in Ivoirian economics. A survey institute will also be created.

Second, IUA possesses good quality infrastructures, although they are not gathered in one campus. IUA currently occupies eight small-sized and medium-sized infrastructures (villas and buildings) in Abidjan with a rental strategy. IUA has several modern infrastructures (one trading room in the finance department, several sciences and engineering labs, seven IT rooms, 1 videoconference room), one physical library and two virtual libraries, what is quite unusual for the sector. IUA plans to merge several of these sites into one campus in order to invest in modern equipment, increase school capacity but also gain independence from landlords.

Third, IUA partnered with many foreign institutions to facilitate student mobility and professor exchange. In order to become an internationally-oriented institution, IUA built international partnerships with academic institutions based in France (among others, Université de Nantes, de Montpellier), in Canada (Université du Quebec). IUA has also an agreement with the Université Felix Houphouët Boigny de Cocody as well as with the Agence Universitaire de la Francophonie (AUF).

We have little information about graduates’ employability and the general coordination with job market dynamics. IUA claims to be strongly associated with local private players but we have little information to confirm this. The alignment of new academic programmes with the demand of local employers is yet to be assessed. The establishment of a career centre and a new strategy for student’s employability could be supported with technical assistance and advisory by the impact investor.

Growth strategy

IUA’s management team has an ambitious growth vision and wish to become the leading private university of Côte d’Ivoire and a significant player in Western Africa. IUA envisions welcome 10,000 students by 2028. The business plan we had access to states that the number of students will grow from 4,200 in 2018 to 7,400 in 2022, which represents a significant increase of 76%. In the meantime, revenues are expected to double from 5 to 10 million euros, which includes the volume growth but also a fee increase of 20% over the next five years.

Table 3.5. Expected population growth and revenue from 2018 to 2022

Indicators	2017/2018	2018/2019	2019/2020	2020/2021	2021/2022
Population	4200	4310	5388	6734	7408
Expected revenues (K€)	4980	5700	7125	8906	10362

To support this ambitious growth, IUA has a double-step strategy aiming to increase the overall school capacity in Abidjan and extend even more the infrastructures and programmes. According to IUA's management, the construction of a new campus is the best promotion campaign the university can do to be more attractive on the local market and to become a reference in the sub-region. The campus would be able to welcome the 7,500 student-population targeted in 2021 in their business plan.

To our knowledge, IUA does not plan to invest in continuous training or other education cycles. It does not plan to expand in other regional cities of Côte d'Ivoire or neighbouring countries.

2.3. Additional criteria

We may consider Institut Universitaire d'Abidjan as a model of **dynamic school** of the higher education cycle. Additional criteria of analysis should include the following:

Education cycle

IUA belongs to the higher education cycle.

Exposure to public funding

IUA may benefit from public support through the state allocation per student that may reach 450,000 to 600,000 CFA Francs (650 to 900 euros) and that is directly paid to IUA. The public funding share in IUA's revenues is likely to be significant, although we did not have access to detailed data.

Certification

The certification of academic programmes is a key dimension of IUA's academic supply. According to the management, all IUA's courses are certified by the Ministry (national certification) and labelled by the CAMES (regional certification). With local curriculum and moderate pricing, IUA is likely to attract middle classes students as well as foreign students.

Infrastructure management strategy

As commented earlier, IUA relies on eight different facilities located in Abidjan with a rental strategy. Due to capacity constraint and dependency to landlords, IUA wishes to build its own infrastructure near Abidjan. In the short-term, IUA plans to fund and build a small-sized campus near Abidjan (Bonoumin) in order to meet the strong market demand, to overcome the exiguity of the current facilities and to be less dependent on the landlords of the villas. In the medium-term, IUA plans to build a large campus for which it has already acquired land of 3,5 Hectares in Bingerville (near Abidjan). This campus would include 10 buildings of 5 five floors, for a target population of 7,500 students by 2021.

2.4. Financials and Projections

Key financial indicators - IUA	2016	2017	2018
Revenue (K euros)	3400	3467	4974
EBITDA (K euros)	440	783	1687
EBITDA Margin (%)	13%	23%	34%
Net Profit (K euros)	301	544	1125
Net Margin (%)	9%	16%	23%
Other indicators			
% of staff costs ¹⁷⁸ / revenue	17%	18%	14%
% of infrastructure costs ¹⁷⁹ / revenue	11%	11%	10%

Source: financial statements provided by IUA to I&P team (2019) and author's own calculations

IUA seems to be a performing economic model with growing revenue and a good level of profitability. The financial information we had access to shows that IUA's revenue grew by 46% in two years to reach nearly 5 million euros in 2018. The EBITDA was multiplied by 4 in the same period to reach more than 1,6 million euros. This spectacular growth of profitability seems due to the increased enrollment and the strengthening of economies of scales. Indeed, the rental costs of the 8 different sites were maintained at a decent level (10% of revenue) as the HR costs (14-18%). However, this good performance seems to reach its own limits as IUA faces issues of overcapacity and experiences strong pressure on its current infrastructures. Indeed, the quality of IUA's education and the general attractiveness of the brand could be jeopardized by a long period of overcapacity.

THE ENTREPRENEUR

Mr Aka Kouamé is the founder and current chair of Institut Universitaire d'Abidjan. Mr Kouamé holds a PhD in Demographics from the University of Montreal. He founded IUA in 2004.

¹⁷⁸ This does not include non-permanent contracts that may be substantial for the model but for which do not have financial data.

¹⁷⁹ Rough estimation based on the limited and aggregated information we had access to. We know that in the academic year 2018/19, the total rent charges exceed 300 million CFA Francs (equivalent to 460K euros).

2.5. Conclusions

Since 2004, IUA has built a strong and recognized model of a private university in Côte d'Ivoire. The progressive enrollment growth added to the diversification of academic programmes makes IUA a significant player in Abidjan with solid profitability at relatively moderate pricing. IUA's rental strategy in Abidjan is reaching its limits. In a context of high competition where competitors are engaged in the construction of new campuses and in the diversification of their curricula, IUA certainly needs to invest in modern facilities to remain attractive for the local demand.

We believe the intervention of an impact investor could support IUA's development to reach a critical size and help it become a leading provider in higher education in Côte d'Ivoire. The support to IUA's strategic expansion could include the funding of the campus construction and equipment, improvement of internal processes and quality control, reinforcement of academic and administrative team, support to academic and pedagogic innovations. However, impact perspectives would be also tied to a strong inclusion of IUA in the local education ecosystem: enabling better alignment and cooperation with the public universities (in research, teacher training etc), stronger inclusion of employers in the life of the university, better support to students during and after their studies and better tracking of employability performance.

3. Sayna: an early-stage standardized school

Organization	Sayna
Localization	Antananarivo, Madagascar Aiming expansion in other Africa countries
Field	Vocational Training (3-month training and 6-month work-studies)
Disciplines	IT – Coding
Population	30 enrollees in 2018, 250 in 2019 (targeted)
Annual school fees	Free for students Companies pay 900\$ for hiring a student

3.1. Introduction

Sayna was founded in 2017 as a vocational school delivering short-term training in IT to vulnerable youth of Madagascar. Sayna's mission is not only to provide technical and soft skills to its trainees but also to facilitate their social integration and boost their employability. The social ambition of Sayna is strong and from the beginning, the school targeted youth from poor families which have no chance to pursue traditional higher education opportunities.

The education model of Sayna is to provide a 3-month intense training in Coding and a 6-month internship or work-study period. A selective process was created to identify and select the most brilliant and motivated students in disadvantaged neighbourhoods of Antananarivo ("Sayna Sourcing"). The selection process includes basic technical skill test, motivation test and a language test. During the training period, the student learns the basic skills in coding and programming as well as some soft skills (e.g. communication, CV writing). Then, the trainee can apply and develop its skill in a corporate environment during an internship or a work-study programme. Sayna provides support and coaching during the whole period and aims to facilitate the placement in companies as soon as possible in the training process.

Sayna's main innovation is the gratuity for students, which makes it accessible to the low-income community. Sayna has set up partnerships with local employers so that each firm pays the totality of the trainee's school fees to enrol him/her after the training period. According to the Sayna's CEO, the very high motivation of these youth to succeed, adding to their great potential in IT, make them very reliable and work-hard employees that become very valuable for the future employers.

Sayna's advocacy efforts are driven by the manager, Matina. Sayna's ability to contract with big firms and local employers is enabled by the high Matina's personal investment in business development and advocacy for the sector. Matina believes that Malagasy employers should participate more in the funding and development of the training sector, in particular in the digital and IT sector where the local needs are huge.

To develop relevant and quality training modules, Sayna partnered with internationally-recognized institutions of the IT Training sector. A first partnership was early in 2018 with The Hacking Project –THP (<https://www.thehackingproject.org/>) which provides low-cost basic coding modules with peer-learning methodology and group-based projects. Sayna trained a cohort of 12 students with one coach following the THP method. Another partnership has starting in early 2019 with Ecole Simplon (<https://simplon.co/qui-sommes-nous/>) to extend the types of coding and methods provided to the trainees. These two partnerships provide the trainees with coding skills developed in international standards which are highly demanded by IT companies but also international corporates with integrated IT services (e.g. banks). Thus, the training content is not directly driven by local firms but the standardization coding skills ensures a good match with employers' needs.

Sayna enrolment is growing, and the placement of trainees has been very effective in 2018.

The first cohort of students reached 30 students in 2018 and will significantly increase in 2019 (Sayna targets 250 trainees over the current year). In January 2019, the first new cohorts include 20 students for the THP track and 20 students for the Simplon track. More activities will start with BOCASAYNA and My Fund Code, in addition to mentoring and SDG-related work.

Table 3.6. Impact performance of Sayna in 2018: integration rates of trainees

Cohort #	Total number of trainees	Placement in local firms	Others
“Sayna 1”	12 trainees	9 got a job after their training	2 pursue their studies, 1 hired by Sayna (coach)
“Sayna 2”	12 trainees	10 got a job after their training	2 doing projects for Sayna, waiting for jobs
“Sayna 3”	12 trainees	In process	In process

The job placement rate reaches 80% for the two first cohorts of trainees. In 2018, the trained placements were done in local firms like Axian and Star as well as local branches from international corporates like Orange and Maltem.

3.2. Sayna, an early-stage standardized school

Pricing

Free for students. Moderate for employers.

From the start of its activities in 2017, Sayna has built a free access education model in order to maximize the accessibility for low-income trainees. The incoming students do not pay tuition fee to enrol in Sayna and benefit from a number of additional benefits (they are provided with a personal laptop, they have 24h access to the school facility). The school funding scheme is based on a business to business where Sayna team propose to the client, the future employer, to pay a fixed price for the student they will recruit at the end of the training. The portfolio of corporates clients was developed through strong business development efforts led by Matina. She has done a lot of marketing and advocacy work, first with the CEO of companies but also with middle managers (typically information systems directors).

Sayna’s price can be considered as relatively moderate for its corporate clients. According to Matina, the price charged in 2018 (800 euros) for one trainee was much lower than the short and long term benefits for the company. With this unitary price, Matina declares to reach 10-15% of gross margin. In 2019, Sayna repriced the service to 1600 euros per trainee because:

- They consider the companies have a higher ability to pay;

- Companies acquire valuable and multiple benefits from this recruitment (skilled, highly-motivated workers on the HR side, impactful HR policies which are valuable for CSR, advocacy and communication strategy);
- There is a lack of IT-skilled workers in the local markets and very few schools providing this type of training.

In 2019, there will be a significant strategic shift, as Sayna will broaden its service offer to employers to increase the revenue. The advisory component will constitute the main source of revenue for Sayna and thus subsidize the costs of training. See below for projections and figures.

Innovation

Strong. Sayna has developed a very effective training model, in partnership with internationally-recognized institutions. In addition to the business model which is an innovation per se in Madagascar, the Sayna project is to transform skills and employability of Malagasy youth in the IT industry where very few vocational schools can effectively source, train and place local talents.

Sayna approach is to use active pedagogy and group-based projects to offer 3-month intense training for young Malagasy coming from disadvantaged backgrounds. Sayna was able to develop this pedagogy thanks to partnerships made with renowned IT schools. The technology is well integrated into this training as the whole training experience is based on computer-assisted or –led learning. The nature of training in coding and this reliance on peer-learning enables a significant standardization of the learning track with limited individual supervision.

The training session is followed by a 6-month internship or work-study scheme. This is also an innovation since in Madagascar very few schemes of this kind exist. This period of practice brings great value to the training as it enables the students to develop soft skills in a corporate environment as well as further technical skills in coding, and eventually boosting its employability.

Growth strategy

Fast. With strengthened implementation skills, Sayna could replicate the model inside and outside Madagascar and achieve fast growth. The school will target a number of trainee reaching 250 students (what represents 7x more than in 2018). In 2018, Sayna communicated around a target of training 10,000 Malagasy digital workers in 5 years. Sayna also seeks to build new partnerships with education companies (e.g. OpenClassRoom) to increase the number of trainees and courses. However, the scalability of Sayna in a single country is naturally limited by the job placement capacity of the IT industry. Thus, an international expansion constitutes another dimension of strategic growth for Sayna. Some business development is done in Côte d'Ivoire in particular. Due to the nature of Sayna's core education model (short-term, little equipment required, low supervision), the scalability is high.

Sayna envisions playing a large role in the tech community by providing new services to trainees and local employers. Sayna growth will thus be grounded on diversification. In 2019,

Sayna will provide local and international firms with advisory services on their impact and digital policies which may include a complete and recurrent partnership for sourcing, training and hiring local talents in IT positions, but also strategic guidance on digital transformation, impactful HR policies, ecosystem leadership and advocacy (“Sayna Advisory”). Finally, Sayna will also help and support youth entrepreneurship in the tech sector through the implementation and commercialization of group-based projects run by the trainees (“Sayna Seed”).

To support and sustain this growth strategy, Sayna will recruit and “industrialize” its processes. Important work will be done to rationalize the different functions of the school that were mainly managed by Matina in 2018. New employees will be trained by the managers (in particular Matina and Nirina, her mother, who joined the school early 2019). The hiring efforts will target a pedagogic director (overseeing training module development and coaching) and a business development officer in charge of facilitating the placement of trainees. The team will also transform the sourcing work, by leveraging technologies and standardizing a part of the hiring process.

Sayna will invest in quick fundraising stages in order to support this growth strategy. Early 2019, Sayna already raised 30,000 euros from business angel investors. In September, Sayna will probably go for the series A aiming to receive 300,000 euros in equity from early-stage or impact investors. In addition, Sayna will seek to raise 300,000 euros in donations from philanthropic players to acquire new infrastructures and materials. In case Sayna is successful in Madagascar and in another market (e.g. Côte d’Ivoire), another funding round could be planned in 2020 or 2021.

3.3. Additional criteria

We consider Sayna a standardized school because the model relies on free access for students and moderate pricing for employers, high innovation and fast-growth strategy. We thus apply the additional criteria we believe more appropriate to analyze this type of schools: education cycle, infrastructure management and certification.

Education cycle

Sayna provides vocational training services in coding. There is no plan to evolve into another education cycle.

Infrastructure management

Sayna uses a rental contract for its only facility in Antananarivo. The rent cost is moderate for the school (200€ monthly) despite a good localization. As it is still a very early stage project, infrastructure management is not yet a critical component of the business model. To our information, it is unclear what infrastructure needs will characterize the next steps of Sayna Development, including outside Madagascar. But once clarified, the infrastructure management strategy will logically drive the costs and opportunities of launching new Sayna Schools in other

African cities where real estate markets dynamics may be sensibly different than those in Antananarivo.

Certification

Sayna favours international certification due to the nature of its training activity. Indeed, Sayna does not provide a local curriculum which could be certified with the Ministry as its short term training does not enter the LMD system. However, the different training tracks in Sayna are recognized and certified by foreign institutions like Ecole Simphon or The Hacking Project which are remarkable players in the coding industry.

3.4. Financials and projections

In 2018, the financial situation of Sayna was characterized by

- A revenue of 42,000 euros, 70% of which issued from donations and exceptional revenue.
- Good operational profitability with an EBITDA at 11,000 euros (25% of revenue).
- A strong working capital requirement: the regular revenues are typically earned when the trainee promotion is placed in the company.
- An asset-light model: the staff expenditures account for 30% of revenues and infrastructure rent for only 17% (a part of the infrastructure was granted by Maltem).

However, it is difficult to draw real lessons from this quick overview since we only assess the financials on one full exercise and this exercise relied on in-kind donations and exceptional funding.

Table 3.7. Key financial indicators – Sayna

	In 2018
Population (trainees)	36
Total Revenues (euros)	42 810
Fee Revenue (euros)	18 000
EBITDA (euros)	11 195
Net Profit (euros)	2 245
Other ratios	
% of staff / total revenue	29%
% of infrastructure / total revenue	17%

Source: Financial information provided by Sayna to Ferdi (2019)

In 2019, there is a substantial growth in revenue expected in all activities and the total revenue would exceed 300,000 euros.

Table 3.8. Projections and Targets – Sayna

	In 2019
Sayna School (trainees)	250
Sayna Sourcing (candidates)	1,250
Sayna Integration	
<i>Including Advisory (euros)</i>	265,000
<i>Including Seed (euros)</i>	36,000
Total revenue (expected) (euros)	301,000

This growth is ambitious and extensively relies on the new Advisory branch, which illustrates the strategic shift to a diversification of services (including training) provided to local companies. This would have to be further challenged by an investor.

We do not have a business plan and projects for 2020 and further on. Considering the fast growth strategy and the numerous diversification projects, the development of Sayna will require external funding and could be supported by an impact investor with early-stage funding (from grants up to series A). Due to lack of information about the business plan over 3 to 5 years¹⁸⁰, it is hard to provide additional analysis for assessing the possibility to use equity investment in this context.

The entrepreneur

Matina Razafimahefa is a 21-year-old social entrepreneur. She studies Political Sciences at La Sorbonne University in Paris. She founded Sayna in 2017 and aspires to make Madagascar the “Next Digital Eldorado”. Matina was awarded the prize of “Social Entrepreneur of the Year” by Organization Internationale de la Francophonie in 2018.

3.5. Conclusions

Sayna model is very unique in the Malagasy context and shows great promises in term of employability and socioeconomic integration for the local youth. Key assets in terms of educational impact include the relevance of training considering the needs of local employers, and the quality of partnerships made with reputable coding schools. The training field and pedagogic approach

¹⁸⁰ The entrepreneur was working on this business plan at the time we wrote this section.

enable Sayna to use standardized modules and sessions in a cost-effective way, which shows potential for duplicability.

The project is still very early stage and there are still a number of questions to be raised on the business model. We believe key dimensions to assess in the future of Sayna will deal with the management of Sayna in scaling-up training activities (and maintain quality) while also starting advisory missions. It will also deal with its capacity to stabilize and duplicate the business model in very different contexts.

There are success stories driving this sector such as the US-based Andela¹⁸¹ which raised 100m\$ since 2014 to train and place African talents in top IT companies. These stories show that the potential of standardized schools in IT is important and may attract considerable investment, including from impact investors, once the right positioning is found.

4. Institut Spécialisé en Technologie d’Art Dentaire (ISTD): a neighborhood school

Organization	Institut Spécialisé En Technologie D’Art Dentaire (ISTD)
Localization	Fès
Field	Vocational Training (2 or 3-year Technician Degree)
Disciplines	Dental Prosthesis
Population	60 students, 1 site
Annual school fees	About 2000\$

4.1. Introduction

ISTD school was established in 2006, it offers dental lab technician programs that train technicians to work in dental laboratories, dental clinics, and hospitals. The school is accredited and its legal form is the limited liability company (LLC). It proposes two kinds of programs: a two-year program for dental lab technicians and a three-year program for specialised dental lab technicians. Both programs is accessible to all students having a high school diploma.

The number of students registered a little increase over time, is at 47 in 2012/13 and at 69 in 2018/19, but the school has not reached its full school capacity yet.

¹⁸¹ See the website <https://andela.com/about/> and last news about fundraising <https://www.jeuneafrique.com/emploi-formation/715540/formation-au-code-andela-recoit-un-financement-de-100-millions-de-dollars/>

In terms of employability, most students easily find a job within six months after they obtained the diploma. Data on graduates in the 2017/18 academic year show that 13 out of the 25 graduates are current employees or self-employees in dental laboratories or clinics in Morocco, 8 others are on an internship, 4 of them pursued their studies abroad.

The school employs both permanent and temporary trainers in the number of ten. It also employs four administrative staff. Staff costs represent 57 per cent of total expenditure, being thus the largest expense for the school. Behind that, the school uses specialized equipment and many consumables that also represent important costs. The school is currently located in three rented apartments, and rental fees represent about 8,5 per cent of total annual expenditures.

There are currently about ten schools offering dental lab technician programs in Morocco, but only half of them are accredited¹⁸². According to the manager of ISTD, Mrs El Hraiki, the labour market conditions are such that all graduates from those schools are able to find a job. Moreover, ISTD can benefit from a good reputation in the field, that allows it to well face competition with the new entrants in the market.

4.2. ISTD, a model of neighborhood school

Pricing

Moderate pricing. Students' fees stand at 20,000 dirhams per year, plus 2,000 dirhams of registration fees. This makes a total fee of about 2,000 euros. Although it might appear as a high fee for a country where annual per capita GDP stands at 3,000 euros¹⁸³, it is much lower than average fee asked by private universities in Morocco¹⁸⁴. Moreover, since the school is accredited, students can apply for a State contribution of 4,000 dirhams to enrol. We thus consider that the training is accessible to the Moroccan lower middle class, especially coming from the Fès region. According to the manager of ISTD, their students typically come from middle-class families; their father is often an entrepreneur and has revenues between 1,000 and 1,800 euros per month.

Innovation

Limited. ISTD trains dental lab technicians with adapted equipment and motivated teachers. The education model appears to be quite traditional and takes place in a small-sized structure, where students are well supervised. The school has a good reputation, but it competes to other private and public schools offering the same programs. There are several innovations in the profession,

¹⁸² In the region of Fès-Meknès, there are two private schools (*Institut spécialisé et prothèses dentaires* located in Meknès, *Art' Dent*, located in Fès) and a public school (*OFPPT ISTA Paramédical et Santé branche Prothésiste Dentaire*) who offer the same programs as ISTD, but ISTD is the only one who is accredited.

¹⁸³ Source: <http://pubdocs.worldbank.org/en/909011553672435332/Morocco-MEU-April-2019-Eng.pdf>

¹⁸⁴ An average fee of 95,000 dirhams per year is indicated here for the programs in dental medicine: <https://www.9rayti.com/article/frais-scolaire-facultes-medecine-pharmacie-maroc>

especially since 3D printers started to be used in dentistry. The school thus needs to continuously invest in new equipment to be competitive.

Growth strategy

Low. ISTD is financially auto-sufficient and lacks access to external resources to implement extension projects. ISTD would like to develop new programs in the next few years, in order to diversify its offer. In particular, the school would like to propose a new undergraduate programme in partnership with a US-based University and a Master degree in Dental Hygiene. In the longer run, the school also aims to build a new campus and to eventually establish a school in a sub-Saharan African country, maybe in Gabon, where they already have an established network.

One problem with dental prosthesis production is that it can be easily delocalized. This is what already happened somehow in Western Europe, where technicians are expensive and prostheses are sometimes outsourced in some developing countries¹⁸⁵. For now, Morocco is among the developing countries that seem to be known to be advantageous for a dental implant¹⁸⁶, but the situation could easily reverse and the country could quickly move to the other way around. ISTD could thus try to take rapid advantage of this situation, for example by setting up partnerships with industry players for starting producing dental implants for the European market. At the same time, the diversification of the education offer with the inclusion of programs training to diverse careers in the dental field seems opportune.

4.3. Additional criteria

With a moderate/low pricing, limited innovation potential and a low growth strategy, we consider ISTD as a neighborhood school, and we thus apply the additional criteria we believe more appropriate to analyze this type of schools.

Education cycle

The school is in the Tertiary Vocational Education cycle but plans to provide Higher Education programmes in the future.

Exposure to public sector

ISTD does not receive any direct subsidy from the government but its students may receive support in the payment of their fees, as said above. The government is also a regulator for the school because it gives the accreditation.

Infrastructure strategy management

¹⁸⁵ See for example this article on the situation of dental prostheses in France, that shows that between 10 and 30 per cent of prostheses were imported in France in 2016, mainly from China and Hong-Kong (57%), but also from Morocco (9,8%) and Madagascar (3,7%): : <https://www.eurodentaire.com/la-situation-preoccupante-de-la-prothese-dentaire-en-france/>

¹⁸⁶ See for example : <https://www.vivamorocco.com/what-about-medical-tourism-in-morocco/>

ISTD aims to build a campus, probably in another Moroccan town, but this is a long run project. For now, the school is located in three rented apartments (in a four-floor building), and the rent represents only 8,5 per cent of the annual expenditures.

4.4. Financial and Projections

ISTD's financial data show an average revenue of 100,000 euros (113,000 euros on academic year 2018/19), which represents about 1600 euros per student. The revenue growth in five years has been quite limited (14% in total). The EBITDA has grown slightly faster than revenues in the same period to reach 54,300 euros. The EBITDA margin is rough 30-40% (its annual variations are due to our estimation of fixed operational costs for varying revenues), which shows decent operational profitability. The assessment of expenditures shows that the HR costs are quite important (40-50% of revenues) and infrastructure expenditures fairly managed (10% of revenues). To sum-up, ISTD creates value with good profitability but is limited by its weak capacity to increase enrollment. The growth of ISTD is thus constrained by the (small) size of the school.

Table 3.9. Key financial indicators – ISTD

Estimated profitability ratios ¹⁸⁷	2015	2016	2017	2018	2019
Revenues (€)	98 388	90 189	76 524	104 947	113 146
EBITDA (€)	43 355	35 529	20 507	47 206	54 329
EBITDA Margin	44%	39%	27%	45%	48%
Net Profit (€)	34428	27385	13865	37894	44305
Profit / Revenue	35%	30%	18%	36%	39%
Expenditures	2015	2016	2017	2018	2019
% of staff / total revenue	41%	45%	55%	39%	38%
% of infrastructure / total revenue	6%	6%	7%	6%	5%
% of financial costs / revenue	6%	6%	7%	5%	5%
Other indicators	2014/2015	2015/2016	2017	2018	2019
# of students	60	55	51	50	69
student/teacher ratio	6	6	5	5	7

Source: financial statements and information provided by ISTD to Ferdi (2019)

¹⁸⁷ Estimation from partial data we had access to. A substantial part of this data was not audited. Conversion MAD/EUR were done at 0,0911 (rate observed on January 1st of 2019 on xe.com)

Entrepreneur

Saloua EL HRAIKI is the Director of ISTD. ISTD was founded in 2006 by her husband who was a professional from this field. Saloua studied law and eventually became a professional of dental sciences when she took over the management of ISTD.

4.5. Conclusions

ISTD offers relevant training at an accessible price and with good employability to dozens of students in a region that provides few employment opportunities for the youth. It also participates to the (very-needed) strengthening of the health sector with qualified human resources. Finally, ISTD has a strong local anchorage and is very aware and committed to social challenges in the Fès region.

However, ISTD appears to be quite constrained in its capacity to grow and expand the school capacity. While our estimations of the economic model show a good level of profitability, there is limited scope for increasing the revenues of the school for at least two reasons. First, the entrepreneur does not have access to the long-term funding which would be required to build new facilities and pursue other strategic development projects. Second, ISTD is now positioned in a niche market (dental studies), and would not easily diversify its training without a strong partnership with other academic players.

Therefore, the additionality of an impact investor in supporting such type of neighborhood school would be quite very strong but there are also challenges and risks. We believe that in the short-term ISTD is not likely to show sufficient and feasible growth perspective to collaborate with an equity fund. A grant-funding approach and/or small-sized loan associated with non-financial support to the entrepreneur and the school would constitute a good strategy to support and increase ISTD's development and its impact.

5. Practical Education Network (PEN): a project of teacher training

Organization	Practical Education Network
Localization	Ghana, PEN mainly operates in Greater Accra
Field	In-service teacher training
Disciplines	STEM: science, technology, engineering and mathematics
Population	About 2,900 teachers trained in three years
Cost	Around 78\$ for a 6-days training for public school teachers, 114\$ for private ones.

5.1. Introduction

PEN is a social enterprise that was born in 2014 with the idea to diffuse an experiential MIT-style learning approach to children living in contexts where schools normally lack laboratories and equipment to do science experiments, have the large class size and where interactive pedagogy is not well developed yet. PEN decided to establish in Accra because of the easy business environment.

PEN engages STEM (*Science, technology, engineering, and mathematics*) teachers in workshops where they can learn how to teach the national curriculum using hands-on science activities that could be created from low-cost material that is locally available. At the end of the workshop, the teacher receives a booklet presenting all the proposed activities, that can thus be replicated in class with the students. PEN’s see the teachers as the agents of change in STEM learning.

PEN’s workshops are mostly addressed to teachers teaching in Junior Secondary School (JSS, grade 7 to 9). Today PEN targets neighbourhoods and dynamic schools, mainly located in Greater Accra. Up to 2018, PEN organized 68 workshops and about 2,900 teachers have been trained.

The first workshop was organised in 2014, and, after a rapid increase, in 2016 PEN organised 34 workshops spread across Ghana, in collaboration with several NGOs and with the Ghana Education Service (GES). The elections in December 2016 marked an important change for PEN. The new government added the “free SHS” policy to its agenda and with the idea that education was supposed to be free, any initiative that asked for a financial contribution (even if not paid by the

students) found a lot of resistance. At the same time, a change in the leadership in the GES office PEN was in contact to, made even more difficult for PEN to spread its activities.

5.2. PEN, a model of teacher training programme

Relation to buyers and beneficiaries

At present, typically PEN's training takes the form of workshops where PEN staff train teachers. Sometimes the workshops are organized in cooperation with third parties, mainly NGOs, and in those cases, PEN share revenues with them. Between 30 and 70 teachers attend each workshop, usually one per school, but numbers are lower when no partner is involved. Currently, PEN is also testing a new micro-franchise model that consists in setting up a PEN science lab in a school, that can be opened to students from other schools and thus constituting a sort of community hub, to which PEN provides regular training and materials. PEN is refining the model and aims to promote it in the next few years¹⁸⁸.

Whatever is the form of the training, we consider PEN having a Business to Business to Beneficiaries (B2B2Be) model in terms of relation to buyers and beneficiaries because PEN always contracts with the school to train its teachers. Teachers can thus be considered as the final beneficiaries and the schools can be considered as the customers. Public schools are supposed to pay for the training using their capitation grant, that is the general fund public schools receive from the state for their functioning.

Pricing

Mid-priced marketing strategy. PEN's training consists of six stages: teachers are supposed to attend six workshops over a period of 2-3 years and each workshop currently costs on average 66 cedis (about 13 US\$) for public school teachers and 100 cedis (about 19 US\$) for private schools teachers. PEN wants the revenues from workshops to cover the expenditures, but at the same time, it aims to keep the price accessible for public schools and it often charges less to schools that are in great financial difficulty. Public JSS are supposed to receive 4.5 GHC (i.e. about 0.88\$) per enrolled pupil per year as capitation grant. This means that in order to pay for an entire training for a STEM teacher the school needs to spend roughly the amount it receives for 88 pupils. This might be not trivial to them. For this reason, sometimes schools ask for one or two workshops, rather than for the six. PEN is currently trying to get schools to sign up for the whole training package, which includes follow-up school visits, coaching and recognition awards for top performers.

¹⁸⁸ PEN's ideas and methods are also spread through the step-down trainings that are provided by teachers who have been already trained by PEN. Although PEN does not have clear tracking systems of those trainers' workshops, they were estimated at 45 in 2017.

Innovation

Innovative business. A limited offer of in-service teacher training already exists in Ghana, but what PEN proposes is very different from what others do. PEN aims at introducing simple, hands-on experiences in science classrooms. They view teachers as the best channel to do so. PEN's main innovation is to give teachers who do not dispose of any laboratory nor technical equipment, ideas on how experiences can be created using simple and locally available materials. It is worth to mention that PEN is one of the eight winners of the 2018 MIT's Solve Class for Teachers and Educators.

Potential for scaling up

Potential for progressive scaling up. The environment where PEN operates presents several obstacles for the expansion of their activities. Since 2016, the enterprise is searching for a model that could allow it to be financially sustainable in the long run. One option could be to offer more training to private schools since the latter can might be better able to pay for them and are more flexible in the use of their funds. Although this option has not been discarded yet, currently PEN seems rather trying to be more involved in public education (see below).

Projections for the next years see an increase in the number of workshops from 10 per year in 2019 to about 22 per year in 2023, and an increase in the number of schools lab from 5 to 13. PEN is also elaborating strategies allowing it to scale up in other countries and to diversify its offer. For example, they plan to produce a science-focused cartoon.

Relation to the public sector

Client, academic partner and regulator. Since the beginning of its activities, PEN has always made the effort to engage with the government. When training is provided to the public schools, the public sector is a client of PEN. But behind that, all the training materials proposed by PEN are designed to align with the national curriculum, so as to best be adopted.

PEN's engagement with the public sector is expected to increase in the next years. Currently, Ghana is involved in a comprehensive reform of curricula for basic and SHS school and PEN has a seat on the Science Panel, which is revising the science curriculum for primary school. Moreover, PEN is working with GES in preparing the nation-wide training of science teachers on the new curriculum. Finally, PEN hopes to be involved in the organization of the regular in-service teaching training for STEM teachers that could become compulsory soon according to the wish of the NTC (National Teaching Council).

Entrepreneur

Heather Beem is the founder and CEO. She had her PhD at MIT in Mechanical Engineering. She also teaches engineering at Ashesi University.

5.3. Financial and Projections

PEN's income statements for the period 2014-2018 show that revenue has rapidly increased at the beginning of the activity, suddenly decreased in 2017, to then starting gradually rising again the year after. This trend can be explained with the difficulties encountered in 2017 right after the national election and its consequences on secondary education, as described above.

In terms of expenditures, the rapid increase we see in the data for the first three years of activity can be mainly explained with the increase in the number of workshops PEN organised. At the same time, the company was growing so that general and administrative expenditures increased as well. In 2014, there was only one staff and two volunteers, in 2015 three part-time master trainers were recruited and three more staff were recruited in 2017. That year, despite the drop in the number of workshops, the amount of general and administrative expenditures remained stable, thus explaining the important loss in term of net income realised in 2017.

In the period 2014-2018, PEN received several grants, for a total amount of 67,400 US\$ that allowed the company to cover the loss and to constitute a reserve to continue operations. It also allows PEN to plan investments for the following years.

Table 3.10. Key financial indicators – PEN

In US dollars	2014	2015	2016	2017	2018
Revenue	0	1,507	16,119	1,613	3,722
Grants received		4,000	6,000	22,400	35,000
Expenditure	724	2,224	17,685	10,790	9,722
General and administrative expenditures on total expenditures	44%	26.3%	62%	93%	84%
Net income without grants	(724)	(716)	(1,561)	(9,176)	(6,000)
Net income including grants	(724)	3,283	4,434	13,223	29,000
Number of workshops organised	1 (pilot)	17	34	8 direct et 45 step-down	10

Source: PEN's income statements. Original data were in GHC, have been converted in US dollars by the authors (exchange rate at April 30th, 2019).

Since 2017, PEN is refining a strategy which would allow them to reach financial sustainability. At the same time, they are perfectly aware that it is extremely difficult for a company aiming to work with public schools to be autonomous from grants.

PEN is planning an increase in general and administrative expenditures from 2019 because the company has finally invested in infrastructures (i.e. an office space) and in a vehicle. Moreover, the company has just hired new staff, an operations manager.

Breakeven calculations show that a total of 875 workshops and 631 science labs in a school should be organized between 2019 and 2023 to balance total costs with total gains, while last internal projections foresee only 77 workshops and 45 science labs across the period.

For the period 2019-2023 PEN plans to have a deficit of about 23,000\$ per year. The deficit is planned to be higher at the beginning of this period (at about 27,300\$) and to decrease over time up to less than 20,000 in 2023. PEN plans to cover it asking for new grants, involving in partnerships with local companies, and above all, they hope to become a tender for the government.

5.4. Conclusions

PEN aims to improve the **quality** of teaching and learning experience in science, thus contributing to changing the negative perceptions students often have about it. PEN thus may have a positive and long-term impact on the enrolment rate in scientific and technical programs, which are very low in Ghana. PEN's mission is well aligned with the government strategy that aims to increase the percentage of young people pursuing scientific studies.

In terms of social impact, PEN is concerned about reaching the maximum of teachers, mainly in the public schools, thus promoting **equitable access** to good teachers and quality education. At the same time, the economic model of PEN is not sustainable and require additional grants or other sources of funding to reach break-even.

An impact investor could hardly invest equity in PEN but support with grant-funding as well as additional non-financial support to improve the strategy and strengthen the revenues would be an impactful investment for PEN and its ecosystem, including the public sector. This example shows that an impact investing project should incorporate diverse instruments which may benefit social enterprises that are looking for financial sustainability or/and independence from grant-funders.

6. Etudesk: an early-stage education technology company

Organization	Etudesk
Localization	Abidjan, Cote d'Ivoire
Field	E-learning
Disciplines	Finance and Accounting, Marketing, Human Resources, Sales, Management and Communication
Population	About 8,000 learners (as of 2019)
Cost	Around 200\$ for a 2-3 month training

6.1. Introduction

Etudesk is a startup currently proposing short online training programs, highly enterprises oriented, to francophone young Africans. It currently proposes short training on Finance and Accounting, Marketing, Human Resources, Sales, Management and Communication.

The company was established in 2016 with the objective to become the “University of Enterprises”. The founding idea is to conceive the training programs together with the enterprises and then proposing them on a learning platform. At the origin of Etudesk there is the recognition that a mismatch exists between the traditional programs offered in Cote d'Ivoire and the skills demanded on the labour market.

The original Etudesk model consisted of short online courses’ provision (between 2 and 10 hours), in full autonomy and with no coach or teacher. Today the platform still offers about 40 courses responding to this model. Although the company was able to reach about 8,000 learners in a few years, it quickly realized that the short MOOCs format does not work well for the Ivorian market, where students appear to be reluctant to study in complete autonomy. This is the main reason why Etudesk recently decided to move towards longer training (2 or 3-months length) where learners not only have access to several practical training modules on specific job-related contents but are also accompanied by a mentor throughout the entire course. Interactions with the mentor always take place on the platform and do not consist of face-to-face interaction. The new Etudesk strategy also contemplates learners to pass a test to evaluate whether they fit for the job they would like to

be trained, and see the company acting as an incubator to help for the professional integration of learners. The platform already started to propose this new kind of programs, for each of them Etudesk charges about 200 US\$. In the medium run, the company would like to dismiss the short programs and just offer the longer ones.

The choice of the programs to offer is demand-driven: Etudesk conducts market researches with companies and job seekers to identify their needs. According to the CEO of the company, the most demanded jobs in Cote d'Ivoire are in sales, logistics, finance and in web and apps development. Since there is a lot of competition in the latter subject¹⁸⁹, Etudesk decides to launch its first longer training programs in sales, project management and corporate finance.

When the enterprises approach Etudesk in order to put a course in place for their employees, they often provide their own instructors. Sometimes the company needs to find external consultants as instructors that are usually paid with revenue sharing contracts. Etudesk recently encountered some difficulties in finding Ivoirian experts in some field, as for example in project management.

Etudesk is not currently able to provide any certifications to learners, so the value of their programs is only given by the credibility of the partner enterprises. For this reason, the company tries to associate with corporates, mainly large-sized enterprises including branches from international companies.

A recent survey on Etudesk users shows that they are on average 27 years old, most of them are trainees or recently-employed persons and 23 per cent of them are women. In terms of nationality, only 58 per cent of learners is from Cote d'Ivoire. 12,9 per cent come from Cameroon, 9,8 per cent from Senegal, 4,5 per cent from Benin and 3,4 per cent from Morocco. These percentages indicate that Etudesk is already spreading in other francophone countries¹⁹⁰.

Today nine persons work for Etudesk. Lamine Barro is the founder and CEO of the company. At his side, there are an educational content manager, a technical manager, a content manager, a multimedia project manager, a marketing manager, an administrative and financial manager and two trainees.

¹⁸⁹ Several free courses on web and app development are available online. Moreover, on this subject, Etudesk is in competition with Edacy, a company that proposes 9-months training (3 months specialisation on line and 6 months of work-learning) in web development, mobile development and data science, both in Senegal and Cote d'Ivoire, as well as with Open Classrooms (French), a significant player in West Africa.

¹⁹⁰ The enterprise mostly uses mobile money and credit cards as payment methods. This makes easier to sell its services abroad such as Cameroon and Gabon.

6.2. Etudesk, a model of an education technology company

Relation to buyers and beneficiaries

Etudesk sells its training programs to both individuals and enterprises. As described above, the main initial strategy of the enterprise was to deliver training to individuals, in a **Business to Beneficiaries Model (B2Be)**, where the clients are also the final users/beneficiaries of these courses. With this configuration, Etudesk mainly targets three types of customers: (i) bachelors and students wanting to prepare for a more successful job insertion or wanting to reinforce their theoretical knowledge with business-oriented courses; (ii) job seekers who want to acquire new skills.; (iii) workers, employers and entrepreneurs, who aim developing their skills (in a more flexible format for employees, with tracking for their employers, and at a lower cost).

Recently, the strategic shift is leading Etudesk toward a **Business to Business to Beneficiaries (B2B2Be)** model, where the clients are corporates and the beneficiaries are their employees. Etudesk currently sells 70 per cent of their programs to enterprises (as of 2019).

Pricing

Low-cost positioning. The cost of shorter courses (between 2 and 10 hours) ranges between 3.5 and 35 US\$. This low price makes them very accessible even to lower-income classes. The cost of the newly-designed programs is around 200 US\$. The new offer is not expected to change the typical socio-economic profile of learners, although it might be more difficult for low-income users to afford this new price.

Innovation

Innovative. Etudesk is the first platform proposing low-cost online training programs in Cote d'Ivoire. Direct and indirect competitors seem indeed to be more expensive. The direct competitors in Côte d'Ivoire are Educatel Cote d'Ivoire and CED-CI (Centre d'Education à Distance), but both seem to be not active at the moment. There are more indirect competitors, the training and recruiting firms offering face-to-face training¹⁹¹. A market study run by Comoé Capital found that the average price of a face-to-face training in Cote d'Ivoire is about 250\$. Main direct competitors are the international platforms that are accessible from Cote d'Ivoire (e.g. Coursera, Edx, Udacity, Udemy, OpenClassroom) offering online training. OpenClassroom is the only one that offers courses in French, thus can be considered the most important among direct competitors. An OpenClassroom training can last from 3 to 16 months and costs range between 330 to 560 US\$ per month¹⁹².

¹⁹¹ There are many training and recruiting firms in Cote d'Ivoire. COMOE Capital market research identified three main training and recruiting firms: Maison Chefs d'Entreprise, CIFIP and RMO, that register an increasing demand for their services, offered to both individuals and enterprises. As indicated in section on Cote d'Ivoire, enterprises can benefit from the resources of the FDFP to train their employees.

¹⁹² OpenClassroom also helps people to search for enterprises that are available to pay for training.

We see Etudesk as innovative in two senses. First, in the low price of training that can allow the company to reach a wide range of beneficiaries in the local education system and job markets such as students, job seekers and employees. Second, the collaboration with employers as most of their programmes are proposed and designed in coordination with the companies themselves thus ensure the relevance of the training offered in the local context.

In addition, Etudesk is seeking through its new strategy to increase its knowledge of skilled workers' availability on local job markets and facilitate job placement after they attend and complete one of Etudesk's training. With such positioning in both training and job placement (which are generally ensured by recruitment agencies), Etudesk could gain an important strategic value to a local employer in a diversity of sectors.

Potential for scaling up

Progressive. The initial short program was hard to be financially sustainable because it required a huge number of learners to be rentable.

By the end of 2019, Etudesk aims to be able to sell at least 10 long training programs. They need to have at least 2,400 learners to break-even. They also aim to establish partnerships with enterprises operating in Cameroon, Senegal, Mali, Gabon and Guinee to be able to better sell their services in those countries.

Etudesk aims to put in place an income sharing system where the company helps learners to enter the labour market in exchange of 20 per cent of their first 3 months of wage. This is similar to the system applied by some employment agencies.

Relation to the public sector

No relation for now. No authorization is needed in order to sell on-line training programs and their contents are not verified by regulation authorities (ministry of education) since no formal certification is required. The management is willing to obtain accreditation from the FDFP ("Fonds de Développement de la Formation Professionnelle), the public organization in charge of funding the public vocational centres with the revenues collected by the fiscal authorities ("taxe professionnelle"). Such accreditation could permit Etudesk to offer its services to local companies benefiting from a public funding. In 2020, Etudesk will seek to work with the Ministry of Education to obtain a certification of its training.

The Entrepreneur

Lamine Barro is the founder and CEO and the Lead Developer of Etudesk. After an undergraduate degree in Biology, he developed many professional websites and apps for companies in Côte d'Ivoire, before creating his own enterprises. He is also a graduate of the Founder Institute.

6.3. Financials and Projections

Unfortunately, we were unable to have access to any financial information as the entrepreneur is currently restructuring the accounting system with Comoé Capital.

6.4. Conclusions

Etudesk is a start-up seeking to provide students, job-seekers and employees with affordable and relevant training through e-learning modules. Etudesk is trying to find the right strategy in order to be financially sustainable and to differentiate from current models in education technologies. It is too early to say if it will be successful in finding a way to become significant in the Ivorian and, more in general, in the (francophone) African market. A seed funding in equity such as the investment made by Comoé capital in 2018 seems most suited to this profile of risk but with unclear perspectives on exits and returns. We also believe that beyond an investment, the non-financial support of an impact investor (strategic guidance, TA, networking) is essential to help Etudesk to find its way in this early-stage development.

Part 4

A mapping of private investments in education

In the previous sections, we have described the role and contribution of private sector players in the African education ecosystem, which is considered as the demand-side of the education financing sector. This section aims to better understand the current state of the education financing sector by looking at the supply side of investments (i.e. the types of investors and transactions made in the last years). To do so, we draw an overview of investments in private education providers from 2012 to 2019.

1. Introduction and objectives

This section aims to provide information and analysis about the investment ecosystem targeting private education in Africa. By zooming on the supply of education financing, this mapping of investments was conducted in order to answer a series of key questions:

What organization did invest in the education sector recently? Under what strategy?

What types of educational institutions did receive these investments?

What regions and education segments are the most and least attractive and dynamic?

Which investors of the mapping could be considered as impact investors?

Which organizations are funding these investors? With what financial and/or impact objectives?

This section seeks to build a comprehensive and detailed overview of the education investment ecosystem in Africa and to assess the strategies used by investors to support educational institutions. We build upon this mapping work to draw several trends about these investment markets and to provide key lessons for the design and positioning of a new impact fund dedicated to education.

2. Mapping methodology

This section details the methodology used for building this mapping. The investor listing and transactions details can be directly requested to the authors.

Mapping scope

The mapping work aimed to encompass most investment operations on the African continent, from 2012 to 2019. All African countries are included in this research, although the sources and information available to the authors have limited the work on nearly twenty African countries.

The transactions tracked in the database are equity and (senior) debt investments in education providers as well as in ancillary activities (education technologies, teacher training, publishing companies, student finance). The mapping also tracked grant-based funding when it is provided as

a complementary component of investment (e.g. Technical Assistance) although related information is generally scarce.

All investors can be integrated into the database, excepting local and national governments that may invest in education operators and activities through different kinds of funding (e.g. subsidies, facilities).

Mapping indicators

In order to get as much information as possible on these investors and their interventions, the mapping of investments collects data and information on six different categories that gather 45 indicators and criteria.

Table 4.1. Investment Mapping and Data Clusters

Data cluster #	Typical indicators include...
1. Organization	Organization type, home country
2. Investment Strategy	Investor type, maturity, education segment, countries, investees
3. Financial Performance	Deal size, financial returns expected/achieved
4. Funders & fundraising	Fundraising status, vehicle type, investors
5. ESG/Impact policy	Impact policy, impact goals, indicators, tool certification
6. Human resources	Number of staff in Africa, localization of offices

Several analysis and trends are drawn on aggregated data, based upon these different types of information.

Mapping sources

The mapping is based on a diversity of sources that includes:

- Industry data (EMPEA and GIIN databases)
- Grey literature / secondary data (Dalberg 2013, 2015 ; Caerus, 2017)
- Generalist and Specialized News screening (Africa capital digest, PE Africa, Google News)

These sources have different interest and focus on African countries. Most sources are fed or produced by Anglo-Saxon organizations and/or Anglophone players. As a consequence, we recognize that insufficient data is tracked on Francophone and Lusophone African countries. However, additional data has been collected through the field studies implemented for this study.

We admit that our sources may track big-sized transactions more effectively than small transactions, which makes the database less reliable as far as transactions lower than 2-3 m\$ are concerned.

3. Emerging trends in the education financing sector

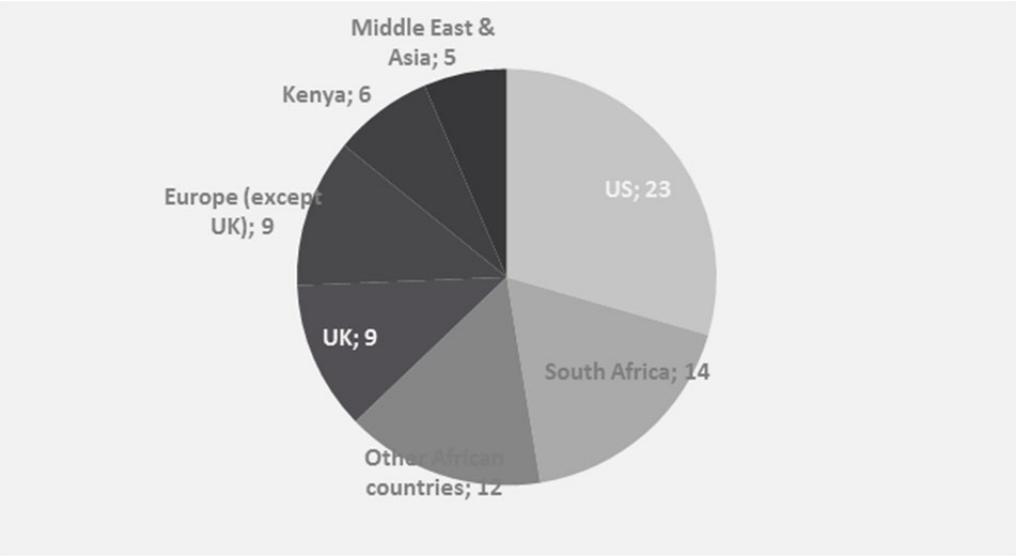
In this sub-section, we provide analysis and trends that emerge from the overview of education investments.

3.1. A diversity of investors and strategies

Nearly 80 investors invested 2 billion dollars in the private education sector in Africa since 2012. The mapping shows that 1,750 million dollars were invested in education companies from 2012 to 2018. These education companies belong to a diversity of education cycles and activities¹⁹³: preprimary education, low-cost K12¹⁹⁴, mid-priced and premium K12, vocational training, contact higher education, distance higher education, other education technologies, student and institutional finance, other ecosystem activities. The mapping could track investments in 25 different countries, so it is likely that the total amount of investment exceeds 1,8 billion dollars.

There is a wide range of investors and strategies that are active in the African education space. The mapping enhances the diversity of players, transactions and strategies. The geographical origin of these players is very diverse, but with a majority of Anglo-Saxon players as shown by Figure 4.1.

Figure 4.1 : Education investors by home countries



A relevant criterion that could be used for clustering these 80 investors is the economic sector/field to which each organization belongs. As shown by Table 2, there are four main categories of sectors: financing industry, philanthropy, education sector, public or multilateral sector. Thus, each investor

¹⁹³ These categories were used in the Caerus Report (Caerus, 2017).

¹⁹⁴ K12 refers to the primary and secondary cycles. In this section, low-cost K12 refers to the education supply targeting low-income populations and whose tuitions fees typically do not exceed 600\$ per year (with country-specific variations). Conversely, mid-priced and premium education refer to education providers targeting middle class and high-income populations, and whose tuition fees exceed 600\$ per year (Caerus, 2017, p87).

can be assigned to one of these categories, as well as the aggregated funding invested by these categories.

Table 2 : Types of investors active in Africa

Types of investors #	Definition
1. Financial investors	Refer to professional investors belonging to the financing industry. Typically: investment funds.
2. Strategic investors	Refer to independent players from the education sector, or financial players specialized in the education sector.
3. Public investors	Refer to public and para-public organizations whose mandate is to provide financing to private-sector organizations. Typically: development finance institutions.
4. Philanthropic investors	Refer to philanthropic organizations that have legal and operational capacity to invest in private-sector organizations.

Financial investors are the most widespread type of investors in the education financing sector. The database includes 41 players corresponding to this category. These financial investors represent an amount of nearly 990m\$. Beyond the fact that they all are professional investors from the financial industry, they are very different types of investors, pursuing a wide range of investment (and impact) strategies. We find investment funds that are specialized in emerging markets and that pursue a commercial (finance-first) strategy, through a generalist approach. For instance, this includes Development Partners International (DPI) or Emerging Capital Partners (ECP). We also find impact investors, such as Omidyar Network, who have invested in several education projects in West and East Africa. All these investors have invested in projects with different maturity and risks (from seed capital to venture capital to growth investments) as well as on specific projects (infrastructure financing). Financial investors include many players with a pan-African approach (e.g. Actis), or with a strong national anchorage (e.g. Comoé Capital in Côte d'Ivoire).

Strategic investors are significant players in the education financing sector. A dozen players correspond to this category. Together they have invested around 350m\$. Strategic investors are generally education companies that are big enough to do direct (equity) investments in other companies. We find for example Galileo-Studialis, a global group of private education, investing in higher education institutions in West Africa. We may also find specialized investment funds that were created to invest in the sector as well as strategic investment funds backed by global education companies. For example, the Pearson Affordable Learning Fund is an investment fund that was powered by the global publishing company Pearson. Again, a diversity of strategies corresponds to these players but they tend to follow an education-focused commercial approach, and we observe a geographical concentration in East Africa and in South Africa.

We find a limited number of (non-African) public investors active in the education financing sector. They mainly are European and multilateral development finance organizations such as the UK-based CDC or the International Financial Corporation (IFC). These players may operate with both impact- and finance-first strategies, with most of investments on infrastructures, agriculture and services. The DFIs tend to manage substantial levels of funds, of which a small part only goes to education. We count nearly 180m\$ invested by these public investors, who tend to provide investments that range from 5 to 20 m\$.

Finally, philanthropic investors are active in the education financing sector and pursue impact strategies. Most of these players are US-based foundations that have funded education projects and companies following a specific impact goal (e.g. provide affordable education with a new model of blended education in East Africa). The Gates Foundation and the Ford Foundation are two organizations that have historically been active in the sector and that may sponsor and fund private education companies. The Chan & Zuckerberg Initiative is an incoming player in the sector and got involved in the funding of Bridge Academies. Other foundations like IDP Foundation develop education-dedicated programmes that provide financing to private schools, as a microfinance player. We assess that nearly 70m\$ were invested by these organizations.

3.2. A geographic overview of education investors

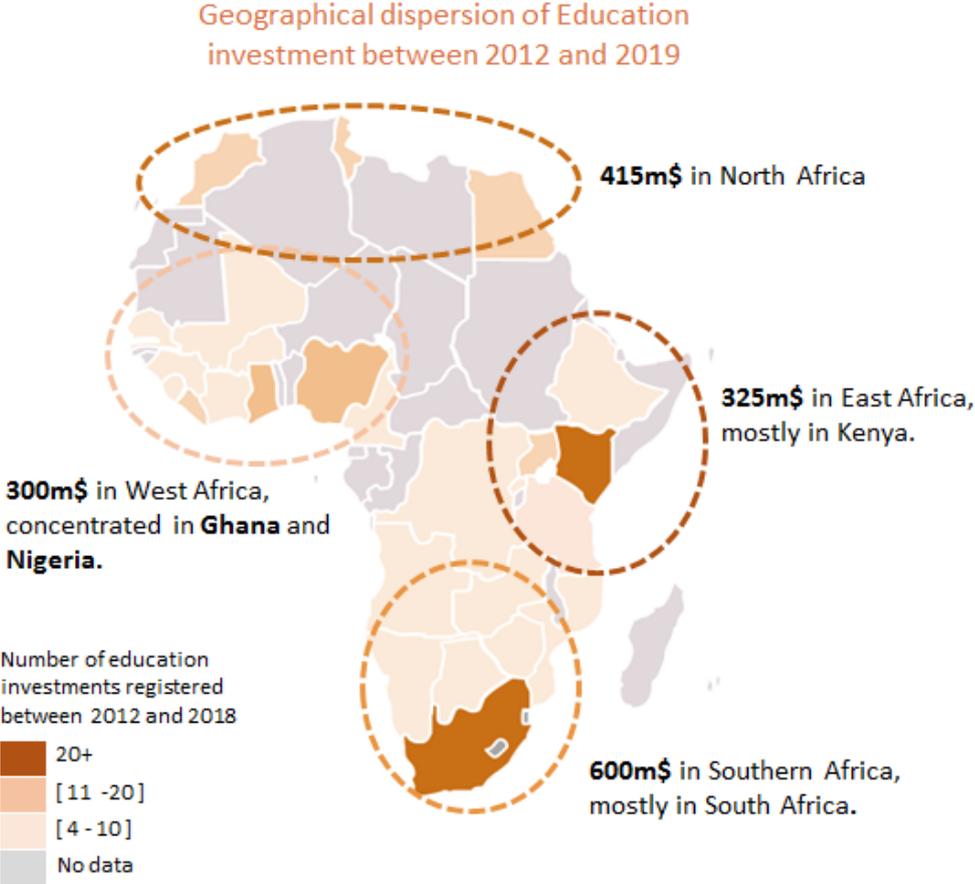
The mapping shows that investments were realized in 25 countries from all sub-regions of the African continent and with a very unequal repartition. The allocation of investment volumes by African sub-regions is given in Chart 2.

Education investors are most active in Anglophone African countries, especially in South Africa and Kenya. Most education investors target their activities in specific sub-regions. We found that nearly 80% of education investments were made in Anglophone countries. Southern Africa is the most attractive subregion, with a volume of investments reaching nearly 600 m\$. The large majority of this volume was invested in South Africa, which is the most dynamic market for education investors. East Africa is another very dynamic sub-region with 320m\$ invested. Kenya appears as a very attractive market of this sub-region (nearly 30 investors are active in Kenya). The mapping work could neither track significant education investments in the Indian Ocean (e.g. Madagascar) nor in Central Africa, probably due to data limitation in this sub-region.

North Africa has attracted a high amount of education investments, but with a limited number of transactions. The mapping shows that more than 410 m\$ were invested in North Africa in education companies. We observed that most transaction in North Africa corresponds to big-sized operations in the higher education segment, that can reach 50 to 100m\$. Morocco and Egypt are two very dynamic markets for these big transactions, that were undertaken by a limited number of players.

Despite a significant economic dynamism, Francophone Western Africa lags behind North Africa, East and Southern Africa in the education investment space. 310 m\$ were invested in Western Africa, this amount of investment was mainly concentrated in two Anglophone countries, Nigeria and Ghana, where 10 to 15 education investors are active. Very few transactions could be tracked in the Francophone West African countries.

Figure 4.2 : Geographical Dispersion of Education Investments in Africa



These geographic trends are well aligned to the general landscape of private equity in Africa. The total investments made by PE firms on the continent were worth 24.4 B\$ between 2012 and 2017, invested in many sectors such as health care, agribusiness, industries and indeed education¹⁹⁵. This amount suggests that education investments represented only 8% of this value over the period. In West Africa, Nigeria represented 73% of the 10 B\$ registered. Kenya is ranked as the second most attractive country after Nigeria and counted for 60% of total PE investment in Eastern Africa¹⁹⁶.

¹⁹⁵ <https://www.dlapiper.com/en/southafrica/insights/publications/2018/11/africa-connected-doing-business-in-africa/private-equity-as-a-catalyst-for-growth-in-africa/>

¹⁹⁶ <https://www.avca-africa.org/media/1634/avca-eastafrika-spotlight-public-sheets-161117c.pdf>

3.3. Investments in diverse education segments

The mapping shows that investments were unequally tracked in all education cycles and ancillary activities. These segments and activities attract different profiles of investors and strategies.

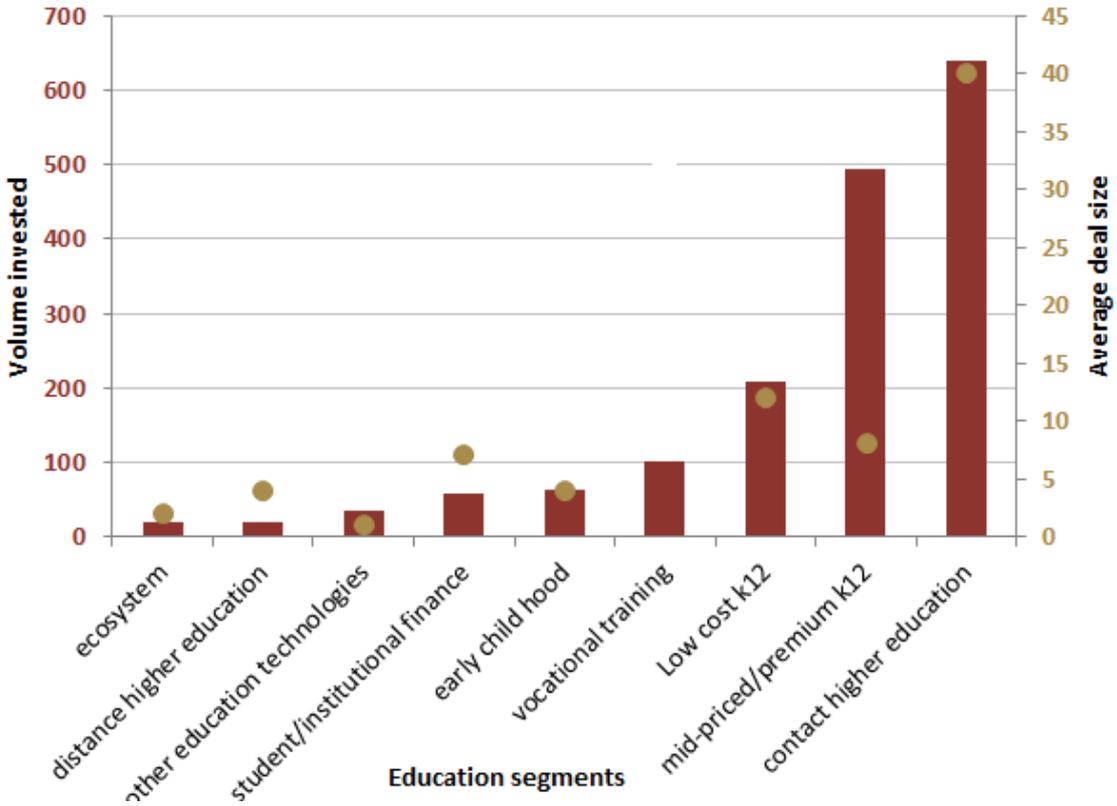
A substantial part of education investments was made in higher education. As shown in Chart 3, contact higher education is the most attractive segment with an average ticket size at 40m\$ and more than 600m\$ invested in total. These transactions tend to include the acquisition of large infrastructures (campus, student housing) and of renowned universities. A significant number of these deals were made in North Africa and in South Africa. Active investors in higher education include ECP, DPI, Africa Integras and Actis. Some giant transactions are to be noticed. Université de Casablanca was acquired in 2017 by Holding Pédagogique (DPI) for 56m\$. Africa Integras (The Christie Company) will undertake the extension of the University of Ghana for 64m\$.

K12 education is the most dynamic market when we consider low-cost and premium education combined. K12 education gathers around 700m\$ and constitutes the most attractive segment in the database. Nearly 500m\$ was invested in mid-priced and premium K12 education, with an average ticket size at 6m\$. Typical investors in this segment include AfricInvest, Centum, Curro, ADvTech and IFC. We find low-cost K12 education as a dynamic segment with nearly 200m\$ invested in total and an average size of the transaction between 5 and 10 m\$. These investments are mainly concentrated in the East and Southern African zone, with a significant number of deals in South Africa and Kenya. Typical investors for low-cost education include DFIs (IFC, DFID) and impact investors (Omidyar Network, Pearson).

Other education cycles like vocational training and early childhood development appear to be much less targeted by investors. The database indicates that around 100 m\$ were invested in TVET but data shows a very limited number of deals that makes the calculation of average transactions uncertain. Typical investors in TVET include Echoing Green, TLCom, Actis and Learn Capital. ECD gathers nearly 50 m\$ of investments, with average deal lower than 5m\$.

Ancillary activities appear to constitute an emerging sector for investing, with an increasing number of small transactions. That includes several transactions in education technologies, ecosystem activities (publishing for instance) and student and institutional finance. The average ticket size for these segments is below 1-2m\$ and generally concerns early-stage companies. Some tech companies are fast-growing ventures that are financed by the venture capital industry, while other activities are supported by traditional and impact investors. E-learning models in high education have attracted nearly 20m\$. The biggest transaction was the fundraising of the e-learning enterprise UNICAF, invested by CDC, University Ventures and Savannah Fund for a global amount of 12m\$. Education technologies are another fast-growing segment, with around 45 transactions and big investors coming in such as Injini, Future Learn (PSG Fund) and Village Capital.

Figure 4.3 : Education investment volume and average deal size, by segments¹⁹⁷



3.4. (Some) insights on exits, valuation and profitability

As the strategic interest of private equity investors in African private education is quite recent, the number of exits, as well as available information on transactions, is still quite scarce. To our knowledge, most exits with institutional investors were realized in two education cycles: higher education and K12.

Transactions in higher education

Since 2015, big private universities were acquired by some of the major private equity players of the continent:

- In 2017, the UK-based **Actis** built up its pan-African Higher Education platform, **Honoris United Universities**, which acquired 7 HE institutions representing 27,000 students, both in Northern and Southern Africa. The platform owns and manages the MANCOSA University (South Africa), the Ecole d’Architecture de Casablanca, the Université Mundiapolis (Morocco), and the Université Centrale (Tunisia). Mundiapolis is based in Casablanca and has a strong international profile with 21 international degree programs attracting over 30% of students from a range of foreign countries. Actis acquired Mundiapolis for an estimated amount of 100m\$.

¹⁹⁷ The average deal size in TVET is missing since the number of registered deals was not significant.

- **Emerging Capital Partners** backs the education-focused Maarifa fund which invested in Zambia and Uganda, typically into institutions disclosing an EBITDA of 2 to 5m US\$. According to a Maarifa manager, typical valuations in the sector reach a multiple of 7x to 8x EBITDA.
- **Mediterranean Capital**, in conjunction with **Development Partners International**, acquired the KMR Holding Pédagogique, a leading HE platform in Morocco and Senegal (7,500 students). KMR owns the Université Internationale de Casablanca (UIC) and the Université Internationale de Marrakech (UIM).

Transactions in K12 education

In Kenya, several significant deals and exits were realized in the last years and show a growing appetite of investors, not only in premium and international education models but also in mid-priced supply.

- **Brookhouse Schools** (Premium and international K12): invested in 2010 by Africinvest and exited in 2015 on UK-based education-focused Educas. Africinvest was a part of a consortium which owned 75% of the school network. Africinvest sold its 30% shares for 9.8m US\$ (1 billion KES at this date) and achieve a multiple of 3x on its investment.
- **Hillcrest (Premium K12)**: invested in 2011 by Fanisi Capital and exited in 2015 on the Dubai-based GEMS Education. The 2015 deal was estimated at 25m US\$.
- **Makini Schools** (Mid-priced K12, 3200 students) was invested in 2018 by Caerus Capital (US), Scholé (UK) and ADvTEch (SA). The consortium bought 71% of shares with a total investment of nearly 9m US\$.
- Early 2019, **Riara School** (mid-priced K12, 6 schools, 12m US\$ revenues) was partially acquired by the Swedish holding Actus for 7m US\$, with additional fundraising needs reaching 15m US\$.

3.5. Impact strategies in the education financing sector

A majority of education investors do not operate as impact investors. The database shows that only 20 investors, which represents nearly a quarter of investors, could be considered as impact investors. That means that 25% of investors declare to pursue a clear impact strategy, with defined and precise impact goals. However, only 10 investors effectively track and report publicly their impact performance against these impact goals, on an annual basis. We could, therefore, assume that only a minority of investors operate as impact investors in the region.

Education impact strategies are diverse. Impact investors seem to pursue different impact goals in the financing sector. We assess at least four categories of impact strategies in the education space:

- a. Support affordable education
- b. Enhance quality education and learning

- c. Support relevance of higher education and TVET
- d. Build an effective ecosystem around education

These impact theses are dispersed in different countries and within education segments. For instance, the affordable education objective was clearly pursued by impact investors in the low-cost basic education segment while the quality of learning was more consistent with investment strategies in the premium education sector. Effective ecosystem financing is an impact goal that tends to be associated with impact investors active in the ancillary services.

We observe that impact metrics are generally more focused on input and output levels, but less frequently on the outcome and long-term effects on education systems. Indeed, many impact strategies report on the number of learners, of facilities built and other easy-to-track data. Much fewer investors are able to communicate on how well their investees did in terms of effective learning or professional insertion of graduates. Impact evaluations in this sector are thus quite limited to short term and quantitative outputs and but give much less information on the long-term. Two reasons may explain this statement. First, most impact investors have started their activities in recent years, and it is probably too soon to consider long term effects of investments. Secondly, robust impact evaluations on long-term effects are very costly and are generally not funded by investment funds. Partnerships with funders and academic institutions would be necessary to fill this gap.

3.6. Funding features of the investors in the education sector

Education investors are supported by a variety of funders, pursuing very different interests. Our database also intended to track the identity and category of the funders that finance the education investors. This data is much more complex to access¹⁹⁸, and the emerging lessons to this regard are still unclear. To our knowledge, there are four types of funders that finance education investors:

- a. Development Finance Institutions and other public actors
- b. Private players, including funds of funds
- c. Foundations and High Net Worth Individuals (HNWIs)
- d. Other diverse players (e.g. banks, listed companies, consortiums)

Most education impact investors are funded by DFIs, public actors as well as by Foundations and HNWIs. We observe that these two categories of funders tend to support impact strategies in the education space. However, these funders can still have different orientations and expectations in terms of financial returns. Some DFIs have market returns expectations and are close to the investor profiles operating in the private equity industry. Other public investors expect much lower financial returns and may follow riskier strategies to operate in the education sector. Some of these funders are focused on early-stage companies and are interested in financing Venture Capital

¹⁹⁸ The trends we draw in this sub-section account for only 50% of investors and 30% of the volume invested and tracked in the database.

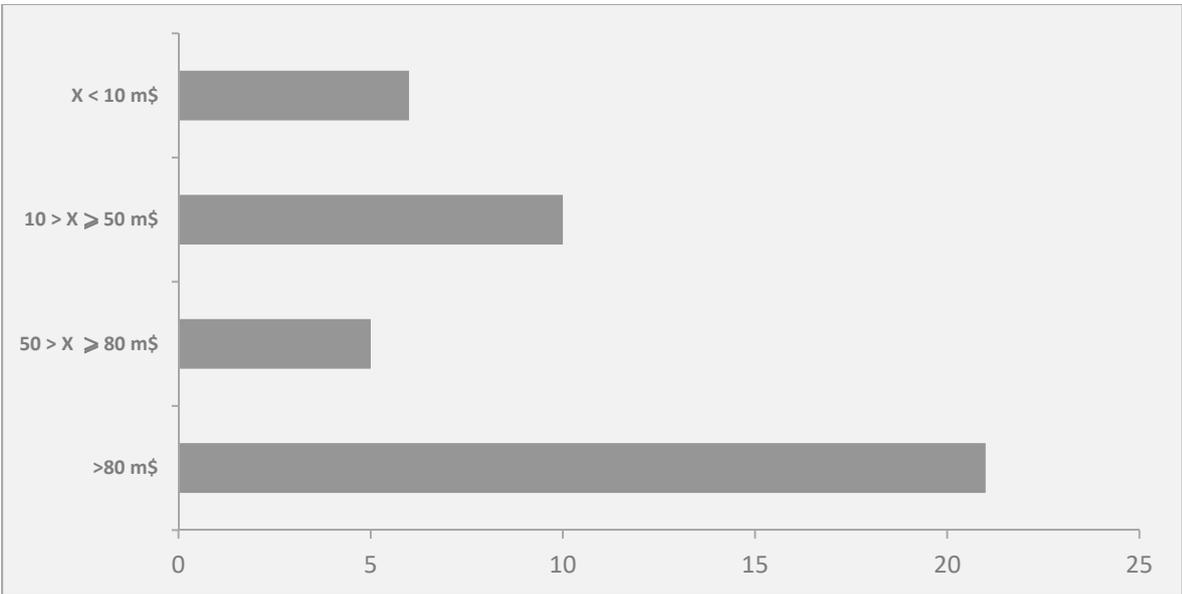
investors. Foundations and other philanthropic players have very different returns expectations and more active in the impact-only space. Overall, that means that education companies may encounter a diversity of funders in the education space, and may struggle to achieve interest alignment in terms of financial returns and impact objectives.

Private players and funds of funds are significant players in the education financing sector.

They may include large-scale independent investment funds, domestic pension funds, and family offices. These organizations tend to support traditional commercial investors that pursue finance-first strategies in education. This is also true for the other diverse players that fund education investors. Some are listed-companies (e.g. ADvTECH in South Africa), others are rather industrial players. Some funders armed specific vehicles to invest in the sector (e.g. education holdings, JV, SPV)

All these funders may take part in initiatives with very diverse sizes of fundraising. Chart 4 shows that around 20 investors have raised more than 80m\$ to invest in the education space, while a dozen of them have raised less than 50m\$. This diversity of fundraising emphasizes the diversity of models to invest in education, ranging from pan-African funds investing in big education ventures to small-scale investors having the capacity to support early-stage projects.

Figure 4.4 : Number of education investors, by size of fundraising



3.7. A snapshot of three education-dedicated investment vehicles

The database enables the mapping to zoom in specific players in order to understand their approach to the education sector. We identified in Chart 5 three players that mobilized different strategies to invest.

Figure 4.5 : 3 education-dedicated investment programmes or funds

Programmes/funds	School and Education Investment Fund (Old Mutual)	Pearson Affordable Learning Fund (Pearson)	Omidyar Network
Description	A vehicle launched in 2011 to support K12 education in South Africa by the financial group Old Mutual.	The vehicle is backed by the UK-based and global editor Pearson since 2014	Operates as an impact investor in the education sector since 2009
Financing	100m\$ fund size, financed by public and private pension funds	50m\$ raised in 2015 from own resources	N/A
Thesis	Funds the development of school infrastructure in a 17 -year investment horizon, targeting « commercially acceptable returns ».	supports the growth of education providers in Anglophone countries (SA, Kenya, Ghana, India) with equity investments up to 2M\$ and with a « patient capital approach »	Support to affordable education across Africa. Mostly in Anglophone countries. VC model with equity investments from 1 to 4 m\$. Also invests through funds.
Target	low cost and mid-priced K12 education providers	low cost/affordable education (core & ancillary operators)	supports K12 innovative schools models as well as K12 edtech and online/blended vocational training
Portfolio	7 investments to date (24 schools & 16K students). Ex: Meridian	9 investments representing 20 m\$. Ex: Bridge, Omega Schools, Lekki Peninsula Schools, CTI	11 investments in Africa. Ex: African Leadership University, Andela, Bridge, Spark schools, Siyavula
Impact reporting	some information available but no access to full reporting	Do not disclose impact reporting	Do not disclose impact reporting

3.8. Education-focused initiatives will flourish in the next years

At the time of writing the study, several education-focused financing projects are emerging, in particular in the impact investing sector.

Along I&P, other significant players of Africa’s landscape of SME financing and private equity declare to launch education dedicated initiatives. Acumen would launch an education impact fund targeting higher education and vocational institutions in East Africa. Other private equity

professionals built on their experience in DFIs or incubators to launch education-focused initiatives mainly in Anglophone Africa (Mavna Cap, The future of Learning Fund).

Other institutional investors such as the African Development Bank seek to develop education funds and cover a wide spectrum of needs and areas in Africa. In addition to such type of initiatives, more and more players have launched impact strategies dedicated to employability and skills-training, with interest to increase exposure to African educational institutions.

4. Key lessons from the education investment mapping

We may draw a few emerging trends from the analysis of the education investing ecosystem in Africa. Five general trends may be observed to respond to the general questions that were proposed in the introduction of this section.

There is a wide diversity of investors and investment opportunities in all education segments.

Education investors constitute a diversity of organizations, with different approaches and strategies to the sector. **Financial investors** are very active investors and include both commercial investors and impact investors, for a global amount invested of 1 billion dollars. Many of them invest with a regional approach to big-sized transactions. **Strategic investors**, armed by industrial players, are significant funds with education-dedicated strategies and reaching a global amount invested at 350m\$. **DFIs and other public investors** are not numerous but invest significant amounts in the sector through a generalist approach (around 200m\$). Finally, **philanthropic investors** played a role in financing impact-oriented projects and early-stage companies. They invested around 70m\$ in the education space.

The mapping shows a diversity of investment types across the regions and the education cycles. Despite a (very) unequal distribution of transactions on the continent, there are significant opportunities in core education provision as well in ancillary activities.

Basic education and higher education providers have attracted a substantial part of transactions and investment volumes. While the financing of universities and higher education infrastructures in North and Southern Africa are well illustrated in this database, we also surprisingly observed a real dynamism in Anglophone markets to finance private education providers in the primary and secondary cycles. The large transactions in these sectors attract private equity investors who typically target up to 25% of net returns.

Although fewer transactions were tracked in **TVET and pre-primary education**, there seems to be an increasing number of early-stage projects in these cycles, as it appears in our field report section. Finally, **ancillary activities** are also a vibrant sector where we see numerous transactions, especially in the education technologies' ventures. **Venture capital-style transactions seem to**

flourish, in particular in vocational and job placements services where some success stories like Andela brought high attention to the sector.

Francophone Africa seems to be underserved by education investors

As nearly **80% of investments were made in Anglophone African countries**, other regions like Lusophone African and Francophone Africa appear far less attractive to investors. While other sections in this report explored structural challenges and constraints that may freeze investors' appetite in these sub-regions, our mapping study shows that the prevalence of Anglo-Saxon investors in this sector does not favour the development of an education financing sector in non-Anglophone areas.

In Western Africa for instance, education investors have actively invested in Nigeria and Ghana, while very few transactions are observed in neighbouring Francophone countries. In fact, education investors with systematic activity in Francophone are very scarce (I&P and its local fund partners are one of them). The geographic gap is partly explained by the **entry barriers** to the area for Anglophone education investors based in Kenya or South Africa (linguistic, institutional, political and cultural challenges), and by the reluctance of certain investors to support them in expanding in Francophone or Lusophone countries.

We believe traditional and impact investments will increase quite strongly in the next years across the continent, in particular in Anglophone Africa but not only, as we see emerging initiatives (education funds, strategic shifts for foundations, renewed interest of DFIs, "Africa Tech" narrative) targeting the education and training sector and its financing.

There could be a missing middle in the education financing sector... and a missing bottom?

The mapping shows that a majority of investments exceeds 5m\$, in particular in core education provision where growth strategies are predominant. Very few transactions could be tracked in the [1-5] m\$ segment. While missing data is likely to limit the overview of the sector, the hypothesis of a **missing middle** should be carefully examined. The role of local banks is not assessed in this mapping but may constitute a source of financing for mature education businesses. However, very few investment funds seem to be active for this size of transactions. Closer examination of the needs of education businesses could lead to confirming the missing middle hypothesis.

The hypothesis of a "**missing bottom**" is also of interest in this overview. Most transactions below 1m\$ belong to the ancillary sector, and very few investments of this kind in core education businesses were tracked in the database. Again, strong limitations in data availability can explain this finding, as it would be logical to find less information for smaller transactions and as banking funding was not part of this study. The provision of microfinancing solutions to small education providers could also meet this segment and is implemented in some contexts by traditional MFIs and specialized investors.

Overall, the general absence of investors in Western Francophone Africa should be examined further, and the strong lack of competition to serve education startups and early-stage ventures could constitute an opportunity for a new player in this sub-region.

Education investors are not necessarily impact investors

The mapping shows a **very limited number of active impact investors** in the education space. Many players deploy private equity financing instruments and related expect returns to target fast-growing private education institutions, in mid-priced and premium K12 and higher education cycles.

The database shows that **only 10 education investors disclose clear impact goals and report publicly on these goals**, on a regular basis. Conversely, a majority of investors do not declare to pursue specific impact goals in the education sector and/or do not report any impact-related data.

Those impact investors present in the education space follow different impact goals (quality, access, relevance) in many countries and sub-regions. Only a few ecosystems (South Africa, Ghana, Kenya) may benefit from the systematic support of impact investors, but generally in growth stage rather than early-stage.

Impact strategies are mainly funded by DFIs and foundations

North-American Foundations and DFIs are key funders for impact investors. The foundations tend to have lower financial returns expectations and have a stronger appetite for risk-loaded projects such as support to early-stage companies. DFIs are significant players since they invest both directly and through funds in the sector. They may have market returns expectations but can operate in frontier markets and in more fragile countries than commercial investors.

Conclusions and Recommendations

This chapter draws the general conclusions of this feasibility study and suggests several recommendations for the establishment of an education-focused impact fund in the African context. The study has reviewed and assessed a series of general opportunities and challenges to constitute a portfolio of impact investments targeting the African education and training ecosystem. The first section summarizes the key findings from the academic literature review and the investment mapping to suggest and justify an evidence-based impact investing intervention in the African context. The second section provides key findings to be used as conceptual and practical recommendations in the design of an impact and investment thesis in the education sector. It provides selection criteria for constituting the portfolio and then enhances general factors that could maximize the finance and impact performance of each type of investments. The third and last section provides additional insights and recommendations and emphasizes several caveats for the project.

▶ General conclusions

There is an emergency to address the global education crisis, in particular in Africa. This global education crisis is first and foremost a **learning crisis** which affects all the cycles of the education systems in the developing world. Urgent interventions should necessarily address this quality challenge to make sure that pupils and students effectively learn at school and acquire the minimum level of knowledge and skills. **Promoting generalized access to basic education and upper cycles** should also be considered as a priority, which requires a significant increase in the supply of education and a focus on equitable access for all. Thirdly, improving the external efficiency of education and training system and the integration of graduates requires to significantly **upgrade the relevance of the supply of secondary and tertiary institutions**, through enhanced dialogue and cooperation with employers and other job markets stakeholders. These challenges are not exhaustive but we believe they should be integrated into any organization's strategy claiming to support the education sector. Since African countries are engaged in a dynamic demographic transition with half of the population under 18, facing these education challenges will require more attention and efforts than in another region of the world.

Education investors and their partners should prioritize evidence-based solutions to address these challenges. This study reviews the most recent academic literature to emphasize several "good practices" in education that are supported by scientific evidence and practice. Quality-focused interventions should prioritize **improvements and innovations in pedagogy and teaching** rather than infrastructure and equipment. In this regard, education technologies have a strong potential when they may integrate adaptive learning methods and are well integrated into

the cognitive and social skills' development of the learner as a complementary tool. The academic review also enhances how **information programmes and financial support** through vouchers and scholarships can facilitate the access of low-income populations in education. These interventions focusing on the entry barriers particularly matter for post-primary cycles where participation costs strongly increase and are often perceived as higher than long-term social and economic returns. Finally, **supporting the capacity of existing institutions in higher education and vocational training** with a strong focus on youth employability seems as urgent as the creation of new infrastructures and projects. Impact strategy targeting education quality, access and relevance shall be grounded on these good practices which are further described in the impact goals and indicators below.

The private sector offers significant opportunities to implement these solutions while it may produce market distortion and potential perverse effects. Education is a public good but is also an economic activity that may be funded, organized and managed by private operators. Our academic review shows that the determinants of the private share in education provision are multiple, with an **important role of public spending and regulation of private institutions**. The growth of private sector in education brings new opportunities: increase in the supply of education in secondary and tertiary institutions, diversification of models and programmes, a boost of education innovation in some cases, improved collaboration with private employers. Private institutions may also fit better with the preferences of families for cultural reasons (religious schools) or direct advantages (proximity, better quality perceived). The literature also enhances the risks for the education system to concentrate wealthy and best students in private institutions and eventually fail to provide equitable access to diverse social groups. In some cases, research also demonstrates that private institutions do not innovate but rather follow traditional models with little incentives to do better than government schools.

The landscape of education investments in Africa provides significant opportunities to generalize impact investments in the sector, with a focus on francophone countries. The sectoral mapping (Part 4) shows that education investors provided nearly 2 billion US dollars to private education businesses since 2012 and other studies estimate the same volume of opportunities in the next five years (Caerus, 2017). However, the contribution of these investors is very unequally spread out through the continent: Anglophone African countries such as Kenya, South Africa and Nigeria attracted 80% of the total volume of investments. In these regions, education investors concentrate their strategy on higher education and on (mainly mid-priced and premium) basic education and conversely show much less interest in vocational schools and preschools. The mapping shows that transactions were also done in francophone countries, in Senegal, Morocco and Côte d'Ivoire, in particular in the last two years. In addition, many investors deploy finance-first strategy in education deals, seeking market-level returns on large transactions with little interest for supporting early-stage or more impact-oriented projects. The additionality of impact investors in Western and Central African would certainly be very high considering the "missing middle" of investors and despite dynamic and growing education businesses in these

regions. Finally, the likelihood for an impact investor to exit on strategic players is increasing, as a growing number of international or regional education funds enter the West African space.

Impact investing can play a crucial role in the African context and complement the interventions of traditional funders and operators. The study sought to demonstrate that impact investing should be defined as an investment in a sustainable economic model that produces direct and positive impacts in terms of education quality, access and relevance and which complements or strengthens the dynamics of the public sector and other ecosystem partners. Since we refer here to a social sector which should guarantee inclusiveness and social diversity, supporting private projects that cannot generate market-level financial returns open the way for impact investors to intervene. Our analysis of private sector contribution to education systems makes the case to use impact investing as a developmental project aiming to effectively address education challenges across Africa. There are sustainable and successful business models in the African education sector, including in ancillary activities, providing fundamental inputs to the education chain. Impact investing can thus contribute to foster more responsible development of education businesses in Africa by selecting and supporting the most performing institutions in terms of economic sustainability and of educational impact.

Recommendations to structure the impact and investment thesis

1. Impact thesis

The impact thesis could integrate at least three impact goals and an additional focal point.

#1 Quality learning first: The impact fund should target education institutions which have a proved record in providing quality education and effective learning to students, which presents new opportunities to invest in, and which deepen quality improvements and innovations including through strengthened teacher capacity, innovative pedagogies and renewed and modern curriculum (i.e. soft skills, 21st century skills). The fund should also target high-quality ancillary activities which participate in the strengthening of the local ecosystem, in particular in terms of teacher training and evidence-based learning-focused education technologies.

#2 Focus on local relevance and employability: The impact fund should target initiatives that favour employability. We used the term employability here in a broad sense: it does not only refer to the matching between training and current local employers' need but more in general to the investment in skills that are "genuinely transferable and of long term value to employers, employees and other job seekers" (Mc Quaid and Lindsay, 2005, p. 215). Interventions can thus include the support (or the development) of certified vocational programmes and skills-training activities in dynamic economic sectors as well as in health and education, or the support of programs assisting students in the professionalization of skills, career development, access to job

opportunities etc. But it also means, for example, supporting initiatives that propose the teaching of soft skills, or make efforts to orient kids from the youngest ages towards scientific subjects.

#3 Strengthen equity in access to partnering institutions. The concern for improved equity in access and inclusiveness is necessary should be integrated into the impact matrix for every investment. The impact fund should make the effort to always facilitate access to quality education for girls and women, low-income populations, and for disadvantaged categories (e.g. disabled people, people living in remote areas, especially rural areas).

(!) The impact fund interventions shall be supportive of the local education ecosystem and aligned with the government strategy. In pursuing the impact goals mentioned above, the impact fund should pay attention to the way the partnering institution and its projects may strengthen and consolidate the broad education ecosystem, including the public sector. Impact interventions should prioritize academic fields and training sectors where public capacity is inexistent or insufficient and exclude those which are already well served by public institutions unless major improvements can be added. The impact fund can support the development of a strong public education sector by helping its investees to produce positive externalities in the ecosystem: diffusion of good practices and innovation, development of teacher training programmes, cooperation with public organizations, support to regulation reforms etc.

2. Impact dimensions and indicators

To explain and clarify the dimensions of these generic impact goals, we provide additional insights shaped as impact indicators and metrics. Such indicators may be used as part of the investment selection criteria (e.g. through a scorecard) as well as the regular impact monitoring during the investment period (e.g. with an annual reporting). The list below does not aspire to be exhaustive but seeks to provide guidelines for the construction of an education-focused impact management policy and tool.

#1 Quality learning first:

Impact scoring and monitoring tools should rely on various and complementary dimensions of quality.

- Strong education outcomes: impact indicators may use several proxies to assess the quality of learning within the institution. In basic education, it may rely on the assessment of tests scores in international evaluations (e.g. PISA/PASEC) or national evaluations (e.g. Baccaulaureate). Such type of evaluation can be used in a comparative approach with competing institutions or in a dynamic approach to assessing the evolution of education outcomes across time.
- Effective teaching: impact indicators should assess the profiles of teachers and educators (qualification, experience) and the opportunities to benefit from individual and collective training opportunities (depth and recurrence of teacher training). Teacher motivation and retention should also be considered as core elements which foster effective learning.

- Innovative pedagogies and technologies: Pedagogic innovations should emphasize an individualized teaching and learning approach and education technologies such as online learning platforms should include adaptive learning processes in their functioning. The use of in-class technologies should support teacher capacity in a complementary approach.
- Certified knowledge: compliance with national or international certification and accreditation.

Key examples of outcomes metrics: success rate and completion of curriculum, student satisfaction, share of teachers with regular training benefits.

#2 Focus on local relevance and employability:

Impact scoring and monitoring tools may focus on processes we strengthen the professionalization of skills and the job-readiness of students, job-seekers and employers.

- Professional development: specific support to students in the development of their career projects in career centres or dedicated programmes.
- Extra-curriculum skills: the teaching of soft-skills, 21st-century skills etc.
- Professionalization of skills: implementation of internship, apprenticeship, work-study programmes.
- Highly relevant skills and training: training in education, health and care, sciences, environment, tourism and hospitality etc.
- Job market matching: organization of job fairs, meeting with professionals, job platforms.
- Focus on scientific subjects: valorization of scientific subjects at school as well as technical disciplines to increase learners' awareness of sciences and scientific studies

Key examples of outcome metrics: share of students using the taught skills in their job, share of graduates employed after 6 months.

#3 Strengthen equity in access to partnering institutions

Impact indicators related to equity in access/social inclusivity should look at how the institution (or project) may facilitate access to quality education for vulnerable social groups.

- Financial incentives: implementation of merit scholarships and/or student loans and/or cross-subsidy models for girls and women, low-income populations, rural communities and marginalized children and youth.
- Non-financial incentives: information programmes and marketing campaigns targeting vulnerable social groups, adapted infrastructures for disabled students etc.

Key examples of outcomes metrics: share of students with (full and partial) scholarships, share of girls/women in the student population.

(!) The impact fund interventions shall be supportive of the local education ecosystem and aligned with the government strategy.

Impact indicators could assess whether the business/project complement or consolidates the local ecosystem and ensure good alignment with the public sector.

- Compliance with local regulation and certification
- Positive externalities: cooperation with public institutions (for teaching, research), diffusion of good practices (Open House Day, participation to specialized conferences, conduct and diffusion of impact evaluation, training of teachers for other institutions)

Key examples of outcomes metrics: share of offered training which complies with the local certification process.

3. Impact strategies: four ways to impact education

There are at least four approaches to tackle African education challenges as an impact investor. These four strategies correspond to mission-driven interventions in pre-primary education, basic education, technical and vocational education, and higher education. In this conclusive section, we summarize what types of investments could be made for each strategy. The two former strategies are mainly associated with the learning crisis in basic education and the latter strategies with the employability challenge in secondary and higher education. We believe this classification will help the impact investor to establish a clear approach to the education sector.

#1 Boosting innovations in pre-primary education

Our academic literature review shows that strengthening preprimary education provision is the most effective way to achieve strong and long-term impact returns in learning and employment.

As described in part 2 and 3, the role of an impact investor in preprimary education could be to support the development of innovative and qualitative models and to help disseminate the good practices in the ecosystem. In this specific education cycle, the impact investor could target: (i) **an economically sustainable organization promoting innovative and/or effective pedagogical practices** in early childhood development and learning, with high differentiation from the common practices observed in the country (ii) with a **committed approach to improved accessibility and inclusiveness** and (iii) and able to **generate positive externalities** on the local ecosystem.

This strategic approach could lead the impact investor to **invest in premium preschools** whose first comparative advantage is to explore and expand a high-quality model in a context where most (private) preschools are quite poor and underdeveloped. Other opportunities in **dynamic preschools** could be considered, although our analysis suggests that such schools are barely emerging, in particular in Western francophone Africa. In terms of ancillary activities, a very impactful approach could be to invest in the initial or **in-service training of educators** and teachers. An additional support to learning-oriented technologies or media could be proposed within this strategy.

#2 Strengthening the ecosystem of basic education

As it is explained in our study, the direct support to private schools in basic education may face stronger issues of accessibility and local alignment, in a context where the government needs to ensure universal free access to basic education. This concern is particularly pregnant for investments in low-cost standardized school models which have emerged in several (Anglophone) African countries as well as neighbourhood schools which represent the majority of institutions in this cycle.

The impact investor could prioritize **indirect support to basic education by investing in impactful ancillary activities** which lack support to build up effective economic models at scale and to produce diffused impacts on the ecosystem. Investments in teacher training and school capacity building programmes, accessible education technologies and qualitative education editing could altogether contribute to the strengthening of basic education ecosystems in Africa. Investment in microfinance programmes targeting private schools and associated with capacity building assistance could also be considered in African countries where the private sector expansion in basic education is well regulated (e.g. Ghana).

#3 Improving the relevance of education and the professional integration of graduates

Our analysis of the dynamics and challenges in post-primary education has shown that many vocational training schools and technical education programmes lack funding and technical support to make their curriculum and programmes more relevant to the local economic sector. More broadly, secondary and tertiary institutions lack interaction and cooperation with employers to boost the employability of the African youth.

The impact investor could consider **direct support for technical and vocational schools**, in particular in strategic sectors which lack formalization and skilled work-force. Some opportunities in **dynamic networks of vocational training** could constitute a good approach to increase access to the sector and, more importantly, to strengthen its value and attractiveness. Secondly, an increasing number of vocational programmes will (partly) rely on technologies to facilitate remote access to training programmes but also to job opportunities. Fast-growing **standardized models of vocational training** could be supported by the impact investor, for instance in the field of IT and coding. More generally, the impact investor could seek to prioritize vocational projects which demonstrate a **capacity to scale-up**, including with the **support of technologies**. Additional support could target skill-connecting technologies, entrepreneurship programmes and other initiatives focused on soft-skills training, and matching mechanisms between graduates and job seekers, and employers.

#4 Expanding school capacity in higher education

The study has pointed out the current under-capacity of universities and other higher education institutions in most African countries. The access challenge in higher education requires more

investments in adapted infrastructures and equipment, as a complementary approach to the employability strategy described above, and with needed attention on quality and social inclusiveness. It also requires developing education and training initiatives which show a great potential to scale-up and to address the fast-growing demography-driven demand in African markets.

The impact investor could consider **direct support to dynamic universities** aiming to expand their capacity through the construction of larger and better-suited facilities. We strongly recommend favouring **scientific education and training** (e.g. health and medicine, agronomy, engineering, IT) and **key niche professions** (e.g. architecture, design), in accordance with the local government's strategy. A support to other generalist universities or business schools seeking financial support to build infrastructures can be considered, but caution must be given to the real additionality of the impact investor, in particular in emerging economies where other equity investors may be active. In all cases, the impact investments in dynamic universities should be coupled with three focal points. The first deals with the **inclusion of vulnerable groups** through financial and non-financial incentives. The second deals with the **quality of teaching and learning**, which could be part of a technical assistance programme funded by the impact investor. The third deals with the integration of social skills, **professional skills** and job-readiness programmes in the curriculum. Indirect support to higher education systems could include investments in **distance learning platforms and other education technologies**, as well as other valuable services to the students (loans, remedial education, job placement platforms etc.).

4. Investment thesis

In order to complement the impact goals and strategies introduced above, we provide strong recommendations to structure the investment thesis.

4.1. Geographic perimeter

Considering the outputs of the country studies and the sectoral investment mapping, we provide recommendations and justifications regarding the geographic scope of an education-focused impact investing initiative in Africa. In fact, three main lessons emerge from this feasibility study.

First, there is a clearly identified need to **target francophone sub-Saharan African countries**. Considering the current positioning of Investisseurs & Partenaires, it is recommendable to anchor the fund in Western and Central African zone where the education challenges are urgent and where other investors are barely active¹⁹⁹. In this area, several fast-growing education systems such as Senegal, Côte d'Ivoire and Cameroon would likely present an interesting pipeline of projects which could match the impact strategies of this report.

¹⁹⁹ A similar conclusion may be drawn for the Lusophone African countries. However, the feasibility study did not focus on this zone and we have little evidence to clearly demonstrate the needs and opportunities in Angola, Mozambique or Guinea Bissau.

Second, there is an imperative to **include fragile countries and LDCs²⁰⁰**, even if investment opportunities could be quantitatively and qualitatively less important in these countries. The additionality of an impact investor in the Sahel region or in Madagascar, for instance, would be very important because there is simply no education-focused investors in these regions. Considering that demographic and socio-economic challenges are even stronger, we recommend the fund to include francophone fragile countries as much as possible in the investment activity.

Thirdly, the impact investment vehicle should target **a pan-African scope** as much as possible. There are various strong justifications to do so. First, traditional and relevant arguments of **risk diversification** should be integrated into the reflexion. Since the francophone African zone (in particular the Sahel region) is affected by a significant and correlated matrix of political and macroeconomic risks, it would be advisable to diversify investments in other regions having uncorrelated risk dynamics. Secondly, there is a clear need to **facilitate the transfer and duplication of education innovations across Africa**. The study shows that Anglophone countries such as Ghana, Kenya or Nigeria have developed very innovative models of education which could be expanded to other regions, provided that there is an impact investor active in these regions to support them. Thirdly, there are several significant quality education providers in **North Africa** which would like to expand in Western Africa, in particular in higher education and vocational training. The Fund could contribute to the creation of regional leaders in private education and facilitate student mobility between North and West Africa. Finally, considering the difficult environment for entrepreneurship and impact investing in many African countries, it seems advisable to expand the scope of the fund to maximize the quality and quantity of projects in the pipeline.

Other geographical scopes could probably be considered but alternative recommendations would require further research (e.g. new sample countries and new sources of data tracking past transactions and present opportunities).

4.2. Investment policy and support to private schools

Our recommendations in terms of investment policy are designed according to the type of schools and activities. For each category of private schools for which we recall the main features, we intend to summarize the kinds of financial and non-financial needs the business may have and the type of investment policy that could support these needs. Our assessment here is partly grounded on I&P's past experience in investing in such type of schools (with a minority equity stake in most cases). This section calls for the need to develop a blended approach regarding financing instruments, and makes the case to deploy grant-funding and other subsidies to support dimensions including capacity building and scholarship programmes.

Premium schools are the private providers which are best placed to explore innovative models of education and to shift the learning innovation frontier in a given country. However, premium

²⁰⁰ We refer here to the list of Fragile countries proposed by the World Bank and the list of Least Developed Countries made by the United Nations. In these lists, we found countries like Mali, Chad, Central African Republic or Madagascar.

schools rely on expensive equipment, human resources and know-how, what increases their pricing and make their model affordable only for a high-income population, except when scholarships or other subsidy mechanisms can be implemented.

Premium schools tend to target country-wide or international growth through a strong network, which may help strengthen their profitability and expand their impact. These patterns of the growth target substantial increase in revenues and operational profitability, sometimes after a period of break-even. A key challenge for growing the network is to adapt the infrastructure management policy (renting or acquiring facilities) to the school environment and the company strategy. This type of strategies could be supported by **equity or quasi-equity investment**. The size of investments in premium schools naturally depends on the maturity of the project, the infrastructure management, the education cycle and the aggressiveness of growth; however, they **may be comprised between 500,000 and 3 million euros**. Expected returns on this type of investments may be relatively better than in other category schools²⁰¹.

As well shown by the example of Enko, this type of growth may require different non-financial support which could include **strategic coaching, technical assistance** and **other grant-funding support**. These supports may deal with the determination of the strategy of expansion (acquisition vs green-field projects), the setting-up of a central platform to provide key functions to all partnering schools (accounting, communication, and administration), the development a strong branding policy, among others. Other assistance could concern the establishment of a scholarship policy by partnering with a philanthropic player, and more generally the support in helping the school produce positive externalities on its ecosystem.

Dynamic schools are significant players in the education space. They tend to provide quality education, to attract a high volume of beneficiaries and are generally economically sustainable. However, even if they are not elitist, they are still not easy to access for the lower-middle class. Dynamic schools are generally anchored in a regional or national landscape and seek to strengthen their position in a competitive sector through incremental innovation and differentiation, including with the construction of new and modern infrastructures.

Considering the growing demand for dynamic schooling model, the financial profitability of the dynamic school may be strengthened by the extension of school facilities and the reach of a significant enrolment size. The impact investor may support this type of expansion projects and benefit from the financial and impact returns they seek to provide. The size of financial needs would depend on the characteristic of the dynamic school (education cycle in particular) and its project (size and quality of facilities to be built). Impact investments in dynamic schools could, therefore, rely on **mixed debt and equity** funding which is comprised between **1 and 5 million euros**, with higher investment in higher education projects. In particular, the funding of

²⁰¹ We do not intend to provide exact figures on expected financial returns for the investor but rather follow a comparative approach between schools.

infrastructures projects in dynamic universities (which corresponds to the impact strategy introduced in the previous section) can generate decent financial returns for the impact investor.

Additional support can be provided by the impact investor to support the investment and strengthen the impact performance of the dynamic school: **technical assistance** to support the effective and on-time realization of the construction programmes; support in the certification process of the school, in the establishment of academic partnerships with foreign institutions, **grant-funding scholarship policy** targeting girls and vulnerable population etc.

Neighbourhood schools are probably the category with the highest volume of institutions in our typology. They tend to have low growth perspectives, a fragile economic model and little innovation potential to improve quality. At the same time, they may contribute to increasing access to education, including for low and middle classes and may provide relevant education and training opportunities to learners. Considering the impact strategies described above, the support to neighbourhood schools in the vocational training space could be a relevant approach to deepen the Fund's impact in rural or suburban areas.

Considering the economic fragility of this type of school and their difficulties to implement growth plans, **neighbourhood schools may not be ready for an impact investing**, at least in equity funding. The impact investor could thus consider indirect support to these schools, with the aim to help them to improve their economic and impact performance. This type of direct support could be provided through investment-readiness programmes which aim to formalize the schools, structure and improve their business model, and could rely on **grant or debt funding, typically inferior to 500,000 euros**. Indirect support through microfinance and capacity building programmes could also be considered.

Standardized schools are emerging as ambitious schools networks, in particular in Anglophone African countries. They typically combine a low-cost structure with disruptive pedagogic or organizational innovations to provide education or training to low and middle-income populations. Some models of standardized schools have been more successful than others at scaling-up while maintaining a decent level of quality. Our study shows indeed that investing in this category of schools in the basic education cycle can be risky for an impact investor because the quick expansion strategy is not well associated with the quality and alignment impact goals. However, standardized schools in TVET can contribute to transform educational practices in the ecosystem and foster youth economic integration, at fast speed.

The impact investor can support the growth of these standardized schools in the vocational training sector whose financial needs concern the acquisition of technologies, the expansion to new cities and countries, the possibility to build a central platform of support functions for the network and the reinforcement of quality of content and teaching. Due to their capacity to grow and scale-up quite quickly, standardized school networks can require regular and growing financing rounds, and to some extent, could be assessed as Venture Capital-style investments.

Consequently, **equity investments** ranging from **500,000 to 4-5 million euros** would fit this type of investment opportunities. Strategic guidance can also be provided to help the entrepreneur to stabilize its business model, target the right speed of expansion and build solid partnerships with other stakeholders (government, labelled schools, employers etc). Technical assistance programme may be used to fund initiatives related standardization of processes, teaching training or impact evaluation.

Investing in **ancillary businesses** may also be critical for the challenges of quality, relevance and improved equity of education businesses and systems in Africa. The study has shown that economic and impact performances of ancillary are driven by a variety of factors, including the relation with customers and beneficiaries, the pricing model, the innovation dimension, the scalability and the relation to the public sector. Despite their impact potential on education ecosystems, many ancillary activities tend to evolve in a difficult economic environment, with little public support and difficulty to grow sustainably. Some models are more dynamic, in particular in the field of education technologies.

The impact investor can play an essential role in accompanying performing models of ancillary activities. Recommendations related to the investment policy targeting these businesses are harder to define considering the **variety of businesses and trajectories** in this space. Some opportunities to invest in **teacher training** programmes, **editing and publishing companies** and other types of ancillary are relatively small with early-stage or fragile models and would require seed funding, patient support and mentoring. Other opportunities to invest in **microfinance programmes** dedicated to school loans or student loans could be more consequent, with equity investment exceeding 1 million euros. Finally, investments in fast-growing modes of **education technologies** could be required progressive funding in equity with a better scenario of exits and financial returns for the impact investor than for the other business models. For this wide range of ancillary activities, the additionality of the impact investor can be to facilitate their scale-up and increase their support to other education institutions, including in the public sector (e.g. furnishing qualified teachers, school equipment, school books, and technologies).

Looking at these different types of businesses and investment opportunities, it is likely that an impact portfolio should not necessarily focus on only one type of school or activity. The study shows that different types of schools and ancillary activities have different profiles of risks, financial returns and impact performance and that, in terms of impact, they offer different opportunities to tackle challenges of access, quality and relevance of education as well as to improve equity and inclusiveness. The capacity of the impact investor to constitute a large and qualitative deal flow will naturally influence the composition of the impact portfolio and the type of financial and impact returns the impact fund will be able to achieve. A possible strategy in the investment policy could be thus to diversify the types of businesses and projects invested in order to balance and diversify the types of impact for the fund.

► Final recommendations and comments

In this conclusive section, we provide some key warning for the fund, additional insights and recommendations and finally some key conclusions which, hopefully, will help the preparation, structuration and launch of this impact investing initiative in education.

1. Points of attention

The feasibility study shows that the impact investing project in education could strongly support education businesses and their partners facing the most pressing education challenges in their ecosystem. At the same time, we recognize this highly-relevant contribution should be seen as complementary to other interventions, in particular, those of local governments and their international partners which have more capacity and resources to test and implement system-wide education solutions that could benefit to a majority of learners in the ecosystem.

In order to deepen and sustain the general impact performance of the Fund, we shed light here on two additional points of attention.

First, there is an essential challenge in **including the rural youth** as a target category of final beneficiaries of the impact fund. Many institutions and investment opportunities highlighted in the study are anchored in urban zones, in particular in capital cities, and this trend could be representative of the future pipeline. Nevertheless, a significant part of children and youth lives, studies and work in rural areas and have little access to secondary and tertiary institutions, to education innovations and eventually to formal employment opportunities. Indeed, education businesses may be less present in these areas where the structural conditions for running sustainable education businesses are more difficult. Therefore, a clear priority should be given to projects and opportunities to reach and benefit rural youth in future investment activity. That could include projects in agri-business entrepreneurship or rural neighbourhood high schools or even education technologies which are technically and also financially accessible to rural populations.

The second point of attention deals with the **alignment imperative** with other education stakeholders, including the local government and public sector, and the possibility to create **partnerships with other funders**. Our study shows that it is fundamental to anchor the Impact Fund's activity and team in the local education ecosystem and to ensure a good complementary with local public policies and strategies in education. It seems necessary to conduct regular dialogue with other stakeholders such as public education institutions, philanthropic organizations and organizations of employers. Impactful partnerships could be implemented with other philanthropic institutions and would significantly strengthen the credibility and sustainability of the initiative in the local ecosystem. The example of Comoe Capital and Jacobs Foundation is in this regard critical as the *Education Impact Fund* was part, on Jacobs' side, of a larger intervention

promoting quality education in Côte d'Ivoire. Important synergies between impact investment activities (targeting private sector initiatives) and philanthropic activities can be found and developed through these partnerships. In the end, we believe that this global effort to increase alignment and dialogue with other education stakeholders will help the Impact Fund be more in phase with the country-specific challenges and thus to provide the most relevant contribution at the local scale.

2. Additional insights

In addition to the recommendations made in the previous section, the study also stresses out two important insights, one related to the investment activity and another to the impact management policy.

The Fund's team and partners should carry a reflection on to what extent and how the Impact Fund could target and **support hybrid models of education**, typically philanthropic organizations searching for financial sustainability²⁰². Indeed, among the numerous organizations interviewed for this study, we have encountered several effective and inspiring education projects led by non-profit organizations and who do not meet the long-term financial sustainability criteria that characterize private sector initiatives. However, these programmes and organizations may have long-lasting and deeply-rooted experience in providing education and training opportunities to vulnerable populations and sometimes in very fragile countries or regions. Many of these organizations seek to strengthen their independence from donations and subsidies and to reach an economically-sustainable model. The role of an impact investor could be to facilitate this transition and support hybrid models of education to maintain their impactful activities through diversification of funding schemes and revenues. These models are presumably not suited to be invested by the Impact Fund, and this is why such insight is not formally part of the investment thesis. However, we recommend the impact investor to consider alternative approaches to support these hybrid models reach long-term sustainability, either through a funding and capacity building approach (e.g. grant-funding and technical assistance) or through an advisory activity.

Secondly, the Fund's **impact management and advocacy policy** should seek to establish and promote good practices for other education investors, as well as to drive an advocacy project for engaging with the impact of education businesses across the African continent. The sectorial mapping (Part 4) shows that most education investors are not impact investors as they do not disclose impact strategy, goals and reporting, thus providing little evidence of their true educational impact. There are some well-established impact investors in the African space which have occasionally invested in education projects but there is little publicly-available information about their impact management practices. The global evidence and knowledge about how impact

²⁰² There is not official denomination for this type of companies. Some organizations could be also called "social businesses", as it is the case for Practical Education Network, the teacher training social enterprise we analysed in part 3 of the study.

investing can effectively support education are thus quite weak. In addition, scientific research and academic literature on how private sector providers can positively contribute to education challenges are also quite weak, including in the African context. Consequently, there is a double gap in the impact investing space in Africa. We recommend the impact investor and its partners to seize this opportunity to contribute filling this gap. First, by designing and implementing an ambitious impact management policy which could be grounded on multidimensional and regular impact reporting, but also on field studies and long-term impact evaluations. Second, by sharing good practices with other investors and stakeholders and by advocating for a stronger engagement of funders and investors with the education sector across the continent. This way, the impact investor could use this innovative experience to encourage further education-focused impacting investing projects, and increase the support to responsible and performing education businesses across Africa.

3. Final conclusions

This feasibility study aimed to emphasize the most important opportunities and challenges at launching an impact investing initiative in the African education space. It could not pretend to treat exhaustively all dimensions of the project and calls for additional work on other key topics (investors' landscape, deal-flow screening, legal and financial structuration of the Fund). But the study sought to establish a rigorous approach to justify and implement a systematic impact investing activity in the education sector, for the African context.

To do so, we have first grounded the analysis and recommendations on evidence-based practices and academic research. We have also realized an in-depth analysis of five education systems, emphasizing their common dynamics as well as their specific challenges. We tried to provide a clear methodology to differentiate and analyse the types of education businesses and their aptitude to be supported by an impact investor. We also highlighted the current dynamics of investments and the potential gap across the continent. Each of these stages was necessary to then provide justifications and recommendations for launching an education-focused impact investing fund in Africa. Our recommendations for designing the investment and impact strategy aspire to be as much ambitious as possible and constitute guidelines that may serve other projects in the future.

We suggest to build the impact thesis upon three main impact goals: (i) focusing on quality learning first, (ii) searching for the relevance of training and employability, (iii) acting in order to strengthen equity in access to education in partner institutions. We also point out that the impact fund interventions shall be as much as possible aligned with the government strategy. In addition, we propose four approaches to tackle African education challenges as an impact investor, that correspond to mission-driven interventions in pre-primary education, basic education, technical and vocational education, and higher education, and we illustrate challenges and opportunities to invest in different types of education businesses.

Finally, this study suggests that a specific approach to impact investing could be necessary in order to effectively contribute to address the education challenges in Africa. Indeed, the necessity to ensure equitable access and social inclusiveness of partnering education businesses as well as the needs for research and advocacy, call for using complementary types of support which are not necessarily in the core mission of a traditional impact fund. Thus, our conclusions make the case for **launching an innovative approach in blended finance** that would associate impact investments with grant-funding subsidies and non-financial assistance, enabling the project to support performing and responsible entrepreneurs in the education space, meet ambitious impact goals and generate a decent level of financial returns, and finally align and coordinate its intervention with other key stakeholders to maximize the long-term impact on African education ecosystems.

Annexe : List of people interviewed

Name	Position	Organization	Country	
Laura	Abadia	Senior Policy Manager	J-Pal Europe	France
Saida	Abouid	Coordinatrice Pays	Coopération Monégasque	Maroc
Sophie	Achilleas	Chef de la section Education	UNICEF	Madagascar
Desiree	Acholla		IDP Foundation	Ghana
Sara	Adico Ollo	Fondatrice Directrice	Ecole La Coccinelle	Côte d'Ivoire
Gordon	Adomza	Associate Professor	Ashesi University	Ghana
Mohammad	Alaa Nasser	Consultant en éducation	IPC	Allemagne
JO	Ally	Manager	Design and Technology Institute	Ghana
Nathanaëlle	Amar	Responsable Projet, Division Education Formation	Agence Française de Développement	France
Rudolph	Ampofo	Country Director	Eneza	Ghana
Kwabena	Amporful	Ex-Director	Stanford Seed Ghana	Ghana
Saaid	Amzazi	Ministre	Ministère de l'Education Nationale, de la Formation Professionnelle, de l'Enseignement Supérieur et de la Recherche	Maroc
Djohary	Andrianambinina	Directeur National	Centre National de Télé-Enseignement de Madagascar	Madagascar
Christophe	Andriantarijaka	Coordonateur Général	Ministère de l'Enseignement Technique et de la Formation Professionnelle	Madagascar
Louis Gervais	Anoma	Responsable Education	UNESCO	Côte d'Ivoire
Jerry	Ansah	Budget Office	Ghana Education Service	Ghana
Fred Kyei	Asamoah	Executive Director	Council for Technical and Vocational Education and Training	Ghana
Carole	Attoungbre	Directrice Pays	Eneza	Côte d'Ivoire
Océane	Aucour	Chargée de Mission Coopération	Ambassade de France	Madagascar

Julie	Averseng	Senior Analyst	Koys Invest	Belgique
Bernard	Ayensu	Head Planning and Budgeting Department	Ministry of Education	Ghana
N'Goh	Bakayoko	Conseiller Technique	Ministère de l'Enseignement Supérieur et de la Recherche	Côte d'Ivoire
El Mkohtar	Bakkour	Directeur	Agence Nationale d'Evaluation et d'Assurance Qualité de l'Enseignement Supérieur	Maroc
Alexandra	Balafreg	Responsable Projet Career Center	US Agency for International Development	Maroc
Ashley	Barry	Senior Evaluation and Learning Manager	Education for Employment	Maroc
Tunas	Bas	CEO	Mavna Cap	France
Saturnin	Bationo	Directeur Général des Etudes	Ministère de l'Enseignement Supérieur	Burkina Faso
Joe	Beaulieu		SABRE education	Ghana
Heather	Beem	Founder	Practical Education Network	Ghana
Saïd	Benjelloun	Directeur Fondateur	ISTH Ecole de Gestion Tourisme Hotellerie	Maroc
Faitai	Berdai	Directrice Complexe Formation	Office de la Formation et de la Promotion du Travail	Maroc
Emilie	Bih	Coordinateur Pays	Réseau Ouest et Centre Africa de Recherche en Education	Côte d'Ivoire
Lise	Birikundavyi	Directrice Impact Investing	Fondation Jacobs	Côte d'Ivoire
Johnson	Boh		Ghana Association of Teachers	Ghana
Sara	Bolliri	Premier Secrétaire	Ambassade du Luxembourg	Burkina Faso
Adam	Bouhadma	Fondateur	Education Media Company	Maroc
Martin	Briba	Promoteur	Institut Pédagogique des Sciences de Ouagadougou	Burkina Faso
Antoine	Bricout	Attaché de coopération universitaire	Ambassade de France	Burkina Faso
Svenia	Buisson	Fondatrice	Learn Space / EdTech Tours	France
Vikash	Chabra	Investment Director	Marifaa Education	Mauricuis

Marcelin	Cissé	Directeur du Plan	Ministère du Plan et du Développement	Côte d'Ivoire
Renaud	Comba	Education Project Development Lead	Innovation for Poverty Action (IPA)	Ghana
Issa	Compaoré	Directeur Executif	Institut Supérieur Privé de Technologies	Burkina Faso
Paul	Cordeiro	Consultant	University of San Diego	Ghana
Laurent	Cortese	Chargée de Mission Education Formation	Agence Française de Développement	Côte d'Ivoire
Valérie	Coulibaly	Directrice	International Bilingual School of Africa	Côte d'Ivoire
Rohen	d'Aiglepierre	Economiste Développement Humain	Agence Française de Développement	France
David	de Ferranti	Président du Conseil d'Administration	Results for Development Foundation	Etats-Unis
Hamzah	Debbarh	Founder	3W Academy	Maroc
Yoann	Dechambenoit	COO	African Leadership University	Mauricius
Florencia	Devoto	Chercheur	J-PAL / IPA	Maroc
Carsten	Diaha	Directeur	Ecole Maison Cerise	Côte d'Ivoire
Mohamed	Diakité	Directeur	RH Afrique Excellence	Sénégal
Saloua	El Hraiki	Gérante	Institut Spécialisé en Technologie d'Art Dentaire	Maroc
Omar	El Hyani	Directeur des Investissements	Maroc Numeric Fund	Maroc
Hakima	Fassi Fihri	Directrice des Relation Internationales	Université Internationale de Rabat	Maroc
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Part 3. Investing in education for impact

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Part 4. A mapping of private investments in education

The sectorial mapping was made with two main types of sources:

Industry Data & Specialized sources

- EMPEA Data Base: <https://www.empea.org/research/data-and-statistics/>
- GIIN Research: Education.
<https://thegiin.org/research?filters=15&sortBy=relevance%2Cnewest>
- E-Learning Industry, Survey 2018: <https://elearningindustry.com/investments-in-the-education-sector>
- Africa Capital Digest: <https://africacapitaldigest.com/>
- PE Africa: <https://peafricanews.com/>
- Google screening with key words “education”, “investment”, “private” (monthly update).

Reports & grey literature

- Caerus (2017), “The business of Education in Africa”.
- Dalberg (2013), “Impact investing in education: an overview of the current landscape”.

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The views expressed in the Report are those of the authors and do not necessarily reflect those of FERDI, Investisseurs & Partenaires or the Monegasque Cooperation. The authors remain directly responsible for any errors or omissions.

“Sur quoi la fondera-t-il l'économie du monde qu'il veut gouverner? Sera-ce sur le caprice de chaque particulier? Quelle confusion! Sera-ce sur la justice? Il l'ignore.”

Pascal

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