



**World Bank**

**Higher Education in Côte d'Ivoire**

**Policy brief**

*Provisional version*

December 2017

---

**Table of Contents**

<b>I. FOREWORD .....</b>	<b>4</b>
<b>II. CONTEXT AND CHALLENGES .....</b>	<b>5</b>
A. SOCIO-ECONOMIC CONTEXT .....	5
B. SECTORAL CONTEXT .....	7
C. THE CHALLENGES OF HIGHER EDUCATION .....	10
<b>III. OPTIONS AND RECOMMENDATIONS .....</b>	<b>13</b>
A. EQUITABLE ACCESS .....	13
B. ESTABLISHING HIGH-QUALITY, RELEVANT TERTIARY EDUCATION .....	17
C. SUSTAINABLE AND EQUITABLE FINANCING .....	26
D. EFFECTIVE GOVERNANCE .....	31

**List of Figures**

Graph 1: Côte d'Ivoire: population growth, economic growth, and GDP per capita (2007–2017) .....	5
Graph 2: Changes in the poverty rate .....	6
Graph 3: Côte d'Ivoire: Students enrolled in 2016 .....	7
Graph 4: Distribution of students enrolled by institution, sector and gender (2016) .....	8
Graph 5: Student numbers and percentage of females (2007–2016) .....	9
Graph 6: Distribution of students by sector (2007–2016) .....	9
Graph 7: Tertiary Gross Enrollment Rate 1987, 1997, 2007, 2016 .....	9
Graph 8: Tertiary Gross Enrollment Rate 2007–2016 .....	9
Graph 9: Changes in and projections for the total population and for school-age population .....	11
Graph 10: Proportion of female students by level of education (2016) .....	13
Chart 11: Unemployment by level of education: unemployment rate and relative contribution to unemployment (2013) .....	15
Graph 12 : PASEC 2010: Percentage of students reaching an adequate threshold of competence .....	18
Graph 13 : PASEC 2014: Percentage of students reaching an adequate threshold of competence .....	18
Graph 14: Global Innovation Index Global and Ranking of Higher Education Systems (2017) .....	19
Graph 15: Evolution of success rates for national exams (2000–2017) .....	20
Graph 16: MESRS Budget and Share of Expenditure on Education (2006–2015) .....	27
Graph 17: Public Expenditure on Higher Education: % of GDP and % of State Budget .....	27

**List of Abbreviations and Acronyms**

BAC	Baccalauréate
BEPC	Lower Secondary Education Certificate ( <i>Brevet d'Études du Premier Cycle</i> )
CEPE	Elementary Primary Education Certificate ( <i>Certificat d'Études Primaires Élémentaires</i> )
CFA	African Financial Community ( <i>Communauté Financière d'Afrique</i> )
CPC	Certificate of Professional Competence
DECO	Direction of Examinations ( <i>Direction des Examens et Concours</i> )
DESPRIV	Directorate of Private Higher Education ( <i>Direction de l'Enseignement Supérieur Privé</i> )
DOB	Directorate of Orientation and Scholarship ( <i>Direction de l'Orientatation et des Bourses</i> )
DOREX	Directorate of Orientation and Examinations ( <i>Direction de l'Orientatation et des Examens</i> )
GDP	Gross Domestic Product
GER	Gross Enrollment Ratio
GPI	Gender Parity Index
HDI	Human Development Index
ICT	Information Communication Technology
LMD	License, Master's, Doctorate
LSMS	Living Standards Measurement Study
MEN	Ministry of National Education
MENETFP	Ministry of National Education, Technical and Vocational Training
MOOC	Massive Open Online Course
MESRS	Ministry of Higher Education and Scientific Research
NDP	National Development Program
PASEC	Analysis Programme of the CONFEMEN Education Systems
UAO	University Alassane Ouattara
UFHB	University Félix Houphouët Boigny
UIS	UNESCO Institute for Statistics
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNPD	United Nations, Department of Economic and Social Affairs, Population Division
VSC	Vocational Studies Certificate
VTC	Vocational Training Certificate
WB	World Bank

## I. FOREWORD

Upon request of the Côte d'Ivoire government, the World Bank and the French Agency for Development carried out a series of studies on higher education in the country. This series is structured around four key themes, which concern financing, governance and the access to and the quality of higher education in the country. The aim of this series is to offer a comprehensive, in-depth review of the strengths and weaknesses of the sector in order to contribute to the development of policies and projects that can support the government in the reform of higher education.

This brief integrates and summarizes the conclusions and recommendations of four thematic reports on higher education in Côte d'Ivoire:

- i) Equity and employability;
- ii) Quality of higher education;
- iii) Financing of higher education;
- iv) Governance and scientific research.

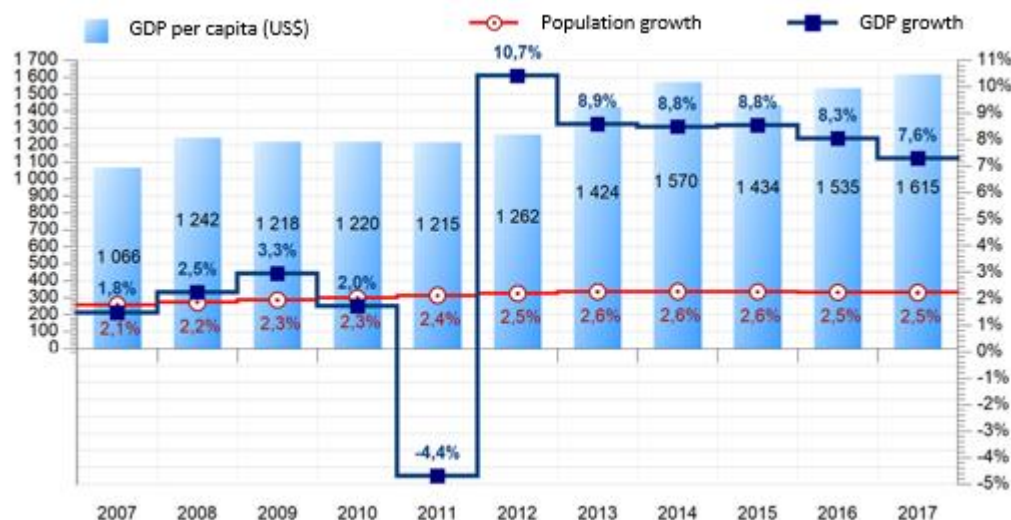
The brief presents the general and sectoral context, the main features of the sector, and the main challenges of higher education in Côte d'Ivoire, followed by policy recommendations for the sector based on the analysis presented in the four thematic reports.

## II. CONTEXT AND CHALLENGES

### A. Socio-Economic Context

1. Côte d'Ivoire covers an area of 322,462 km<sup>2</sup> and has over 24 million people. Over 42% are under the age of 15 and more than 50% are under the age of 20. Population growth is about 2.5% and forecast to remain high over the next few years, with the population expected to reach nearly 30 million in 2025.
2. The political crisis of 2010 was a major turning point in the country's recent history. The newfound political stability has fostered higher growth. Indeed, in the aftermath of the post-election crisis of 2010 and 2011, Côte d'Ivoire has renewed its efforts toward strong economic growth, with a firm commitment to accelerate development. Since 2012, Côte d'Ivoire has been experiencing remarkable economic success as indicated by rapid GDP growth, which has been supported by a favorable external environment, internal stability, and structural reforms that have fostered an average growth of 9% over the last five years. This has brought the GDP per capita in 2017 to over US\$1600, compared to US\$1066 in 2007, as shown in the following chart:

*Graph 1: Côte d'Ivoire: population growth, economic growth, and GDP per capita (2007–2017)*



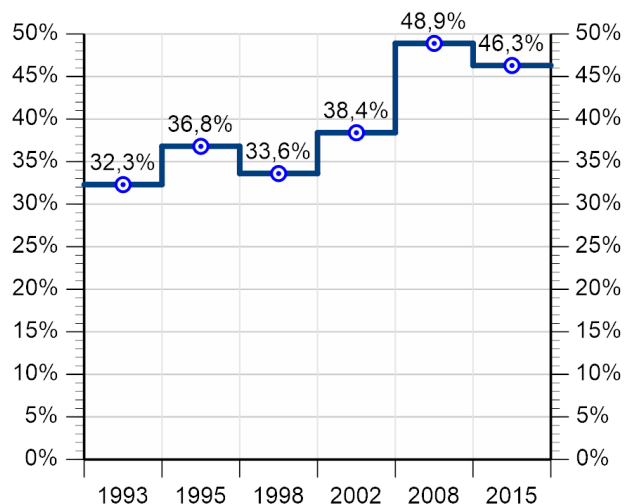
Source: World Bank and IMF data.

3. In 2017, the Ivorian economy demonstrated strong resilience in the face of external shocks such as the fall in the world price of cocoa, the tightening of regional monetary, policy and domestic social unrest. The country is expected to achieve an economic growth of 7.6%, particularly through the impact of the adjustment measures and policy reforms adopted by

the government, and the diversification of investments. According to the International Monetary Fund (IMF), the economic outlook for the next few years remains positive: it expects the growth rate to be around 7%, inflation to remain moderate, control of public finance to be achieved through cautious fiscal and monetary policies and the pursuit of reforms to improve the business climate and promote the efficient use of public-private partnerships.

4. The Ivorian Government has adopted a new National Development Program (NDP) for the period 2016–2020. The NDP aims to turn Côte d'Ivoire into a middle-income economy by 2020 and further reduce the poverty rate, which remains high (46.3%) despite the progress made since 2012. The main social challenge will be to support the Ivorian economy on a path of strong growth, to significantly reduce inequality and redistribute a larger share of the products of this growth to the most vulnerable populations. In 2015, the country was ranked 171 out of 188 countries in the HDI (Human Development Index) because of the high rate of poverty and low life expectancy.

**Graph 2: Changes in the poverty rate**



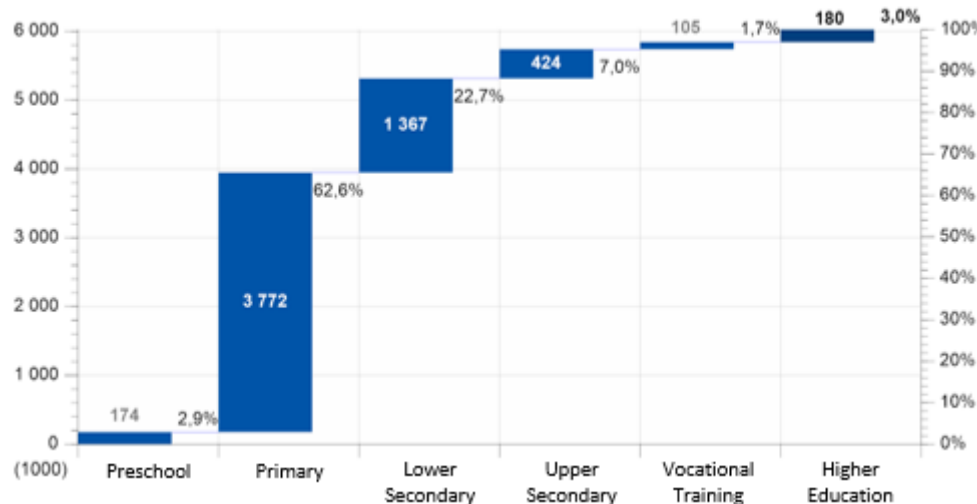
Source: World Bank Living Standards Measurement Study 2008 and 2015.

5. It has become essential for Côte d'Ivoire to develop a skilled, productive workforce to meet the needs of the different economic sectors, which are in full development. For this reason, one area of focus of the NDP 2016–2020 is accelerating the development of human capital and social well-being through universal access to education and the development of professional training. Similarly, it is recognized that growth can be sustained only by diversifying the economy and improving the performance of the country's educational system. Today, no country can adequately meet the challenge of competitiveness in the global economy without relying on quality production by its human resources. For this reason, Côte d'Ivoire has always placed education and training a national priority, as demonstrated by the evolution and level of expenditure for the sector, which reflect very favorable intersectoral trade-offs. The NDP 2016–2020 confirms this priority and keeps the upgrade of the national education system and the broadening of educational and training opportunities as central elements of the government's strategy to strengthen national unity and support economic growth.

## B. Sectoral context

6. The Ivorian education system consists of: (i) preschool education for children 3 to 5 years of age; (ii) primary education for children aged 6 years and above, which leads to the Certificate of Elementary Primary Education (CEPE); and (iii) secondary education, which is divided into two cycles: a four-year cycle leading to the BEPC (Lower Secondary Education Certificate), and a three-year cycle leading to a BAC (Baccalaureate). The vocational training sector offers two to three years of training in vocational training centers or in technical colleges, which leads to the CPC (Certificate of Professional Competence), VSC (Vocational Studies Certificate), or VTC (Vocational Training Certificate).
7. Youth education and training is a high priority for Côte d'Ivoire. The country has always devoted a significant share of its resources to this sector, one of the highest in the region. Consequently, the sector has seen significant change. For instance, it is noted that more than 6 million Ivorian students are currently in school (26.1% of the population); more than 20% of the state budget, corresponding to over 5% of the GDP, is spent on education and training. Graph 3 shows the classification of school enrollments by level of education, with more than 62% enrolled in primary education, and 180,000 secondary students representing 3% of the total enrollments.

**Graph 3: Côte d'Ivoire: Students enrolled in 2016**

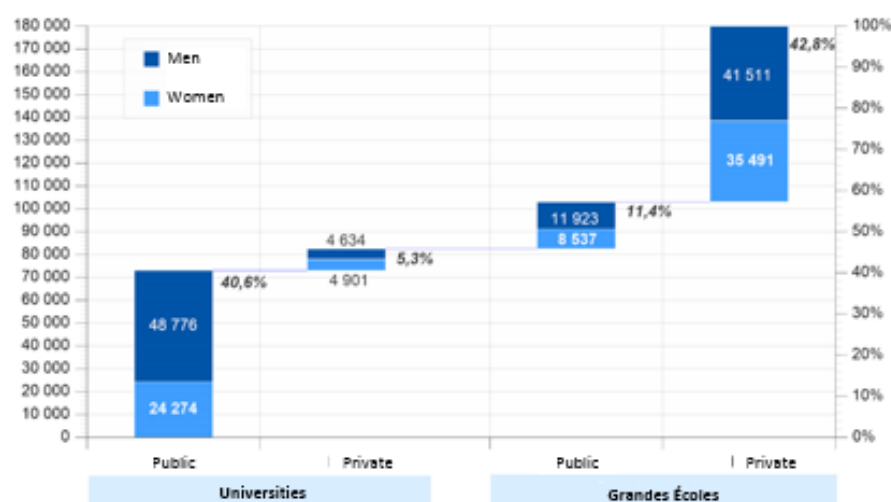


Source: based on the statistical Yearbooks of the Ministry of National Education, Technical Education and Vocational Training (MENETFP), the Secretariat of State in charge of Technical Education and Vocational Training, and the Ministry of Higher Education and Scientific Research (MESRS); most recent data 2006–2017.

Source: MEN (Ministry of National Education), MENETFP, and MESRS data.

8. Despite the progress made towards broadening access to education—particularly primary education, where the GER (Gross Enrollment Ratio) reaches almost 100%, Côte d'Ivoire continues to lag behind many countries in the region. Almost 25% of primary-school-aged children are out of school, due to impacts of over 10 years of crisis. The illiteracy rate in the country remains very high - 44% of the population aged 15 years and over is illiterate—especially among women (more than 50%) which is worse than 20 years ago (36.4% in 1998).
9. Tertiary education, which can be accessed by those with a BAC, offers from two to eight years of study and is provided by seven (7) public and 28 private universities, and 44 public and 211 private *grandes écoles* (colleges). In 2016, approximately 180,000 students were enrolled across these institutions with their relative distribution illustrated in Graph 4. It shows that majority of enrollment is secured by the private *grandes écoles* (around 43%) and by public universities (41%).

**Graph 4: Distribution of students enrolled by institution, sector and gender (2016)**



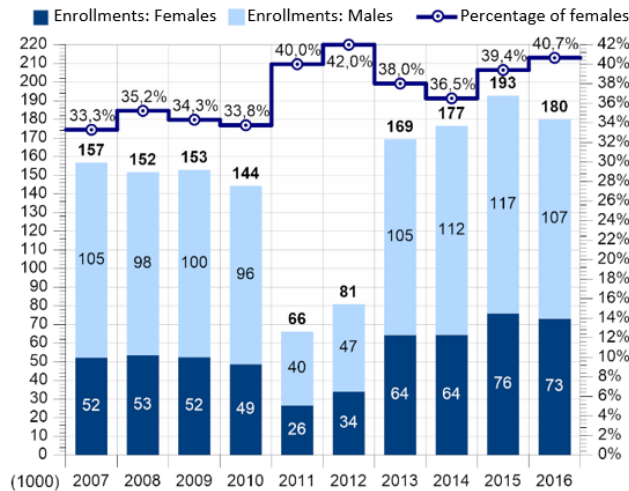
Source: MESRS data, Yearbooks 2015–2016 (provisional version).

10. With respect to higher education, the decade of crisis that affected Côte d'Ivoire between 1999 and 2011 caused a severe decline of the system. Its most visible manifestation was deterioration of system infrastructure, which was exacerbated by the crisis of November 2010. This led to the Ivorian government's call for an extended closure in April 2011 to refurbish the universities, public institutions, and university residences in Abidjan. Universities reopened on September 3, 2012, after EUR€167 million were spent for their refurbishment. Similarly, the evolution of tertiary education was marked by the crisis of 2011–2012. Enrollment dropped by 50%, with moderate change (2.6%) throughout the period 2007 to 2016. Growth was tied to the private sector, which grew at an annual rate of



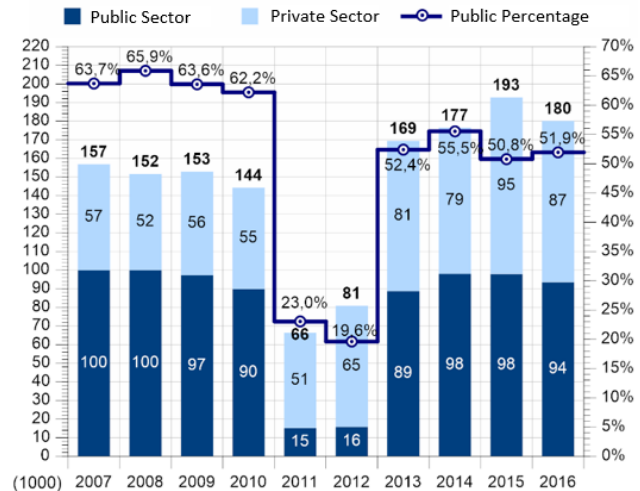
6.6%, while enrollment in public institutions declined from 100,000 in 2007 to 94,000 in 2016, as shown in Graph 5 and 6.

**Graph 5: Student numbers and percentage of females (2007–2016)**



Source: MESRS data

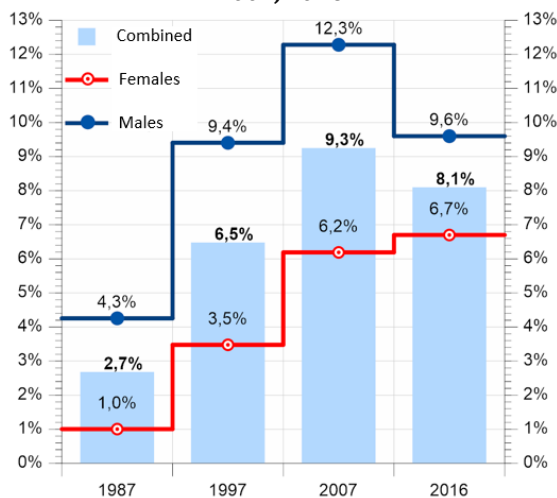
**Graph 6: Distribution of students by sector (2007–2016)**



Source: MESRS data.

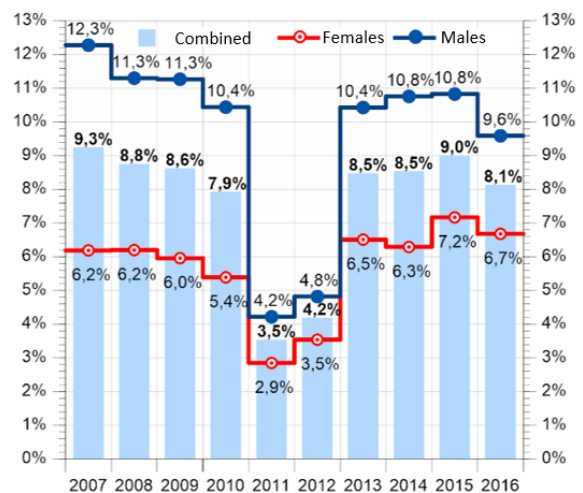
11. The tertiary Global Enrolment Rate (GER) was 8.1% in 2016, down from the years before the crisis. The change in the GER over the long term shows a clear increase of access by female students to higher education whose GER almost doubled between 1997 and 2016, while the GER for male students has stagnated, as shown in the following two graphs:

**Graph 7: Tertiary Gross Enrollment Rate 1987, 1997, 2007, 2016**



Source: MESRS and UNPD data

**Graph 8: Tertiary Gross Enrollment Rate 2007–2016**



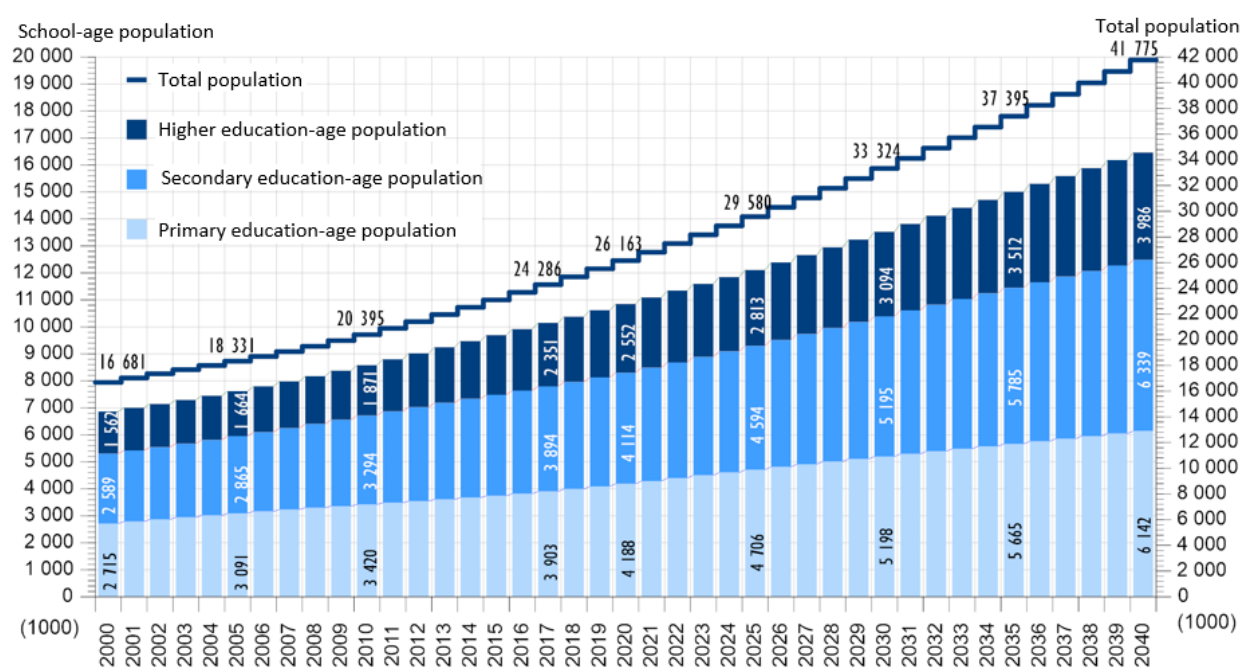
Source: MESRS and UNPD data.

### C. The Challenges of Higher Education

12. After years of political, social, and economic crisis that shook the country at the start of the new millennium, the Ivorian higher education system faces several challenges. The first is access and equality of opportunity, considering the strong growth in enrollments expected in the next few years. The second is the need to improve the quality of training and employability of graduates. The third is the need to ensure sustainable and equitable financing. Fourth and finally, it is essential that the system works with effective good governance.
13. The crisis revealed certain weaknesses in the system and the causes of deterioration of operational procedures in universities. In a post-crisis context, where every action is a priority, higher education has been designated as a key sector for the socioeconomic development of Côte d'Ivoire. The sector has been the subject of many initiatives and much deliberation, which have taken the following into account:
  - a) the structural reality of high population growth, parallel to the social demand for greater access to higher education;
  - b) the paradox of a widening gap between the qualifications needed to support and anticipate Ivorian economic development and the high unemployment rate among higher-education graduates;
  - c) reforms outlined but not completed during the crisis years, especially implementation of the License, Masters, Doctorate (LMD) system adopted by decree in 2009 as a supplement to the West African Economic and Monetary Union (WAEMU) guidelines of July 2007, recommending that member states "adopt the LMD system as a frame of reference for degrees awarded in the universities and higher education institutions located in the territory of the Union"; and
  - d) the need, after years of fits and starts, crises, and unrest, to return to effective functioning of higher education, both in teaching and research activities and in the ability to anticipate upcoming challenges and adjust to new needs.
14. Significant initiatives have been implemented, especially in the rehabilitation of infrastructure. Publication of documents about the LMD system led to a major review of the educational offer. A step-by-step reform of the Technical Higher Education Certificate (BTS) was initiated, a process which will last until 2020. However, even though new universities have been formally created, only the University of Man has had its first intake of students so far. This is because the infrastructure of the other universities has not yet been delivered, and it remains highly unclear as to when they will be operational.

15. Moreover, since the decade of political crisis between 1999 and 2011 and the consequent decline of its higher education system, Côte d'Ivoire has devised numerous strategies to achieve the university system in its needs to address the challenges of the 21<sup>st</sup> century. Although there is a strong convergence of the diagnosis and the major orientations that should be implemented, the key initiatives are still far from completion. This is a long-term challenge which requires time and commitment yet difficulties have emerged from the very outset.
16. The 2015 reform making education compulsory to 16 years of age will inevitably impact the demand for access to higher education. In fact, growth in enrollment at secondary level of education is likely to have medium and long-term impacts on the transition of students into tertiary education. The tertiary education system should therefore be prepared to accommodate a growing number of new students in the next few years. Demographic projections indicate a continuous high growth rate of the school-aged population. By 2030, the secondary-education-aged population will be around 5.2 million and the higher-education-aged population (19–23 years of age) will exceed 3 million. This is an increase of more than 0.7 million compared to 2017, as shown in the following graph:

**Graph 9: Changes in and projections for the total population and for school-age population**



Source: based on data from the United Nations, Department of Economic and Social Affairs, Population Division (2017), World Population Prospects: The 2017 Revision.

17. In the post-crisis context and considering the contextual difficulties in the higher education sector (especially its structural weaknesses), the implementation of a set of deep and relevant reforms is necessary to meet expected growth in demand for higher education services and fully accomplish its role in building an emerging economy and a knowledge society in the context of Côte d'Ivoire Vision 2040. This is set out in the NDP 2016–2020 which consists on building up "an industrial power, united in its cultural diversity, democratic, and open-minded" and in the 2025 education goal which states that "the Ivorian education system provides all children and adults with quality education and training that is equitable and inclusive; taking into account citizens' need to change; enabling them to contribute to the socioeconomic development of their community and Ivorian society, and to promote social cohesion; and provides them with competitive and technological innovations capacity"
18. Finally, several factors weigh on the education system particularly on higher education to meet the challenges mentioned above. In this regard, social and political stability is a vital factor for the success of the reforms. After the crisis, the government initiated a process of strengthening social cohesion, national reconciliation and conflict resolution, which must be reinforced to implement the reforms in an enabling environment. Higher education has a key role to play in promoting peace and dialogue and it is therefore important to invest in the triptic "knowledge, skills and abilities" to develop quality human resources. Developing skills for dialogue, cooperation and shared responsibility at the level of the entire university community is essential, and it will help to cope with the phenomenon of violence. Concurrently, improving equity in access to higher education and the quality of services (infrastructure, equipment, career, etc.) will also contribute to strengthening social cohesion in the university.

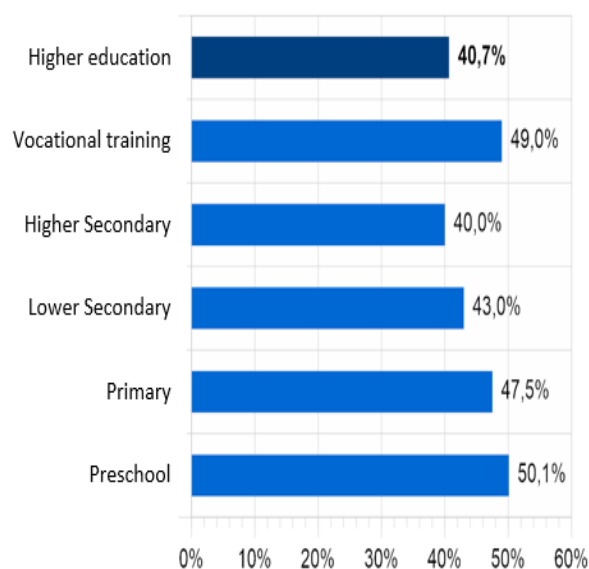
### III. OPTIONS AND RECOMMENDATIONS

The proposed options and recommendations are structured according to the four areas of challenges identified and studied for the tertiary education sector in Côte d'Ivoire

#### A. Equitable access

19. Access to tertiary education has been fluctuating over the years, depending on performance of secondary-education results, accommodation capacities and more importantly, security context. The GER recorded in 2016 (8.1%) is average in sub-Saharan Africa, but remains largely below average for middle-income countries, and more importantly, it is lower than before the crisis (9.3% in 2007). It does, however, show a reduction in the access gap between male and female students. The proportion of female students in higher education (40.7%) is the same as in secondary education. Graph 10 (opposite) shows that it continues to be more difficult for female students to remain enrolled through the education cycle. They are the majority in preschool however their proportion gradually decreases in higher levels of education.

**Graph 10: Proportion of female students by level of education (2016)**



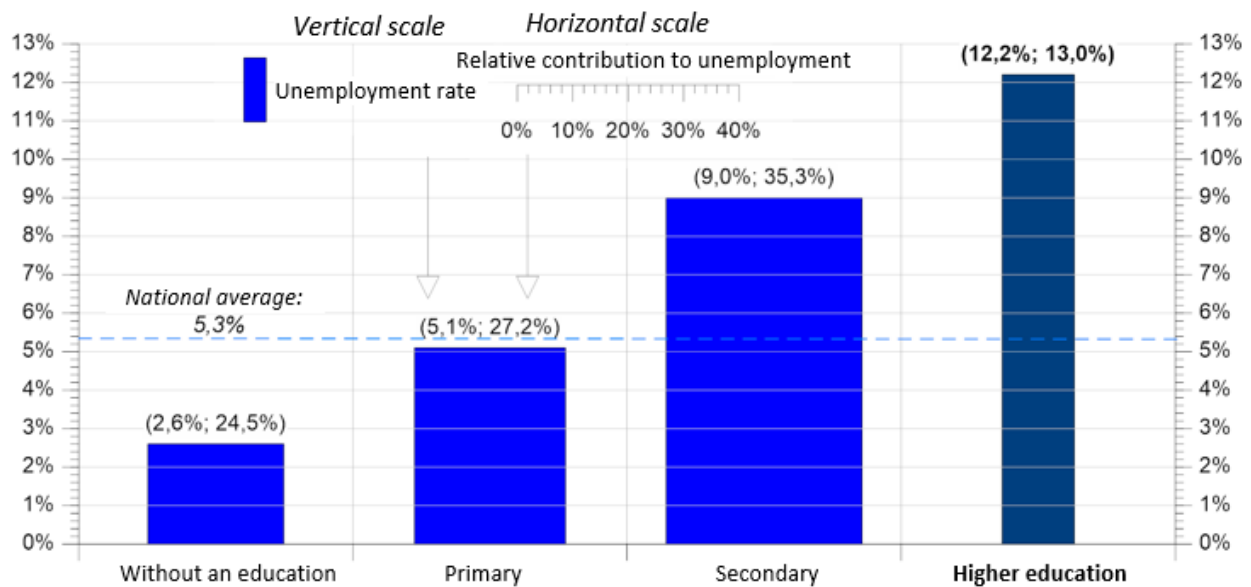
Source: MEN and MESRS data.

20. Although female students are not necessarily disadvantaged in the transition to tertiary education, there are gender inequalities in participation. Female students generally have a higher transition rate than male students. In fact, in 2015, about 76% of female students who obtained their BAC continued onto tertiary education the following academic year, compared to 65% of male students. However, the girls' high transition rate did contribute to reducing the gender gaps in terms of participation in tertiary education. In 2016, the GER was 9.6% for male students (down from 12% in 2007), and 6.7% for female students (up from 6.2% in 2007). Female students from wealthier households benefit the most from this increased access to tertiary education. The sector shows several areas of social inequality:
- i) Students from poor households are less likely to transition from secondary to tertiary education and have a relatively low GER in this sector. Among the poor, 61% of students with a BAC moved onto tertiary education in 2015, compared to 72% among the least poor students. Only 2% of students enrolled in private tertiary institutions and 7% in public ones come from the poorest 20%, replicating the

---

inequalities observed in earlier levels. Only 8% of the pupils enrolled in the last year of secondary education come from the poorest 20%.

- ii) The national system for enrolling students in private tertiary institutions is largely biased toward the wealthy. 80% of students attending private tertiary institutions belong to the wealthiest 20% of the population. Given that more than 80% of the students enrolled in private tertiary institutions are supported by the government, this poses a question on whether the current system of student orientation and support creates inequalities. On the other hand, it can be noted that approximately 50% of students from non-poor households are headed toward private tertiary institutions, compared to 10% of students from poor households.
21. Inequalities exist also between geographical areas. In 2008, the tertiary GER was 9.4% among those born in urban areas, and 2% among those born in rural areas. Also, in the same year, the GER was 15.4% among people born in Abidjan and 3.7% among people born in locations with no public university. Majority of students in public tertiary institutions enroll in humanities programs, while those in private tertiary institutions enroll in business and administration programs. 57% of students enrolled in private tertiary institutions study business and administration, while 29% of students in private tertiary institutions choose humanities programs. Science-based courses such as mathematics have a small proportion of students (2.6% and 0.2% in public and private tertiary institutions, respectively).
  22. Career choices and labor market indicators such as salaries are only slightly related. There is a very tenuous correlation between the careers chosen by the tertiary education graduates with (i) the average salary in the careers; and (ii) the areas in high demand. This illustrates the limitations of the current student guidance system in making optimal choices. Tertiary education degrees lead to different outcomes. Someone with a two-year degree—whether general (DEUG), technical (BTS or DUT), arts- (DUEL) or science-focused (DUES)—earns on average 35% more than someone with a BAC. Someone with a three-year degree (bachelor's or engineering diploma) earns on average 81% more than someone with a BAC. Although three-year degrees lead to lower chances of obtaining work faster compared to two-year degrees, they offer more opportunities to find a salaried position. In general, the higher the job seeker's education level, the more difficult it is to be employed. This reflects a limit to the external efficiency of education. Results of the Employment Survey 2013 show that if the overall average unemployment rate is 5.3%, for those without an education it was 50% lower (2.6%) for primary education graduates, and doubled for those with a tertiary degree (12.2%), who represented 13% of unemployed people, as illustrated in Graph 11:

**Graph 11: Unemployment by level of education: unemployment rate and relative contribution to unemployment (2013)**

Source: based on the results of the Employment Survey 2013.

23. Based on findings on access and inequalities of the system, some options and recommendations could be considered, in particular:

- a) **Restructuring the tertiary education catchment areas** by increasing enrollment capacity in tertiary education system and decentralizing the tertiary education supply according to demand and tying it to the communities' needs. This will help reduce inequalities of access to tertiary education studies and provide better match between training and employment.
- b) **Reform the subsidy scheme** by introducing gradually an education voucher system,<sup>1</sup> based on household income level, and combined with a student loan mechanism. With vouchers, students receive direct subsidies from the government. They choose for themselves programs in which they wish to continue their studies, in either public or private tertiary institutions. When they start their course, after admission and registration, the entire subsidy amount could be paid to the chosen institution, and any additional tuition fees are borne by the student. Students from wealthy families would be able to contribute more to the financing of their studies. Such a system would respond to two concerns:

<sup>1</sup> Based on the experience of other countries, studies have shown that the education voucher system is beneficial for a number of reasons. First, it increases the competition between institutions, which helps improve the quality of the services provided. Second, it helps to improve the academic performance of students. Third, this system allows people from disadvantaged groups (including the poor and women) to have greater access to private institutions. Fourth, it offers students more flexibility in their choice of institution.

- 
- The first issue is *inequality*. In the current system, the Department of Orientation and Examinations (DOREX) assigns students toward both public and private institutions and handles subsidies for them. Students receive identical subsidies regardless of their socio-economic background. Therefore, only students who can afford the high additional tuition fees in private institutions attend them. A system of varied voucher values determined by household income level might help resolve this issue.
  - The Second issue is *Program Guidance*. DOREX does not always guide students toward the courses they want to attend, resulting in administrative problems that can often take a long time to resolve. A voucher system, with students personally responsible for their program choices, would decrease the DOREX workload.
- c) **Promote two-year and three-year degrees** and review specialization options delivered in partnership with major employers. Two-year and three-year programs are of high value in the labor market and offer faster employment opportunities. It is therefore important to encourage majority of students to enroll in these programs. The relevance of specialization options is also questioned with regards to employer needs. A review of tertiary education curriculum in partnership with major public and private sector employers would lead to reforms that could increase the relevance of tertiary education degrees.
- d) **Strengthen monitoring capacities** of private tertiary institutions and promote career services in public and private tertiary institutions. The capacity of the Department for Private Sector Higher Education (DESPRIV) to monitor private institutions should be strengthened to ensure quality of teaching and relevance to the job market. It has been demonstrated that matching training to employment contributes to higher productivity of graduates in their jobs. Therefore, for programs delivered by private institutions, it is important that clear content requirements are set and that compliance by the institutions is ensured. The content should be selected according to the employers' needs, to match training to employment. To facilitate the transition of tertiary education students to the labor market, establishing career services in public and private tertiary institutions could also be promoted. Such career services can connect students to potential employers, and at the same time collect data on students' employment by programs to inform new students on employment opportunities.
-



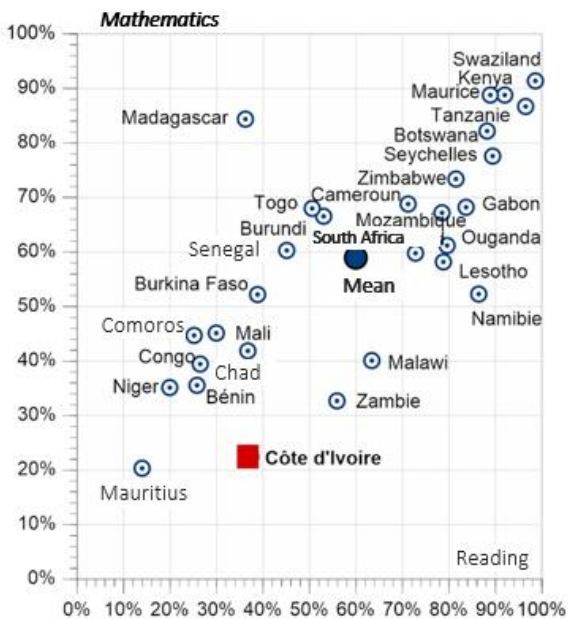
- 
- e) **Strengthen partnership between tertiary education institutions and the private sector**, and establish programs with compulsory internships. As stated, closer partnership between tertiary education institutions and the private sector offering students internships could provide a better match between training and jobs. To better meet the private needs in terms of skilled labor, developing mechanisms for regular consultation between tertiary institutions and the private sector is worth encouraging. For example, events such as “career days”, where private companies would be able to share, with students and tertiary education institutions, the information on employment opportunities in their sector and the specific skills they are seeking. The “cooperative programs” could be another option to improve employment options for tertiary education graduates, and at the same time offer opportunities of financial support for their studies. Cooperative programs combine in-class courses with paid internships. In practice, cooperative programs require tertiary education institutions to establish a network of partners in the public and private sectors. Tax compensation or other benefits could be offered to partnering companies to encourage them to deliver paid internship programs. Studies have shown that these types of programs, in addition to providing students with practical experience in the field, can help them to address financial needs and increase their chances of finding employment at the end of their studies and especially for students from poor households.

## **B. Establishing high-quality, relevant tertiary education**

24. Among the multiple challenges facing the tertiary education sector, the issue of quality is perhaps the most pressing, as increased coverage can have limited effect on the country's development if the tertiary education system cannot guarantee high standards. In turn, improving tertiary education quality is only possible if the governance and financing systems are appropriate in the medium and long-term.
25. Measuring the quality of higher education through objective data is not an easy exercise. Indeed, unlike in primary and secondary education—across which the use of learning assessment tests is common practice—at tertiary education level, despite the emergence of some interesting initiatives incorporating this type of approach in the last decade, it has been adopted by very few countries or institutions. In Côte d'Ivoire, tertiary education institution leaders, teachers, and economic sector representatives express great concern about the quality and relevance of Ivorian programs. Their concerns are based on different and converging observations.
26. With regards to international rankings, the relatively low position of the Ivorian education system is of concerns. Student learning outcomes assessments carried out under the PASEC (CONFEMEN Educational Systems Analysis Program) show that Ivorian students are in relatively low position compared to several other African countries. PASEC 2010 data for

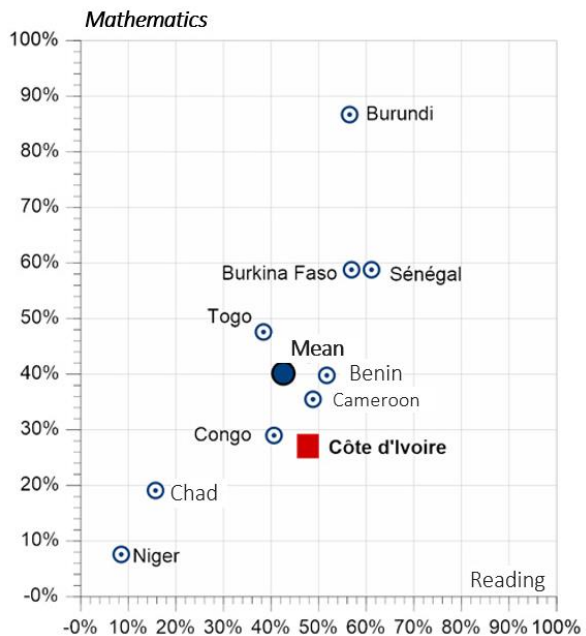
Ivorian pupils at the end of primary school showed that only 37.3% had reached the minimum level in reading while averages in other countries exceeded 60%. Less than 22.5% reached the minimum level in mathematics compared to almost 60% in other countries. PASEC 2014 results showed progress in reading (48% at the appropriate level), but less in mathematics (26.9% at the appropriate level). This is illustrated by the following two graphs:

**Graph 11 : PASEC 2010: Percentage of students reaching an adequate threshold of competence**



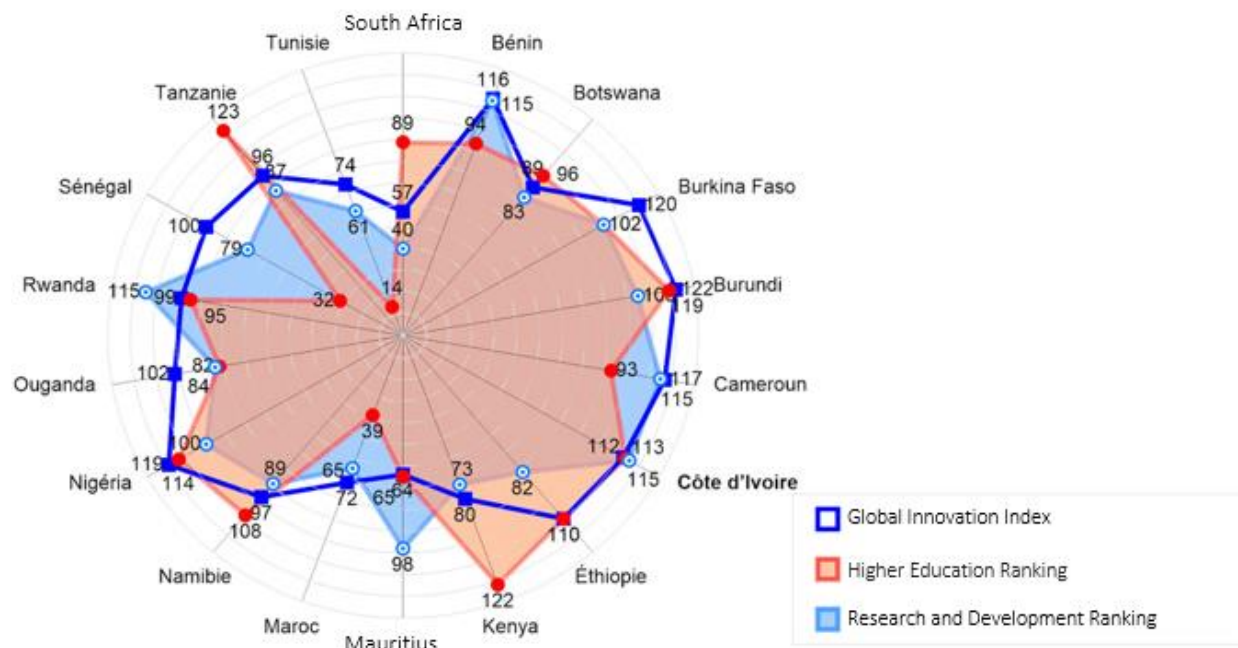
Source: data from PASEC 2010.

**Graph 12 : PASEC 2014: Percentage of students reaching an adequate threshold of competence**



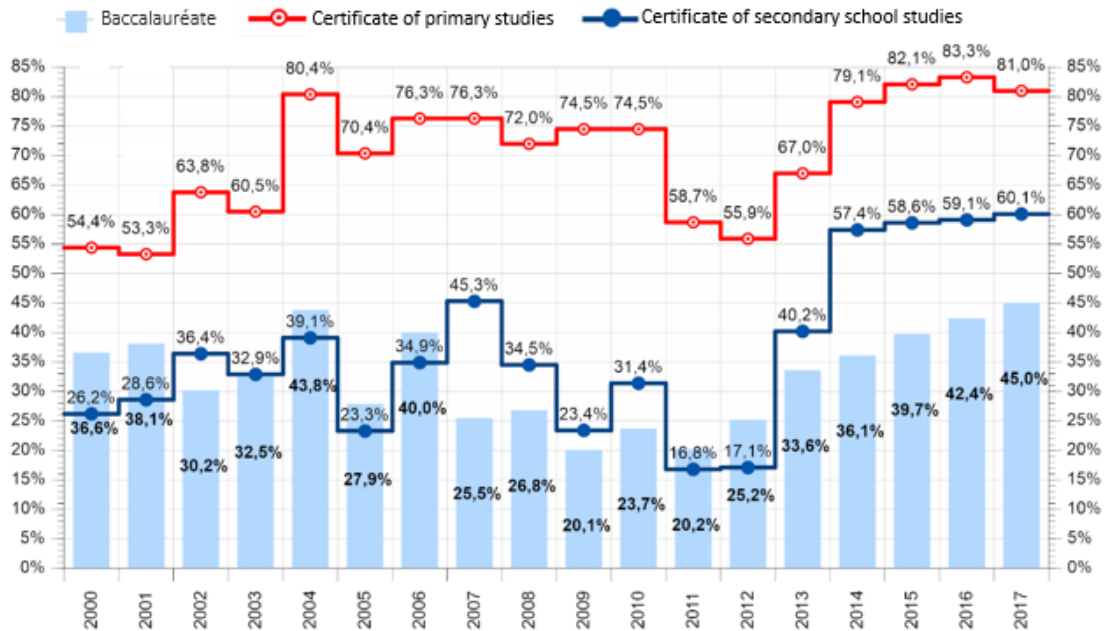
Source: data from PASEC 2014.

27. The performance level of primary and secondary students inevitably impacts the quality of tertiary education. An example of this can be seen in the Global Innovation Index (produced by Cornell University, INSEAD, and the World Intellectual Property Organization), which compares Côte d'Ivoire performances in innovation and development of higher education with those of other African countries. The higher education ranking is based on a composite indicator measuring enrollment rates, the proportion of graduates in science and technology and the proportion of foreign students received by the country. The Research and Development (R&D) indicator measures the number of researchers in relation to the broader labor force and the level of investment in R&D as a proportion of GDP. As shown in Graph 13, Côte d'Ivoire has the lowest results compared to other African countries, with the exception of Benin, Burundi and Nigeria. Senegal is much better positioned both in terms of higher education development and for scientific research, which is likely a direct result of the fundamental reforms it has undertaken in recent years.

**Graph 13: Global Innovation Index Global and Ranking of Higher Education Systems (2017)**

Source: Global Innovation Index data, 2017.

28. At the national level, there are very few indicators available to assess the quality of education in general and of tertiary education in particular. National examination results may contain some benchmarks. Analysis of success rates in the three national exams (CEPE, BEPC, and BAC) shows improvement in the results after the crisis, but the results also show that a significant portion of students has not reached the required qualification to access the next level of education. The results about 40% at the end of lower secondary education and 55% in the BAC in 2017 represent a major loss for the country and for the individuals in question. In addition, the low proportion of secondary graduates obtaining a distinction with a score above 12/20, was 8,4% in 2013, is another indicator of the low level of secondary education graduates.

**Graph 15: Evolution of success rates for national exams (2000–2017)**

Source: MENETFP data.

29. In fact, this modest level of quality of higher education in Côte d'Ivoire finds its explanation in several weaknesses experienced by the sector:

- i) **Insufficient information and guidance:** Among the obstacles that affect the preparation and motivation of new students in tertiary education is the lack of effective mechanisms to inform future graduates during their secondary schooling and help them determine their choice of institutions, programs and tracks in tertiary education. Despite MENETFP efforts made through the Information and Orientation Centers (CIO), and the Department of Examinations, Competitions, Guidance and Scholarships, a lack of visibility persists at MESRS level and higher education structures, particularly public ones. Moreover, it seems that, when issued, the information provided does not include geographical data (with regard to the entire territory) or sufficient chronological data on unemployment, wages, etc., for future students to be able to make wise career choices. However, this information is essential because beyond its usefulness to new students, it could guide tertiary education institutions to review their programs on two levels: creating new courses and evaluating the efficiency of existing curricula.

- 
- ii) **Lack of interface structures and support for integration:** In terms of support and follow-up mechanisms deployed in tertiary education institutions for graduates, some positive points should be noted. These concern: (a) the government's commitment to several initiatives for establishing a system to support and monitor the professional integration of graduates, specifically by assessing the situation, through surveys and analysis, and making proposals; (b) the emergence of good institutional practices that can be disseminated nationally; (c) awareness of the need to acquire skills relevant to the job market (core skills: English language, IT, entrepreneurship, etc., and skills specific to the profession)—which can be developed by integration support structures; (d) willingness of most stakeholders (government, universities and colleges, donors and socio-professional partners) to contribute actively and jointly to tackling the issue of youth unemployment. The main challenges concern the following aspects: (i) Insufficient or complete lack of dedicated resources (human, financial, material), including a relevant and fair system for collecting and analyzing data and for maintaining contact between graduates and their tertiary institutions; (ii) lack of awareness and cooperation of key actors (leaders of tertiary institutions, especially public institutions, and private sector leaders) on this new mission of academic institutions; (iii) lack of an institutionalized national system for graduates tracking surveys; (iv) economic network and regional disparities unconducive to tertiary graduates employment; (v) reluctance by public tertiary education institutions due to the additional costs in a context of scarce resources.
- iii) **Incomplete License-Master-Doctorate (LMD) reform.** The transition to the LMD system is still in progress and many requirements of the new system are yet unmet, including the professionalization of teaching, the modernization of pedagogical methods based on student's individual autonomy, and the establishment of support structures and mechanisms to measure the mobility of students and teachers. Pedagogically, Ivorian universities are still characterized by a traditional approach organized around a classical education model. The instructor lectures on texts while students passively internalize. This emphasis on learning by memorization leaves little room for the development of critical thinking and acquisition of analytical skills. A focus on theoretical knowledge rather than practical applications results in students who know what to say but not what to do. The combination of teaching centered on abstract knowledge without direct connection to the surrounding environment makes it difficult to prepare students for the needs of working life and to equip them with the generic skills and open minds necessary for flexibility in adapting to a rapidly changing world.
-

- iv) **Difficult learning conditions:** The crisis had a major impact on students' learning conditions. First, several academic years were seriously disrupted during the years of civil conflict and the system has never fully recovered. To date, training and exam periods are not aligned to the normal academic calendar in many tertiary education institutions. In many cases, the different training and research units (UFRs) do not work at the same pace within the same university. Second, the significant destruction that took place during the political crisis has required major reconstruction and rehabilitation efforts in recent years. Despite tremendous progress, not all equipment is operational and the digital infrastructure is inadequate in many facilities.
  
- v) **Training quality** (especially at the practical level, is directly affected): Scientific research activity which was practically abandoned for several years, is struggling to resume. Scientific production cannot rely on laboratories with insufficient resources to meet the needs of civil society **in** the socio-economic world. In addition to the lack of scientific equipment, teachers deplore the lack of laboratory technicians to support them in practices for training and research. This is mainly due to the status and regulations of the civil service, which do promote competency-based selection or offer competitive salaries, comparable to those of the private sector.

- 
- vi) **An embryonic quality assurance system.** The quality assurance function in Ivorian tertiary education still needs to be developed. The process started two decades ago with the adoption of the Education Law dated September 7, 1995. Initiatives undertaken at the regional or international levels have obviously contributed to raising a collective awareness (at institutional and national levels) of: (a) the need to integrate quality assurance as a key element of governance of tertiary education, and (b) the need to develop a core national expertise and sub-regional reference groups that can benefit from a cascading capacity-building approach. This achievement is commendable, but the process to develop a quality assurance system needs to be reinforced, in particular by aligning it with directives, references, and international practices. In this process, several challenges should be addressed: (i) lack of equal awareness of the issues among all stakeholders when it comes to developing a systemic approach to quality; (ii) the weak ecosystem in terms of the collection of data and information; (iii) the accumulated knowledge and national expertise accumulated through the various initiatives of AUF (Francophone University Agency), UNESCO, DAAD (German Academic Exchange Service), etc. remain scattered, with limited dissemination and under-valued; (iv) tertiary education institutions are not at the same level of awareness and development regarding quality and quality assurance (most of public tertiary institutions did not include quality assurance as a priority in their strategic development plan); (v) the choice of entrusting the management of quality assurance to a MESRS general directorate might delay the alignment of the Ivorian system with international, European, and regional standards; (vi) resistance to change among certain actors and stakeholders; (vii) socioeconomic disparities and unfavorable conditions for young universities created within Côte d'Ivoire; (viii) low involvement of socioeconomic partners in developing tertiary education.
30. The main options arising from this analysis for improving the quality of higher education include the following:
31. **Instructors Evaluation:** The current system lacks information on the quality of education services. This element can be integrated into the system, as in Anglo-Saxon universities, by considering student evaluations in measuring teaching quality. This can lead to two purposes: improvement in instructors' pedagogical practices based on student suggestions and how decisions regarding promotion of instructors or extension of their contract are made.
32. **Modernization of curricula and pedagogical practices:** The main objective of curriculum reforms and pedagogical practices should be the modernization of curricula and the transformation of knowledge and skills-acquisition methods. To support tertiary education institutions that are committed to improving the learning experience of students, the MESRS should encourage the transition to traditional teaching methods to interactive, collaborative approach based on the reality of professional life. Therefore, it would be
-

---

crucial to set up a Center for Teaching and Learning within each tertiary education institution to promote educational innovation with respect to active learning methods. These centers would be intended to support the efforts of teachers who are ready to adopt innovative methods through appropriate training and mentoring.

33. **ICT Development:** With regard to ICT, which is essential for tertiary education, many challenges still remain, including (i) improving access to ICT resources by strengthening ICT infrastructures; (ii) building human resources capacity to use ICTs; (iii) connecting tertiary education institutions to set up a national higher education network (**Réseau Ivoirien des Télécommunications pour l'Enseignement et la Recherche (RITER)**), open to the rest of the world; and (iv) setting up a body to be in charge of the management, development and maintenance of the national tertiary education network- RITER. All these are essential to support the innovations introduced in tertiary education, including the virtual university, virtual libraries, Massive Open Online Courses (MOOCs) and digital spaces accessible to users.
  34. **Creation of close links with the private economic sector:** Strengthening the link between tertiary education and private economic sector is an effective way to increase the quality and relevance of training. To this end, tertiary education institutions may use different complementary mechanisms such as providing internships for Bachelor's degree students, placing instructors and researchers in private companies or offering courses taught by professionals. Universities can also set up cooperative education programs for students to secure paid internships during their studies. Similarly, the integration of entrepreneurship training into mainstream academic programs can also be used to bring the university closer to the rest of the working world and increase its capability to develop young entrepreneurs and job creators.
  35. **Improved learning conditions:** Modernizing the training and learning environment requires the development of a comprehensive and integrated strategy and an appropriate funding mechanism to ensure its implementation. The aim is to provide a comprehensive assessment of the existing infrastructure and human resources dedicated to their management (and maintenance), to **analyze the needs of improvements in** accordance with international standards of quality (as well as of safety and hygiene) and to develop a shared policy **among** the various actors for the upgrading and management of their respective physical infrastructures.
  36. **Development of the information and orientation system:** One of the objectives of a quality tertiary education system is to prepare students for an active life by supporting them in their career choices, promoting their personal development and academic success, and contributing to their professional integration. Students (and their families) need accurate, reliable and up-to-date information to make informed decisions regarding their career choices. They must be able to access a comprehensive directory of academic **courses and to**
-



compare the offers based on the career or advanced studies to which the selected course will lead; the qualifications required to access and follow them successfully, the skills that these programs are supposed to develop, detailed syllabuses, success rates, insertion rates and new perspectives in the job market. This new function should be able to rely on an integrated system of collection, analysis, consolidation and dissemination of information that will be relayed by ad hoc structures within the university (teaching departments, research departments and internships, student associations, etc.) and within national structures responsible for regular tracking surveys of graduates. Students are not always able to analyze these indicators on their own when determining which field to specialize in or, more broadly, when planning their future career. Tertiary education institutions would be required to develop new spaces and develop personalized counseling mechanisms for students, starting with post-BAC orientation and continuing throughout their higher studies. It is therefore a question of preparing and accompanying the young graduates in the transitions between secondary education, university and the working world by appropriate reception and coaching; services. For instance, Morocco and Tunisia have recently developed career centers that implement these new systems. In Tunisia, career centers are associated with the International Skills Certification Centers, and their mandates broadened to: strengthen and internationally certify the capacities of teachers and administrators; and to generate additional own resources through provision of in-service training and business expertise so that universities can fully and autonomously ensure the financing of this new system of supporting graduates professional integration.

37. **Development of Doctoral schools:** Côte d'Ivoire suffers from lack of faculty renewal- most teaching staff are almost at retirement age and recent graduates are not encouraged to pursue careers in teaching. The doctoral school is the structure responsible for recruitment, monitoring, training through research, supervision, doctoral thesis defense on the assigned scientific topic, and preparation for the professional integration of young PhDs. To date Côte d'Ivoire has two doctoral schools. One of these is the Engineering Sciences and Technology School which is still at an embryonic stage and not yet accredited by the Ministry of High Education and Scientific Research (MESRS). The MESRS could promote the creation and/or reinforcement of support structures to allow tertiary institutions implement their doctoral policies. The following objectives could be recommended: (i) aligning doctoral studies to relevant social and economic environments by encouraging and financing PhD and post-doctoral students in the economic sector; (ii) monitoring PhD students' professional projects; (iii) raising the awareness of PHD students' supervisors about their specific responsibilities; (iv) coordinating and certifying training in core areas for PhD students in pedagogical and digital engineering, project development, promotion of research results, intellectual property, entrepreneurship & cross-cutting skills; and (v) developing interregional and international cooperation and the co-supervision of doctoral students.

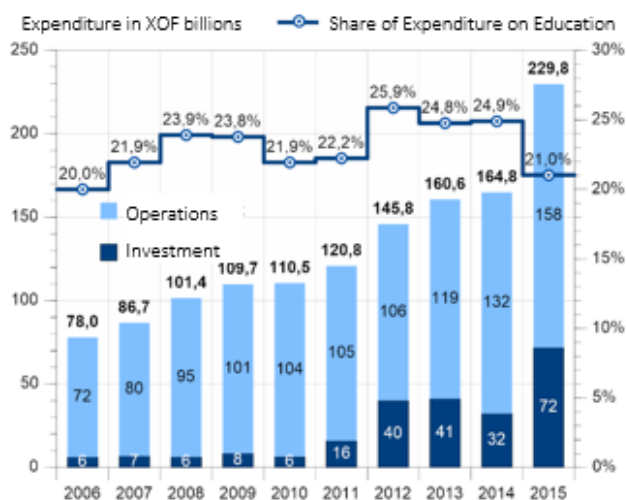
38. **A strong Quality Assurance (QAs) System.** The development of the national strategy should be accompanied by a shared culture of quality, in which all stakeholder will recognize each other, commit themselves and share responsibilities. Therefore, it would be important to communicate, sensitize and build capacity for each specific category of actors: students, teachers, institutional leadership, employers, civil society, representatives of the communities and government. At the *national level*, the aims would be to: (i) develop a process for identifying strategic choices; (ii) support a participatory process for the elaboration of evaluation benchmarks and internal/external evaluation guides (and their dissemination to all concerned parties); (iii) to support the institutionalization and the establishment of quality assurance units within the institutions; (iv) to develop a holistic plan for capacity-building (relying on the already trained referents); and (v) accompany institutional evaluations and pilot programs. At the *institutional level*, the need would be mainly to support the creation and/or strengthening of quality assurance units within tertiary education institutions. Internal quality assurance is the primary responsibility of educational and research institutions. Tertiary education institutions are required to develop a quality assurance policy of their own, to make it public and display it as an integral part of their strategic management. QA should be identified and implemented in a participatory manner by the institutions, which will also include a monitoring and review system. The internal quality assurance units are responsible for piloting and supporting initiatives within their teaching and research institutions in relation to internal and external quality assurance, as well as to overall quality. These activities would require additional funds and greater institutional autonomy.

### C. Sustainable and Equitable Financing

39. The functioning of tertiary education depends mostly on an effective, efficient and equitable financing system. However, as in many countries, Côte d'Ivoire **faces a major** challenge. In face of the rapid growth in student numbers, a key question arises: given the many competing economic priorities, how to establish a financing model that achieves effectiveness, efficiency and equity, while ensuring long-term budget sustainability? If no action is taken, there would be risks of increased pressure on the budget allocated to primary and secondary education, or deterioration of education quality, or increased inequities in tertiary education by turning the sector into a luxury reserved for the elite.
40. Côte d'Ivoire allocates a significant share, equivalent to 1.2% of GDP or 5.5% of total budget expenditure (CFAF229.8 billion in 2015), to tertiary education, but projections of student enrolments raise the question about the sustainability of this public expenditure **model as illustrated in graph 16 and 17.** Public expenditure on tertiary education represented nearly 22% of total expenditure on education over the same year. Moreover, Côte d'Ivoire allocates, on average, a greater share of public resources to higher education than other countries in the sub-Saharan Africa region, with the regional average being approximately 19% of total expenditure on education. The three key factors that have

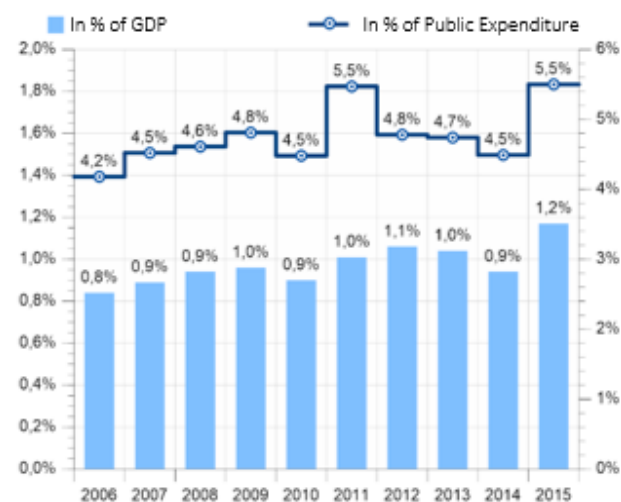
contributed to keeping current public expenditure at a manageable level include: (i) relatively low success rates for the BAC (39.7% in 2015); (ii) low transition rates into upper secondary schools (47%); and (iii) limited access to tertiary level, with a GER of 49%.

**Graph 16: MESRS Budget and Share of Expenditure on Education (2006–2015)**



Source: based on MEF and UIS data.

**Graph 17: Public Expenditure on Higher Education: % of GDP and % of State Budget**



Source: based on MEF, UIS, and IMF data.

41. Projections indicate that, by 2030, increased enrolment numbers will lead to significantly higher expenditure in the tertiary education sector. Basic scenario 1 shows a budget increase from CFAF 230 billion to CFAF 632 billion or 35% of total expenditure on education. This represents 10 percentage points more than in 2015. Scenario 2 considers the effect of an increased rate of success at BAC level from 39% to 50%, and scenario 3 has an improved transition rate into upper secondary schools from 47% to 75%. Scenario 2 estimates a budget of CFAF 893 billion for tertiary education and a 43% share of total public expenditure on education, whereas scenario 3 estimates a budget of CFAF 1,180 billion and a 47% share of total public expenditure on education. These projections highlight the fact that any improvement in performance at upper secondary education level could create significant budget pressure.
42. Public expenditure has risen significantly, especially since 2012, going from CFAF 145.8 billion to CFAF 229.8 billion in 2015. This rise is mainly linked to a significant increase in investment expenditure in the sector because of measures to stimulate the economy taken after the post-electoral crisis. The increase was for investment projects such as rehabilitation of university infrastructure, interconnection of research structures and implementation of the LMD system. This reduced the share of current expenditure over the 2012–2015 period, from 87% to 64%. However, in absolute terms, current expenditure allocated to public tertiary institutions has increased from CFAF 66.4 billion to CFAF 97

---

billion, mainly due to significant increases in personnel costs at the UAO. In total, 45% of current expenditure consists of personnel costs.

43. Although public tertiary institutions receive the largest share of the public tertiary education budget (53%), the Government also allocates significant proportion (13%) of its budget to private tertiary institutions. Public budget allocations to private tertiary institutions are mainly used for current expenditure (99%), and represent almost a quarter of current expenditure allocated to public institutions. Unit cost analysis (current expenditure per student) shows that the state spends three times more on the public rather than the private sector, with a unit cost of CFAF 1.1 million, whereas on average the state spends CFAF 381,775 for students attending private institutions. It should be noted that budget nomenclature does not make it possible to track personnel costs in private tertiary institutions.
44. The current financing model for higher education in Côte d'Ivoire is based on a mechanism whereby the government finances almost all total expenditure, an outdated model which no longer corresponds to the current realities of tertiary education. With a public contribution of CFAF 229 billion in 2015, or 76% of total expenditure on education, higher education in Côte d'Ivoire is still largely financed by public resources, whereas households contributed CFAF 73 billion in 2015, or 24% of expenditure. With the significant increase in enrollments numbers, a budgeting system based on historically incurred costs per institution does no longer ensure adequate, targeted and efficient financing.
45. Public expenditure in higher education is pro-wealth, mainly benefiting students from better-off households. In fact, benefit incidence analysis shows that public expenditure on higher education is particularly biased toward the wealthiest households, with 82% of expenditure benefiting the two richest quintiles, whereas only 8% of public expenditure benefits the two poorest quintiles.
46. On average, households contribute about twice as much to private as to public institutions, even though wealthier households can contribute two to three times more than poor households. More than a third of their contributions go to tuition fees and other costs. Household expenditure analyses show that on average families' contribution to private institutions is more than twice of their contribution to public institutions. In addition, the significant disparity on contribution to education, between wealthiest and poorest households, means easier access to education resources for affluent students.
47. The Ivorian education model's system of allocating grants and financial aid based on academic merit does not seem to address the need for more efficient targeting of female students or enrollment in academic programs in high potential areas. Comparative analysis shows that scholarships are concentrated in two public universities—Université Félix Houphouët-Boigny (UFHB) and Université Alassane Ouattara (UAO)—with a relatively low

share allocated to female students, only 32% on average. Scholarships are made at the expense of STEM studies (Science, Technology, Engineering, and Mathematics), which does not encourage participation in these programs. Furthermore, the unit cost of scholarship awarded to students studying outside Côte d'Ivoire is 10 times the unit cost of domestic scholarship.

48. Based on the conclusions of the analysis on tertiary education financing, recommendations aim to develop appropriate policies to support the government in its efforts to reform the sector and ensure the system's long-term financial sustainability. They involve the following components:

- a) **Cost control:** Projected enrollment numbers in tertiary education and associated public expenditure highlight the budget pressures the sector will face in coming years. In fact, the projected effect of higher education expenditure on overall education expenditure shows a rise from 25 to 35% in the tertiary education budget. A review of current financing mechanisms to contain and mitigate these budget pressures over the long term is essential, the current budgeting mechanism based mainly on past expenditure by institutions. Moreover, implementing a finance formula would help to control costs, guarantee the objective distribution of financial resources by institution and increase transparency in the allocation of public funds. Finance formulas are usually based on criteria reflecting the volume of activity of institutions. For instance, the number of teaching and supervisory staff, salaries and allowances, enrollment numbers by type of program (LMD), weighted by sector, number of part-time students, year of study, among others. Beyond this regular funding, finance formulas in some countries also include a share of public funds allocated based on performance criteria. These generally relate to results achieved by institutions. Other performance criteria can be negotiated depending on the goals the government wishes to promote. In the spirit of transparency and accountability, publishing these performance contracts and institutions' results in terms of performance indicators could increase the benefits of this practice. Public finance formulas encourage institutions to optimize cost-effectiveness and increase the cost-efficiency of public investment.
- b) **Strengthening links between public resources allocated and graduates' employability of beneficiary institutions:** Creating a job market observatory in higher education institutions would provide regular monitoring of graduates and monitoring among other things the success rate for new intakes in the job market, the employment sectors and the unemployment rates. This information would provide a better understanding of the effectiveness of each institution in responding to the needs of the job market and could serve as an indicator for the performance-based contracts.

- 
- c) **Sharing costs.** The government currently finances almost 76% of total education expenditure for higher education in Côte d'Ivoire. Given the current high share of public expenditure for higher education, other financial sources could be considered to ensure the long-term sustainability of public financing, with a larger contribution from students. For example, the gradual implementation of cost-sharing loans (with government-subsidized loan programs) or reimbursable loans (once the graduate starts working)—a policy being implemented at INPHB (Institut National Polytechnique Félix Houphouët-Boigny), could be gradually expanded throughout other tertiary education institutions. Another avenue to consider would be academic vouchers, or checks, to allow students to select their institution, including a private one, which could encourage the choice of academic programs in high potential areas and reduce costs as well, or increasing school costs in public institutions for those families able to finance studies directly or through loans.
- d) **Diversifying the sources of finance.** Public expenditure is still largely centralized. Guaranteeing greater financial autonomy to institutions, for example by expanding income-generating activities, would reduce their high dependence on public financial resources. To encourage this practice, the government could adopt a matching-funds model either by encouraging the tertiary education institutions to generate proper income by guaranteeing public funds equivalent to funds received from income-generating activities. This model, combined with mechanisms for transparency and accountability, would favor institutions with demonstrated ability to guarantee an efficient use of funds.
- e) **Better targeting of beneficiaries.** Adopting a cost-sharing system raises the question of participation of students from disadvantaged backgrounds to it. The government could ensure a better targeting system to provide scholarships to students from disadvantaged backgrounds so that they would not be affected by this new policy. To promote transparency, these scholarships would need to be based on specific, non-random criteria that would not be subject to ambiguous deliberations. In the same vein, the government could also implement good practices such as the publishing of the beneficiaries' names, as well as their field of study. The government could also consider creating an independent agency to manage tertiary education scholarships and financial aids. Moreover, as stated, academic vouchers could: (i) encourage participation in growth areas (for example, STEM); (ii) allow costs controls; and (iii) target beneficiaries of public resources more effectively. To ensure that students have all the information necessary to make the best choice, all this information would have to be made publicly available, for example by posting an updated student guide online.
- f) **Ensuring greater equity in the use of public resources.** In reality, scholarships are based mainly on academic merit. **However, Target Scholarship could be considered**
-

in order to encourage a greater representation of female students and students from disadvantaged backgrounds. Scholarships could also serve as an incentive to encourage enrollment into STEM subjects. In fact, inequalities in an educational system start early (at primary and secondary level), since many students from poor families tend to drop out at secondary level which explains to a large extent why students in higher education tend to be from wealthier families. To reverse the trend, the government could consider intervention programs that target underprivileged students at primary and secondary level. Any measure aiming at reducing inequalities should be based on an effective assessment system of students' social and economic status.

- g) **Improving cost-effectiveness in public expenditure for international scholarships.** Given the high unit cost of international scholarships and financial aids and the need to improve cost-effectiveness, the government could be revive these programs to increase returns, for instance, by introducing shorter-term international scholarship instead of full scholarship. In addition, the program could consider collaborations, agreed in advance, between national public institutions and graduates upon their return home, thereby promoting and applying their expertise and specialization at local level.
- h) **Improving transparency and accountability mechanisms in public funds allocated to private tertiary institutions.** The education sector depends on the private sector to meet the demand for higher education, but the use of allocated public resources by these institutions is not always transparent. Better transparency and accountability mechanisms could be applied to managing the use of public funds. In addition, the suggested job market observatories could also measure the effectiveness of public resources allocated to the private sector, assessing their capacity to generate the expected results. Requiring private institutions to apply for accreditation of the academic programs they offered could contribute to improving their performance.

#### D. Effective Governance

- 49. MESRS operates the tertiary education system as established in 1995. The heavy strain on the system today has increased MESRS's current workload, thus limiting its capacity to create and implement structural changes that could provide lasting solutions to the following pressures:
  - i) It is experiencing problems managing increased enrollment numbers in public universities;
  - ii) Without prerogatives to allocate resources, it does not have the leverage required to carry out its task, nor the incentive to optimize economic efficiency; and



- 
- iii) It does not have job market data to direct its educational offer, nor indicators on its relevance.
50. The reorganization of MESRS in July 2016 has led to the establishment of: a department for information systems on higher education and research to manage increased demand in terms of both management and academics; and a directorate general for quality and standardization. A General Directorate is managing independently the Scientific Research, focused on establishing eight thematic areas, with very limited resources for research and little synergy with education.
51. The MESRS has been improving the monitoring of private tertiary education, but it does not have the capacity to guide it in the long term. Considered as a secondary area of education, where students who have not been admitted into public education are being sent, the private tertiary education nevertheless educates, and will continue a long-term basis to educate, the majority of Ivorian students. Côte d'Ivoire must accept this and establish the mechanisms for private tertiary education to take its right place and contributes efficiently to the country's development.
52. Relations between MESRS and public tertiary education institutions require supervisory relationships (external governance) with direct administration relationship (internal governance). Moreover, because MESRS has no prerogatives to allocate resources, there is dual supervision of public tertiary institutions, with academic supervision by MESRS and financial supervision by the Ministry for Economy and Finance. The Management Board, whose role is equivalent to that of a board of directors, chaired by the Minister of Higher Education or his representative, represents the dual supervision and it is also primarily responsible for the internal governance of the institutions. The second instrument of internal governance, the University Board, chaired by the President of the university, approve the projects presented to the Management Board.
53. This situation leads to lack of understanding, even frustration, by the university community. Rightly or wrongly, it leads to a feeling that there is incoherence between goals and resources, and that academic realities are not properly considered.
54. However, the principle of contract-based relationships is beginning to assert itself. Performance-based contracts seem today to be the most appropriate tool for transformation and to change practices, highlighting key requirements and redirecting tertiary education toward gradual and shared objectives.
-



55. The following are the main challenges facing the governance of tertiary education and scientific research:
- a) ***Putting students (back) at the heart of the higher education project***, by providing better services for orientation, training and professional integration, that prepare them for their future responsibilities, especially their professional responsibilities within Ivorian society.
  - b) ***Anticipating and managing the increased flow of students*** to support the development of the Ivorian economy and society. This increase is unavoidable and it will have to be absorbed by both the public and private sectors of tertiary education, with improved quality. The bulk of the efforts must be made for undergraduate programs (License) and short-term professional programs (*Techniciens Supérieurs*). Tertiary education should be encouraged to actively generate additional resources. There is an urgent need to address the increase of higher education demand. However, to ensure better participation in STEM in tertiary education, it is important to increase students' participation in science and technology in secondary education.
  - c) ***Remobilizing all tertiary education stakeholders*** by rebuilding social dialogue, restoring confidence among key actors and refocusing them on collective challenges, without calling into question the importance of the reforms and changes to be implemented.
  - d) ***Promoting a result oriented culture and complying with the existing law and regulations in force***, with an objective of collective efficiency, focusing on realism in planning and effective monitoring of implementation at all levels.
56. From the analysis of governance in the tertiary education sector, a first set of measures is proposed. These measures are key to initiate changes and their success is conditioned by a strong political will and implementation capacity. The first set of measures involves four objectives, which are to: (i) restore MESRS's management capacities; (ii) anticipate increased needs; (iii) establish fundamentals that ensure accountable and autonomous public and private tertiary education institutions; and (iv) identify key bottlenecks and establish emergency measures to minimize them.

- 
57. **Restoring MESRS's management capacities** begins by declaring the political challenge posed by higher education and scientific research for Côte d'Ivoire, its development, and its young population. This justifies a high-level government reform program, which would bring dynamism and visibility, energize MESRS and institutions, and facilitate inter-ministerial support for the program. With the recent creation of a new general directorate I for quality and standardization and a directorate for information systems, MESRS is prepared to plan, manage and ensure the implementation of the reform program, by organizing ministry activities around the necessary strategic changes, with a specific action plan that mobilizes all departments and whose implementation is rigorously monitored based on performance indicators. The MESRS could also decentralize the implementation of certain actions. Finally, transferring prerogatives to MESRS for allocating resources in higher education and research would strengthen its authority and the consistency of its action.
58. **One of MESRS's main challenges is to organize, with restricted resources, an appropriate response to the increasing demand and correlate it to the labor market.** The MESRS should ensure the construction of the new universities in due time, fully operational to accommodate and train properly the new students. This mission could be decentralized to other bodies with the required authority and competence, ideally the future university management team.
59. MESRS could ensure that the required resources are available to these bodies and could develop the academic programs for the future universities, using appropriate tools and methodologies for analyzing the labor market.
60. Since public tertiary education does not have the means and the authority to respond to all needs, MESRS must develop a proactive incentive policy to maximize the support of private tertiary education.
61. New economic models could be also developed for public tertiary institutions. The new economic model will encourage institutions to generate additional resources to finance their operations and development. Institutions could, for example, be given the responsibility for technological development as part of a growing relationship with the economic sector.
62. More generally, the research organization could be re-examined to ensure better interaction with tertiary education, especially for engineers, master's, and doctoral students. This is feasible and compatible with the existence of "Poles of Excellence". The creation, in December 2016, of the Support Fund for Research and Innovation (FONARI) is an appropriate step forward for developing a competitive financing mechanism for research project.
-

- 
63. Decentralized tertiary education and research can only operate well if they are based on solid fundamentals. After a long period of chaotic development induced by the crisis, it is essential to reassert the fundamentals and ensure they are respected. Institutional autonomy imposes responsibility; both autonomy and responsibility imply respect by all actors for the law, regulations, and guiding principles.
  64. Students are at the heart of an educational system, and efficiency is assessed by the quality of the services provided to them, from orientation to professional integration.
  65. With regards to orientation, decentralizing students' selection to tertiary institutions could be a measure to boost transparency and for better acceptance of the selection mechanism.
  66. The objective of a quality education system from the program identification to the professional integration of graduates, needs concrete actions by establishing rigorous quality related procedures to be applied systematically. It would be managed by the MESRS's new department for quality and standardization. An independent agency would monitor quality education assurance to be recognized for its legitimacy, integrity, and authority. Monitoring the professional integration of students, for all academic programs, would become a key indicator for tertiary education institution.
  67. In parallel, the ongoing process to establish a performance-based contracts for public financing, gives public tertiary institutions an operational framework combining responsibility with autonomy. It allows MESRS to refocus on its supervisory role, approving contracts and monitoring their implementation. Tertiary education institutions should have an effective board of directors, rather than a management board, where the civil society and the economic sector are clearly represented.
  68. To ensure a better planning system, the number of students in major subjects and by degree must be a key element in the performance-based contracts.
  69. Public tertiary institutions must have the statutory possibility of managing the resources they themselves generate more proactively. One possible solution is adapting specific procedures already in place to allow them to use these resources for their own teaching and research activities.

70. Finally, addressing the challenges in higher education in Côte d'Ivoire will encounter bottlenecks that have major impacts on services delivery. The huge gap in science graduates and science teachers is one example. MESRS must identify these challenges, then propose an ad hoc organization, either ministerial or inter-ministerial, to develop a sustained effort toward their gradual resolution.