REPORT ON THE ANALYSIS OF THE REPUBLIC OF CONGO'S HIGHER EDUCATION SECTOR

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TABLE OF CONTENTS

LIST OF ACRONYMS AND ABBREVIATIONS

ACPE	Congo's Employment Agency
BESP	Basic Education Support Project
CEMAC	Economic and Monetary Community of Central Africa
CIRAS	Army and Security Research's Computer Center
DEP	Directorate of Studies and Planning
DTICS	Directorate of Information, Communication and Statistics Technologies
ECOM	Congo's Household Survey
EESIC	Congo's Survey on Employment and the Informal Sector
EMIS	Education Management Information System
ENAM	National School of Administration and Magistrature
ENS	Teachers' Training School
ENSAF	National Higher School of Agronomy and Forestry
ENSP	National Higher School of Polytechnics
ETVA	Survey on the Transition to Working Life
GDP	Gross Domestic Product
GER	Gross Enrollment Rate
HEI	Higher Education Institution
ICT	Information and Communication Technologies
INTS	National Institute of Social Work
ISEPS	Higher Institute of Physical and Sports Education
ISG	Higher Institute of Management
LMD	License-Master-Doctorate
MEPSA	Ministry of Primary and Secondary Education and Literacy
METPFQE	Ministry of Technical and Vocational Education, Skills Training and Employment
MHE	Ministry of Higher Education
NDP	National Development Plan
NER	Net Enrollment Rate
ONEMO	National Office for Employment and Labor
PESD	Project Employability Skills Development
PSED	Project in support to Economic Diversification
SE	College of Economics
SHS	College of Health Sciences
SL	College of Law
SLHS	College of Humanities
SST	College of Sciences and Technologies
UDSN	Denis Sassou Nguesso University
UMNG	Marien Ngouabi University
UNESCO	United Nations Educational, Scientific and Cultural Organization
WDI	World Development Indicators

LIST OF TABLES

LIST OF FIGURES

EXECUTIVE SUMMARY

1.   **Congo's higher education does not appear to be aligned with the country's development objectives**. It is also out of step with the development dynamics in Congo's education sector as a whole. It faces two major challenges: (i) align its training supply with the needs of the labor market, mainly in promising economic sectors identified as growth levers, (ii) improve its internal and external efficiency in order to meet the growing demand for higher education and to ensure effective professional integration to its graduates.

2.   **Congo, as a country that aims for emergence by 2025 and has opted for inclusive and sustainable development, is currently implementing a National Development Plan (NDP- 2018-2022) under which economic diversification and the development of human capital are two of the three pillars**. Actually, Congo's economy remains undiversified and dependent on oil revenues, despite a significant increase of some non-oil sectors' contribution to growth since 2013, including transport, telecommunications, construction and public works, agriculture and livestock.

3.   **The Government of Congo acknowledges that its diversification policy must go through the development of sectors that it identifies as with high potentialities for growth and job creation, namely agriculture, tourism and processing industries**. However, the lack of qualified labor is one of the major obstacles to these sectors' operations. Indeed, it is acknowledged that the education system does not meet the needs of the job-creating private sector. According to the study of the agribusiness and agroforestry sub-sectors carried out by the Project in support of Economic Diversification (PSED) as part of developing an economic diversification strategy, there is a stark lack of qualified labor both at the level of production, processing and trade [fn2: Project in support of Economic Diversification - PSED]. The members of UNICONGO, employers and the National Office for Employment and Labor (ONEMO) repeatedly mention the difficulties encountered by graduates in finding a job as an illustration of the poor quality of education in Congo and in particular at the higher education level.[1]

4.   **Yet, higher education is meant to play a key role in the country's economic and social development policy**. The availability of a highly qualified national workforce is necessary to ensure the orientation, supervision and development of new economic sectors with high growth potentialities while limiting the use of foreign labor, in order to better fight against unemployment. The processing industry in particular needs higher education so it can have available high-level, qualified executives capable of supporting the technological leaps involved in transitioning from a weakly industrialized economy to an economy that incorporates modern, and often digital, means of production to achieve competitiveness.

5.   **Access to higher education is well developed but remains little oriented towards scientific fields**. With an enrollment rate that increased from 432 to 1,104 students per 100,000 inhabitants respectively between 2008 and 2017, the coverage is above the average for African countries of 733, while being below that of Cameroon (1,620), Benin (1240) or Ghana (1510). Access to the higher education has gone through significant changes over the past fifteen years in the Congo.[2] The number of students, which was about

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[1]Restructured in November 2019 with the creation of two entities: the Congo's Agency for Employment (ACPE) and the National Fund for Employability and Employment (FONEA)
[2]Here, access being the "demand", the number of young people accessing higher education, although the receiving establishments do not have the accomodation capacities required.

15,000 in 2005, more than tripled to 55,025 by 2016. Today, private establishments welcome more than one in three students. The higher education Gross Enrollment Rate (GER), estimated at 12.7 percent also exceeds the average of economic comparator countries. Significant resources were mobilized for the sector over the 2005-2016 period. However, Congo's higher education system is under strong pressure from high school graduates whose number, although fluctuating widely between 2010 and 2016, increased on average by 1,250 *baccalauréat* holders per year, from 11,036 in 2010 to 20,679 in 2016. This situation is exacerbated by the low internal efficiency of Congo's higher education as shown by the more rapid growth in the number of students compared to that of the number of *baccalauréat* holders over the same period. The low average success rate, at 43 percent in 2017, in the country's largest higher education institution (the Marien Ngouabi University) confirms this observation. In addition, the governance of the system, whose major flaws include strong centralization, an inappropriate resource allocation model and ineffective budgeting practices, limits its growth potential and consequently prevents it from aligning with the actual and planned growth of the education sector, ultimately preventing an effective contribution of the sector to the country's development.

6. **In 2013-2014, the number of students in higher education stood at 44,659 students, including 29,572 in public higher education and 15,087 in private higher education**. According to forecasts of the education sector strategy, the upper secondary population (16-18 years) will increase from 248,170 students in 2014 to 326,280 students in 2025, which would likely put increasing pressure on the higher education system in the future. According to data from the statistical yearbook (2016-17) of higher education that was prepared in 2018 with the support of the World Bank-funded Project in support of the education system improvement (PSESI), total enrollment in higher education currently stands at 55,025, including 36,838 in the public sector and 18,187 in the private sector. This represents an increase by 10,366 students between 2014 and 2016. Students admitted to competitive examinations in public higher schools and higher education institutes in the first year of university automatically benefit from scholarships. For college students, scholarships are only awarded from the second year, after successful completion of the first year in the second year without repeating. In 2017, 8,790 scholarships were allocated to a significant number of high school graduates who entered higher education in a foreign country.

7. **In 2013, public resources injected into the education sector amounted to 5.5 percent of GDP**. Between 2015 and 2018, education expenditure as a percentage of GDP showed a downward trend (from 4.6 percent in 2,015 to 3.3 percent in 2018). To achieve the objective of the 2015-2025 sector strategy, the funding will have to be increased to at least 6 percent of GDP, a generally accepted standard, for the entire sector with inter and intra sector trade-offs. Increasing this funding requires introducing innovations and efficiencies. As this regard, a vigorous public-private partnership policy could be one solution to consider. Another solution would be to encourage higher education institutions to mobilize more funds and increase their accountability in the execution of their expenditures.

8. **For nearly a decade, the Government of the Congo has demonstrated its will to develop and modernize its higher education system**, in particular through the development of a general higher education policy project in 2014, including major structural reforms and the launch of the ambitious project of building of a second public university in the country's capital in 2016 to increase the accommodation capacity of the only public university currently in operation. The increase in the number of students has come along a small increase in the number of teachers. It is acknowledged that the quality of teaching conditions has deteriorated in recent years, especially at UMNG. This deterioration is likely to continue in the years to come as a total of 230 teachers would retire between 2017 and 2023, accounting

for 26 percent of the current UMNG faculty. It is also acknowledged that there are poor linkages between the training supply, research and the socio-economic needs of the country and local communities.

9.   The draft general policy drawn up by the Government of the Congo in 2013 aims to increase access, especially for the most disadvantaged, to improve quality and to strengthen the system's governance in order to improve its relevance and effectiveness. The policy prioritizes improving the quality and effectiveness of teaching. Higher education institutions will have greater autonomy, and stronger incentives to develop private higher education is envisaged. One of the priorities consists also in largely deploying information and communication technologies (ICT) and distance learning with the development of the network of university institutions.

10.   **As such, higher education must hold an important place in the country's development policy and strategy.** To support the diversification policy as well as to promote employment, a quality higher education aligned with the work world is needed and its expansion must be controlled. To meet this challenge, a number of actions based on the education sector strategy will have to be carried out: (i) offer quality training and direct the flow of students to scientific and professional fields; (ii) strengthen partnerships with the productive sector; and (iii) ensure a better distribution of the training supply over the country. Under the strategic vision, the higher education meets the training needs of qualified and creative executives who are open to technological developments and innovation and will contribute to the country's future social and economic development.

11.   **The key reforms that would put the sector on the track of its development will involve** (i) improving the governance of the sector with the support of strengthened ministerial structures ministry that have steering and needs analysis capacities, (ii) and adopting a policy to promote private higher education.

12.   **Promotion and operationalization of the quality assurance system**. Following the promulgation of the memorandum 056/MES-CAB of February 16, 2013, a draft general policy for quality assurance in higher education was drawn up. This draft was approved and adopted by the second ordinary session of the National Council for Higher Education (CNES), held on December 16 and 17, 2013 in Brazzaville. In February 2018, the Ministry of Higher Education set up a "higher education quality assurance project", which requires support to be effectively operational.

13.   The 2019 coronavirus disease (COVID-19) pandemic is having significant adverse effects around the world, both in terms of direct impacts on health, education and the economy, and indirect impacts resulting from prevention policies, namely lockdowns and restrictions on population movement. Thus, on March 18, 2020, the Government of Congo made the decision to close all schools and universities throughout the country. The closing of university institutions also resulted in the suspension of classes and exams within higher education, without no support measures provided to ensure learning continuity. While two other sub-sectors of education (general education and technical and vocational education) have been able to put in place some approaches to ensure learning continuity, higher education failed to provide teaching and learning to its students due to the lack of equipped structures and teachers trained to provide distance education through information technology.

Recommendations

Strategy, governance and legal framework

14.   Urgently revise, with the involvement of all stakeholders, the higher education development policy document in order to align it with the objectives of the National Development Plan (NDP, 2018-2022) as regards human capital development, in line with the vision of the current administrative and institutional organization of higher education in terms of academies and university centers.

15.   Strengthen the capacity and mandate of the MES in policy formulation and sector performance monitoring.

16.   Prepare a quantified sectoral program supporting the general higher education policy in line with the vision of Strategic Focus #3 of the new education sector strategy (2021-2030, drawn up from the revision of 2015-2025 strategy) and based on a mapping of universities aimed at improving efficiency, quality and access. Under the sectoral program, the training-research-development continuum is open to the economic world and serves the socio-professional integration of young people, the needs of local communities, and the development of the country.

17.   Set up an efficient Education Management Information System (EMIS) in order to have a good database, as needed for the sub-sector management and policy decision-making.

18.   Provide higher education with an "integrated" database system facilitating the online registration of new *baccalauréat* holders as well as those already registered as part of their re-registration.

19.   Improve the governance and management of the sector by adopting legal instruments that grant authority to the supervisory authorities and central structures, provide them with effective means to steer the sector and grant more autonomy to higher education institutions (HEI) with governance bodies to ensure such autonomy. Autonomy should come along with accountability for HEIs that will have to report on their results against resources made available to them. A performance-based contract system will be established between the Government and each HEI. A pilot phase could be initiated before scaling up.

20.   Advance more quickly in the implementation of the quality assurance system with clear and well-articulated objectives and roadmap.

21.   Define a policy for the promotion of private higher education and the development of public-private partnership, including, incentives for the mobilization of private finance, possibilities to raise funds from the productive sector, a mechanism of access to credit for private promoters, financial support for certain aspects of private establishments' operations.

22.   Redefine the institutional framework for the organization and management of *baccalauréat*; restore and strengthen the information and guidance-counseling function for high school graduates.

23.   Revise the texts and criteria for granting scholarships to ensure more equity among students and to put a particular emphasis on girls and studies in scientific and technological fields.

Improve the quality of the supply and its relevance to the labor market needs.

24.   As part of the training-research-development continuum, revise curricula for better support to technical and technological education and in such a way as to train at the high levels of qualification needed by the economy, such as the advanced technicians and engineering levels.

25.   Improve the training supply in promising sectors (construction, mining, transport and logistics, hotel and catering, forestry, agribusiness) by drawing inspiration from the global value chain analyzes carried out in the framework of the PSED, as well as the analysis that will be carried out in the framework of the Project for Skills Development for Employability (PSDE). Have an up-to-date trades skills list.

26.   Define an ICT development program aimed at strengthening the capacities of teaching and supervisory staff, improving information and services to students and promoting distance education.[3]

27.   Have the HEIs adopt a policy and a framework for welcoming new high school graduates to facilitate their integration into higher education.

28.   Develop and implement a teacher training plan and supplement it with a recruitment plan for qualified non-permanent teachers who would benefit from this teacher training.

Streamline and improve the financing system.

29.   Redefine the budget allocation system for HEIs and bring it into line with the contracting policy. Budgets could include a fixed component and a variable part that would be mobilized according to the performance achieved by each HEI.

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[3] This is especially relevant in the current COVID-19 context that requires teaching methods in line with health rules aimed at preserving the lives of students and teaching staff.

1. Introduction

30.   The economy of the Congo is still dominated by oil development, which, in 2013, generated 77.1 percent of its budget revenues and 86 percent of its export revenues. The Republic of the Congo has embarked on a policy of economic diversification whose success will largely depend on the quality and quantity of skilled workforce available to the country.

31.   To achieve such diversification, the Government must close the labor deficit in sectors that will support its diversification policy and the sustainable and inclusive growth wished from it. These sectors need a well-trained workforce to perform well and the economy needs them to become competitive. It will also boost job creation. Even if the limited nature of the labor market could pose a constraint, the point is to achieve an optimal mix of training supply, in line with the emerging needs associated with a flexible policy for study program development. Creating synergy between the different components of the education sector, on one hand, and between the education sector and the professional world, on the other hand, therefore is a challenge that needs to be addressed by the education system of the Republic of Congo, especially as it comes to higher education.

32.   As shown by the document on "The general policy for higher education", this sub-sector needs to be revitalized to contribute to addressing the many challenges that the country needs to take on, especially to provide its youth with a better future and prepare the Congo to international competition.

33.   This document is intended to provide the basis for discussion between the Government and the World Bank regarding the definition of higher education reform policy and strategy elements and identification of potential supports to the development of the sector and its alignment with the new education sector strategy (2021-2030), the new vision of higher education, and the growth and economic diversification strategy that the country has embarked into.

34.   This document reviews higher education in the Republic of the Congo and looks into its links with the professional world and the conditions for creating an innovation framework for wealth and job creation. It is derived from a series of field missions that allowed for meeting education sector actors from all levels and, especially, the team from the Ministry of Higher Education in charge of preparing the new sectoral development policy, the managers and staff of the Marien Ngouabi University, promoters of private higher education institutions, employers and a few private companies.

35.   A collection of statistical data, targeting a few large institutions of the Marien Ngouabi University, was conducted to remedy to the severe lack of information at certain levels of the country's education system[4]. Some studies on employment issues in the Republic of the Congo were used, as well as the activity reports of professional groups and public bodies in charge of graduate integration.

36.   The document is structured around six topics. It first discusses the higher education supply in the Congo. Then an analysis of the access to, and quantitative, qualitative, institutional, and financial aspects of higher education in the Congo is provided. Lastly, its linkages with the labor market are addressed. The document identifies the key issues and challenges faced by the sector and expresses recommendations for addressing these demand, quality, equity, and access challenges.

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[4] This targeted data collection, conducted in 2015, did not allow for an in-depth analysis of system quality. To fill this gap, the report was revised with the 2016-17 statistical data from MHE, 2020.

2. Background

37.   The Republic of the Congo ranks among middle-income countries, mainly thanks to its large oil revenues and the small size of its population. However, the country still struggles to stimulate the basis for a diversified economy that creates jobs, especially for young people. It also still struggles at improving its social indicators, mainly in health and education. This is the reason why the objectives of the Strategy Document for Growth, Employment and Poverty Reduction (DSCERP, 2012-2016) and of the current National Development Plan (NDP, 2018-2022) aim to intensify the Congo's efforts for economic diversification through the development of its human capital.

38.   Despite the relative political stability observed in recent years, a high rate of youth unemployment in urban areas (25 percent according to the Survey on Transition to the Work Life or ETVA) continues to characterize the country and it remains even higher among women. Higher education is to play a key role in the country's economic and social development policy. The system therefore needs to prove its relevance to economic growth and development. That way, it will contribute to preparing the country's youth to a better and productive future.

39.   According to the World Bank report, *Economic Situation in the Republic of Congo, 2018,* the economic growth and public resources of the Congo remain extremely vulnerable because they are dependent on oil prices which are subject to fluctuations, constituting a major external risk over the next decade. Past this dependency, analyses of adjusted net savings integrating measures of the consumption of fixed capital, the positive contribution of education expenditures, the depletion of natural capital (energy, minerals, and forest resources), and the damage caused by pollution, show that the Congo has been depleting its stock capital since, at least, 1990[5] and the Congolese growth model is not sustainable. The economy is not growing enough to meet the country's development goals and, at the same time, social indicators remain at low levels. In recent years, growth failed to reach the level required for the country to achieve its development goals by 2025. In fact, between 2012 and 2016, the country's economic growth averaged 3.5 percent, while the average growth rate needed (to achieve the country's development goal) sits at 8.5 percent for the period running from 2012 to 2016, according to the previous NDP. In addition, over the same period, the average growth rate of real GDP per capita amounted to 2.2 percent, while the required rate ranges between 4.5 percent and 6.5 percent. This weak growth is largely due to the under-performance of the oil sector. The Government of the Congo should consider the fact that its lack of economic diversification has, so far, been a factor undermining the performance of its economy and making it excessively sensitive to oil production and price fluctuations on the global market.

40.   During the 2011-2013 period, the non-oil sector achieved an average growth rate of approximately 9 percent, which is much higher than the rate of 5.4 percent recorded over the 2005-2009 period. Over this period, all non-oil sectors achieved positive growth. However, it needs to be strengthened and sustained. In 2013, the booming sectors, showing high growth rates were : (i) transport and telecommunications; (ii) construction and public works; and (iii) agriculture and livestock; the impressive growth of the non-oil sector can be attributed to the positive effects induced by public investments in infrastructure.

41.   The sectors selected in the previous NDP (2012-2016) for their potential to increase economic diversification are the following: (i) agriculture, livestock, and forestry (ii) manufacturing industry, (iii) construction and public works, (iv) transport and telecommunications, (v) trade, catering, hospitality, and

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[5] *World Bank, Economic situation in the Republic of the Congo, 2018*

mining. Indeed, these are the sectors that for the most part, are already rooted in economy, and can directly benefit from the results of public investments in infrastructure.

42.   However, despite this progress, improving social indicators remains a major challenge. Although notable progress has been made in developing access to basic education, efforts still need to be made to improve quality. In 2011, the gross enrollment rate in primary education amounted to 123.7 percent and rose to 107.8 percent in 2018, and parity between girls and boys was reached. On the other hand, the completion rate that was estimated at 80.3 percent in the same year, dropped to 75 percent in 2018. The 2007 PASEC results rank the performance of the Republic of the Congo as weak, as compared to other countries in the sub-region, such as Cameroon. The pupil retention rate is quite low and the repetition rate very high (around 25 percent). The percentage of repeaters is also high in secondary schools, increasing from 18.4 percent in lower secondary school and 17.2 percent in upper secondary school in 2012 (Review of public expenditures in the Education sector. World Bank, 2014) to 19.9 percent and 27.2 percent in 2018. The *baccalauréat* success rate, which amounted to 49.3 percent in 2009 increased to 28.2 percent in 2013 and 27.7 percent in 2018. At the Marien Ngouabi University (UMNG), the promotion rate from first to second year (L1 to L2) remains low, especially in schools with large enrollments, where, in 2013, it ranged from 28.3 percent at the College of Sciences and Technologies to 47.5 percent at the College of Humanities. According to data from the 2016-2017 statistical yearbook of the Ministry of Higher Education, the promotion rate from first to second year in public schools amounts to 39.4 percent.

43.   According to the forecasts of the education sector strategy, the upper secondary school-age population (16-18 years) will increase from 248,170 students in 2014, to 326,280 students in 2025, translating into a future pressure on the higher education system. In 2013-2014, the numbers of students enrolled in higher education stood at 44,659 students, including 29,572 (66.2 percent) in the public sector and 15,087 (33.8 percent) in the private sector. In 2016-2017, this number increased to 55,025 students, including into 36,838 (66.9 percent) in the public sector and 15,087 (33.1 percent) in the private sector, and the success rate at academic exams amounted to 43.2 percent in the public sector and 79.3 percent in the private sector.

44.   According to the results of the last general population and housing census (RGPH, 2007), the total population is estimated at 3,697,490 inhabitants, with the active population ages 15 to 59 making up 57 percent of the total. The population under 15 makes up 39 percent of the total population. The number of jobs created in the modern sector in 2010 amounted to 130,161, including 82,036 in public service, 9,878 in State-owned enterprises and 38,247 in the private sector (Statistical Yearbook of the Congo for 2010). The percentage of higher education graduates in the labor force in 2005 and 2011 amounted to 2.7 percent and 9.8 percent, respectively (estimates derived from ECOM).

45.   The education sector stands at a major turning point as the Government, after adopting its first sector strategy (2015-2025) in late June 2015, moves, in December 2020, to adopt its revised version (2021-2030) that covers the next decade and integrates the higher education development policy to align on the economic and social development challenges of the country.

46.   The employers interviewed all agreed that the quality of education in the Congo is low, especially in higher education, providing a potential, partial explanation for the difficulties in graduate integration. This is confirmed by the empirical evidence available and collected during this work. Preparation of a development strategy for priority subsectors for economic diversification has started. According to a study of the agribusiness and agroforestry subsectors conducted in this context, the generalized lack of skilled

labor poses a huge problem, whether at the level of agricultural production, processing, or trade (Economic Diversification Support Project - EDSP).

47.   The informal sector with its low productivity absorbs a large part of the existing workforce. According to the 2005 survey, nearly 77 percent of the national population works in the informal sector. The majority work in trade, still, the unemployment rate remains high, amounting to approximately 19 percent in 2005. The employment and informal sector study (EESIC) conducted in 2009, in Brazzaville and Pointe-Noire, records an unemployment rate of 16 percent [fn7: Quoted in the World Bank Growth and Employment study report, dated September 2011.] that mainly affects the young population living in urban areas. However, the 2011 Growth and Employment Study notes an upward trend in job creation in recent years, but detailed data is lacking. The education system is pointed as an underlying factor of unemployment for failing to meet the needs of the job-creating private sector. Only a quarter of the students that make it into higher education start technical and vocational studies in 2011, mainly restricting employment prospects to public administration or teaching [fn8: Growth and employment study - From jobless growth to inclusive growth - Republic of the Congo September 2011].

48.   It is acknowledged that the success of the diversification policy is reliant on the development of sectors with growth and employment potential in the private sector, as mentioned earlier. However, the lack of qualified personnel features among the major barriers to the operation of these sectors.

3. Higher education supply

49.   Over the past decade, higher education has expanded both in terms of student enrolments and resources injected into the sector. Enrollment increased from some 15,000 students in 2005 to 50,025 in 2016 (including 39.9 percent of girls), and private education, which represents 33 percent of the enrollment, really expanded. To be admitted in the different (public and private) colleges, vocational schools, and institutes that make up the higher education supply, students must hold the *baccalauréat* (equivalent to a high-school certificate) or equivalent diplomas. According to 2019 data, the higher education supply is made up of 54 institutions (colleges, institutes, schools) including 41 private institutions. The 13 public institutions are grouped under three umbrella institutions, namely the Marien Ngouabi University (UMNG), the National Institute of Social Work (INTS) and the computer training center of the Army and Security Research's Computer Center (CFI-CIRAS). UMNG is comprised of 11 institutions and accommodates two thirds of the students (35,118), whereas the remaining third is accommodated by private institutions. The three main non-scientific or technical study programs (College of Humanities, College of Law, College of Economics) of UMNG concentrate 63 percent of enrollments, when national policies prioritize orientation into scientific study programs. The Denis Sassou-N'guesso University in Kintelé, which focuses on scientific and technological study programs and scheduled to be inaugurated in February 2021, should contribute to the diversification and improvement of the public higher education supply. Private institutions need the accreditation of MHE to operate. MHE assesses them against an analysis of precise specifications regarding the governance of the structure, the diplomas of permanent teachers, and the teaching resources made available to students.

50.   Since 2013, the Government of the Congo has expressed its will to develop its higher education, mainly through the development of a general higher education policy project and construction of a new public university, the Denis Sassou Nguesso University (UDSN). In addition, the Government of Congo aspires to set up the Ouesso Inter-States University, the Pointe-Noire Polytechnic University, and a University of Agriculture in Sibiti.

Higher education with low focus on scientific training programs.

51.   The general higher education policy project provides for the creation of Department University Centers (DUCs) offering training in line with local economic activities under development. UDSN should start off by accommodating three components transferred from UMNG, namely the College of Sciences and Technologies (CST), the National Higher School of Polytechnics (ENS) and the Higher Institute of Physical and Sports Education (ISEPS). Plans for UDSN also include the creation of a college of construction and public works, as well as a college of telecommunications (cf. Annex 1). However, no assessment of the investment planned for these ambitious projects is available, much less an assessment of their implications for the budget that the Government may have to provide.

52.   An assessment of the dynamics of the current higher education system of Congo, conducted through an analysis of its context, relevance, internal and external efficiency, and institutional and financial constraints, is needed and should allow for identifying proper grounds for its development, as well as the reforms and required support measures.

53.   The lack of information and management system, both at the level of the sector and job market, severely limits the availability of reliable and current data. Consequently, an exhaustive analysis of the effectiveness of the system could not be conducted. Nevertheless, the use of a few statistical sources, as well as the conducting of a data collection limited to the undergraduate schools of UMNG that accumulate

the largest numbers, was conducted to help analyze this sub-sector. The MHE statistical yearbook produced in 2018 for the 2016-17 academic year thus allowed for filling some of the gaps of statistical data required by the analysis.

54.   The results of the partial analysis of the higher education supply in the Congo conducted consequently are discussed herein, with a special focus on the issues of access, equity, quality, and governance of the system and, lastly, its financing.

3.1. Public supply

55.   In 2016, 36,838 students, i.e. 66.9 percent of the total number of students enrolled in higher education, were attending a public institution. Since 2014, public higher education in the Congo has been offered by four institutions falling under different administrative authorities, namely the Marien Ngouabi University (UMNG), the Army and Security Research's Computer Center (CIRAS) of the National Institute of Social Work (INTS) and the Central Africa Inter-State Center for Public Health (CIESPAC). With the exception of INTS, headquartered in Ignié, Department of Pool, these institutions are all located in Brazzaville.

56.   UMNG, the only public university currently operating in the Congo (that of Kintelé has not yet started operations), has MHE as line ministry and, through the eleven colleges, schools, and institutes that make it up, provides general and vocational training in the main areas of education: law, humanities, science and technology, engineering, etc. Over 35,118 students were enrolled at UMNG in 2016, which is equivalent to slightly more than two thirds of the number of students in the Congo and nearly 98 percent of public students. UMNG therefore stands as the country's main higher education institution, whether it comes to enrollment, or infrastructure and academic human resources. CIRAS falls under the Presidency of the Republic of the Congo and has been offering vocational computer studies, since its creation in 1999. It takes in between 250 and 450 learners every year. Lastly, INTS, the youngest of the four public higher education institutions in the Congo, trains social workers. The annual numbers of its learners have ranged between 58 and 159 since it opened in 2014. It has two joint line ministries, the Ministry in charge of social affairs and MHE. Lastly, CIESPAC sets itself apart by the fact that it falls under the authority of OCEAC, a specialized agency of CEMAC. CIESPAC offers initial and in-service vocational training in the health sector (public health, health service management, health economics). In the following sections, analyses concerning public higher education will be limited to the case of UMNG which welcomes nearly all higher education students and for which data are available.

57.   There are two ways of getting admitted in first year at UMNG - either by qualification or entrance examination. Qualification-based admission applies to the components of UMNG offering general training, namely the College of Law (FD), the College of Humanities (FLASH), the College of Economic Sciences (FSE) and the College of Science and Technology (FST). Entrance examination-based admission applies to the seven other components of UMNG. These components offer vocational or professional training and are the National College of Administration and Magistrature (ENAM), the Teachers' Training School (ENS), the National Higher School of Agronomy and Forestry (ENSAF), National Higher School of Polytechnics (ENSP), the College of Health Sciences (FSSa), the Higher Institute of Physical and Sports Education and the Higher Institute of Management.

58.   As in 2010-2011, colleges still hold the highest enrollment in 2016-2017. Indeed, three quarters of the students (79.4 percent) attended a college, against 15.0 percent a higher school and 5.6 percent an institute. The same distribution trend was observed in 2016-2017 with 83.5 percent of students enrolled in colleges, 12.6 percent in schools and 3.8 percent in institutes (Annex 2, Table 8). Also, a decline is noted in the number of students working on a *licence* and a drop in the number of those working on a master and Doctorate. In 2016-2017, 29,178 students enrolled in the public sector were working on a *licence*, as compared to 22,149 in 2013-2014, 6,653 on a master, against 6,618, and 821 on a Doctorate versus 666, respectively (Appendix 2, Table 9).

59.   In colleges with large enrollments, the overall success rates in 2011 ranged from 56.8 percent in literature to 24.2 percent in science and technology. For the 2012-2013 academic year, the success rate of students working on a *licence* 1 and 2 in colleges (exclusive of the College of Health) respectively amounted to 41.7 percent and 49.5 percent. This accounts for the decline in enrollment in the first cycle. The success rate improves as the students move further up the cycle. Table 16 in Annex 2 sets forth the details of the students admitted per college and gender. In 2016-2017, promotion rates from L1 to L2 and from L2 to L3 in public institutions remained low, namely 39.4 percent and 38.8 percent respectively.

Figure 1. Breakdown per gender and type of institution of students enrolled at UMNG in 2011 and 2014.
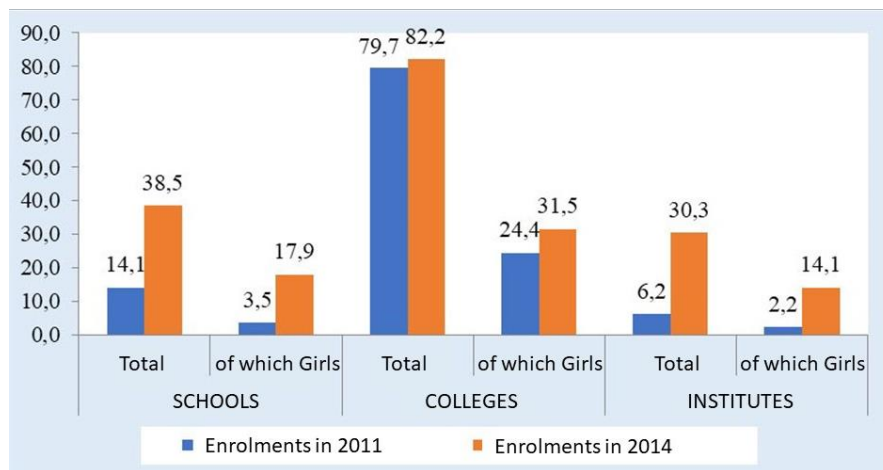
Sources: Statistical yearbooks of higher education, 2010/2011 and 2013/2014

Figure 2. Distribution of students enrolled per sector and gender from 2014 to 2017
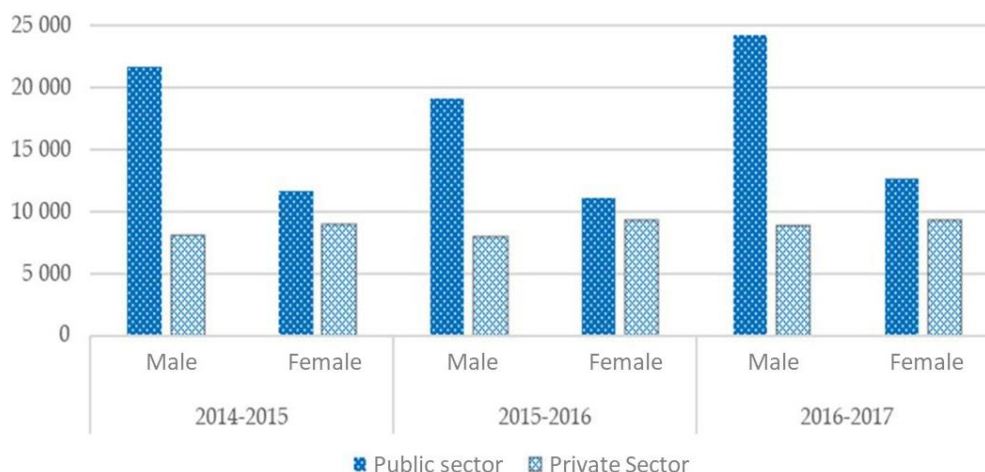
Sources : Current statistical yearbook of higher education, 2016/2017

3.2. Private supply

60.   Since 2010, the opening and operation of private higher education institutions have been controlled by MHE. As such, in 2016, the country counted 46 private establishments, mostly located in Brazzaville and Pointe-Noire, of which 2 had final accreditation and 41 had provisional accreditation.

61.   In 2016, private institutions had an enrollment of 18,187 students, including 9,350 girls (51.4 percent). This number made up a third of the total enrollment in higher education, calling special attention to private higher education. The number of new entrants to the private sector was equivalent to 57.6 percent of the number of new entrants to the public sector and 36.5 percent of all new entrants to higher education, totaling 6,446 students against 11,175 in public institutions. Students holding a general education *baccalauréat* are 2,745 in number, 3,400 hold a technical education *baccalauréat*, and 301 hold other qualifications.

62.   From 2010 to 2016, the private sector supply therefore more than doubled, increasing from 7,652 students to 18,187. The large majority of private sector enrollees, i.e. 17,790 of them, are working on a *licence*, while the rest, making up 2.1 percent of total private institution enrollment, are working on a master. Among the students working on a *licence* in 2016-2017, 3,332 were repeaters, including 1,650 girls, 1,528 were repeating their first year, and 48 repeaters were working on a master. No doctoral studies are offered.

Table 1: Student number trends in the private higher education sector between 2009 and 2016.

Year	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017
Total	7,652	12,903	14,704	13,209	15,087	17,076	17,308	18,187
Proportion of girls	3,862	6,469	7,701	7,139	7838	8,967	9,318	9,350

Sources: DEP / MHE 2015 survey and Higher Education Statistical Yearbook 2016-2017.

63.   The Government authorizes the opening of master study programs selectively but prohibits private institutions from starting doctoral study programs. It doubts private capacity to provide this level of training, but then again, the Government does not have an effective accreditation system. However, these schools have very few permanent teachers.

64.   Internal efficiency is extremely low with high failure rates in first and second years. Lastly, monthly tuition fees range between XAF 40,000 and 65,000 and training is concentrated around the business study program with very little diversification.

3.2.1. Regulation of the private sector

65.   The Government has embarked into a process for revising its accreditation and monitoring system for private higher education institutions, which, in 2016, were 46 in number. In this context, it made a ranking of existing institutions: those granted a final accreditation (2), those granted a provisional accreditation (41), and those to close down (3) for failing to meet the minimum conditions required to practice in the sector. In 2019, out of the 59 private institutions inventoried, 15 had final accreditation, i.e. an increase of 4 to 25 percent in the proportion of private institutions granted final accreditation, as compared to 2016 . These figures suggest strong will among promoters to achieve compliance.

66.   Nevertheless, this situation seems to create a two-tier system in the private sector. Moreover, the measures taken to address this distortion are unclear. Accreditation criteria will require in-depth analysis against the current context and development prospects of higher education, and there is need to define a support policy to promote these institutions at the required standards.

3.2.2. Support to and promotion of the private sector

67.   As regards institutions under provisional accreditation, it appears that promoters are self-financing some of the smaller investments and considering to expand their institution, but struggle to access credit. The provisional accreditation delivered to most private institutions prevents them from considering a long-term development project.

68.   Yet, potential exists that would justify the development of a policy promoting and supporting private higher education by the Government. Indeed, most promoters are education professionals. They adhere to the quality assurance system that the Government is going to set up. Some have a partnership with foreign reference institutes for the development of pathways, education and certification (recognition and accreditation of diplomas). Lastly, they organize themselves into a network that deserves support and is a potential platform for dialogue to promote public-private partnership.

4. Access to higher education

69.   Access to higher education grew at an average annual rate of 10 percent between 2008 and 2011. The gross enrollment rate (GER) in higher education, which amounted to 10.1 percent in 2005, reached 22.3 percent in 2011. As for the net enrollment rate (NER), it increased from 2.3 percent in 2005 to 8.5 percent in 2011 (Annex 2, Table 13).

70.   Enrollments at UMNG nearly tripled in 10 years, increasing from 10,640 in 2003-2004 to 29,249 in 2013-2014. As such, 65.5 percent of students in the Congo were enrolled at UMNG in 2013-2014. The private sector, which barely existed 20 years ago, had 15,087 enrollees, i.e. 33.8 percent of the total enrollment in 2013-2014. In 2016-2017, UMNG had 35,118 students enrolled and the private sector 18,187, i.e. respectively 63.8 percent and 33.1 percent of the 55,025 higher education students.

Figure 3. Gross Enrollment Rate in higher education (%) in 2005 and 2011.
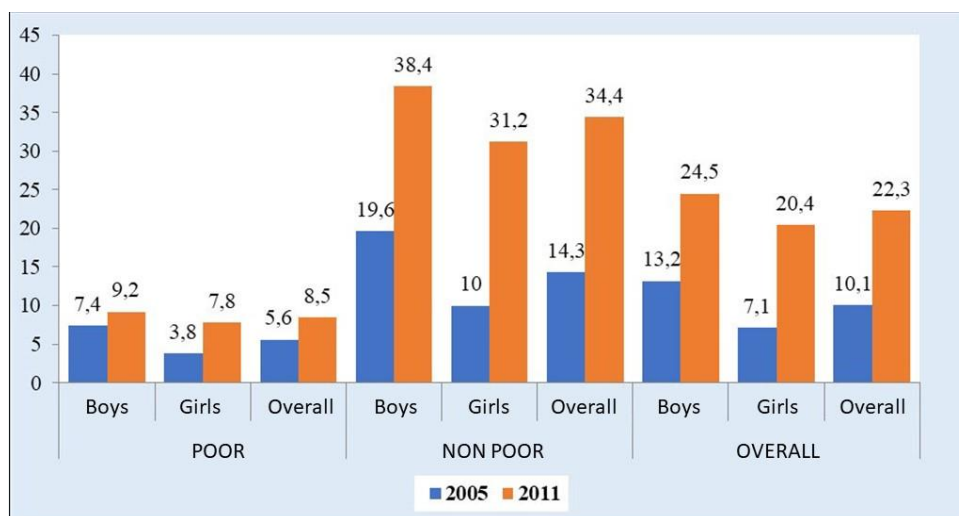
Source: Authors' calculations based on 2005 and 2011 ECOMs.

71.   The increase in the annual number of *baccalauréat* holders joining the higher education system is the main factor accounting for this rapid growth of the student population. The decline in enrollments at UMNG due to its low internal efficiency, as well as the development of private institutions, are also contributing factors of this growth. From 2010 to 2016, the number of *baccalauréat* holders increased from 11,036 to 20,679 at an annual average increase of 11 percent. The number of new entrants to UMNG amounted to 9,206 in 2013-2014 and to 11,175 in 2016-2017 (Table 10 in Annex 2).

Figure 4. Number of students enrolled at UMNG from 2003-2004 to 2017-2018.
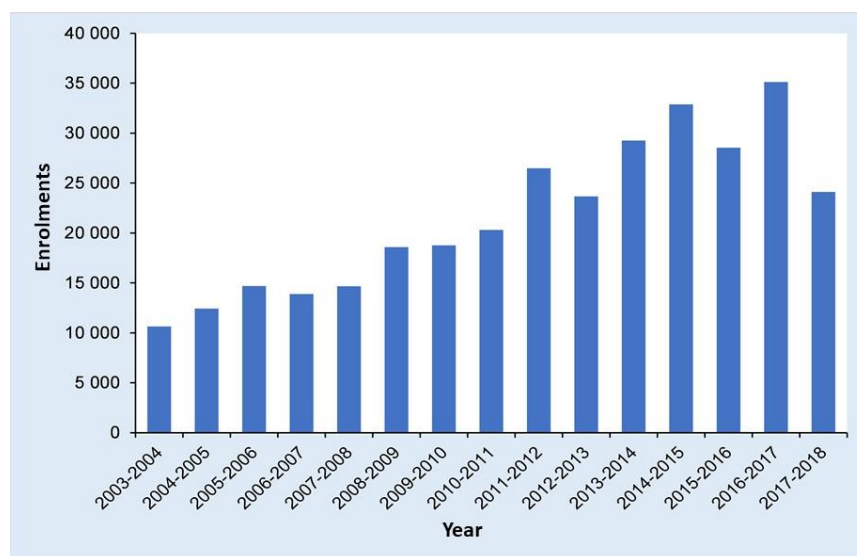
Source: UMNG/Department of Education and Examinations (2020)

4.1. Demand for and transition to higher education

4.1.1. Academic and demographic characteristics of students

72.   UMNG is open to holders of a general or technical education *baccalauréat*, as well as to certain graduates holding a Certificate of End of Teaching Studies (CFEEN), Diploma of Intermediate Artistic Studies (DEMA), and Certificate of Technical and Professional Qualification (CATP).

73.   In 2016, holders of the technical education *baccalauréat* made up 28 percent of new students and 90 percent of them had opted for schools and institutes. Holders of a general education *baccalauréat* make up 60 percent of students enrolled in colleges. New entrants include 39.6 percent of girls. Among these, 14.8 percent hold a technical education *baccalauréant* and 24.3 percent hold a general education *baccalauréat*, including 31.8 percent holding a scientific *baccalauréat*.

74.   The average age at UMNG is 26 years old. In 2014, 14.1 percent of students were under 19 and 8.1 percent were aged 30 on, while in 2011 these rates amounted to 2.5 percent and 5.6 percent, respectively.

4.1.2. Study programs and aspirations of students

75.   Student preparation for transition can be analyzed against two key elements, namely the selected field of study and aspirations, i.e. preferred or desired job in the future.

76.   Regarding the first element, i.e. the selected field of study, 70.0 percent of young students attend general training programs. These fields of study equally interest men (69.5 percent) and women (70.5 percent). Social sciences, trade, and law, which rank second as Congolese youth's preferred field of study (8 percent), attract fewer men (6.0 percent) than women (10.0 percent). On the other hand, studies in

engineering, processing and production industries, which attract nearly 6 percent of youth, have higher male (10.0 percent) than female (1.3 percent) enrollments.

77.   Analysis of the second element reveals that 57.1 percent of young students aspire to work in intellectual and scientific professions. These areas are mentioned by 62.7 percent of women and 51.7 percent of men. Intermediate occupations interest 14.8 percent of youth. However, only 0.7 percent of young students are considering to work in the agricultural sector. This raises the issue of the realism of young students' expectation to work in intellectual and scientific professions on the current job market. (ETVA P18-19).

4.1.3. Higher education expenditures per household category

78.   Household expenditures, which amounted to only XAF 695 million in 2005, more than tripled to reach XAF 2,377 million in 2011. The same year, these expenditures per student were equivalent to 31 percent of the income per capita in the Congo. The poorest 20 percent of households spend an average of XAF 1,500 per year on one student. As for the 20 percent of the households that are financially best-off, they spend an average of XAF 233,129 per year per student, i.e. 155 times more than one of the poorest households.

79.   From a geographic point of view, in urban areas, household contribution is, on average, 2.5 times higher than in rural areas. The average amount of expenditures made on girls is much higher than that made on boys (Table 25 in Annex 2).

Figure 5. Total household expenditures for years 2005 and 2011 (in millions of XAF).
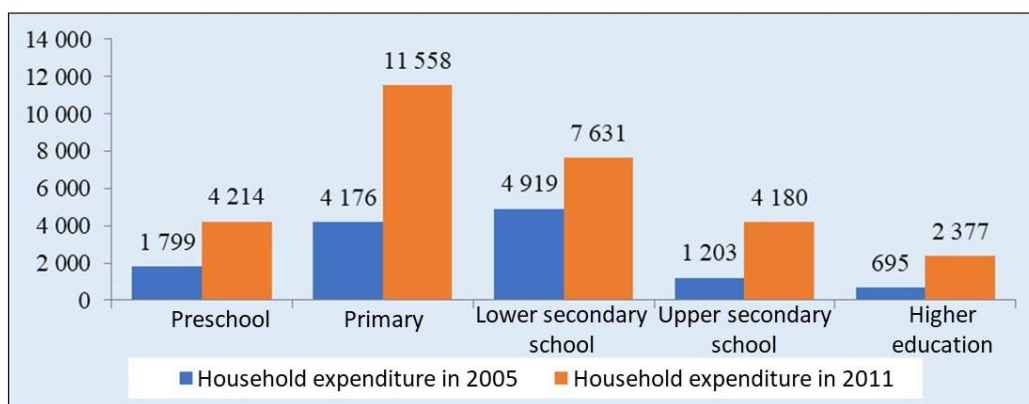
Source: Estimates based on ECOM 2005 and ECOM 2011 data

4.2. Equity of access

80.   Equity issues relating to access to higher education in the Congo emerge on several levels. The disparities noted are linked to gender, social origin (social conditions of families), socio-economic conditions of families, locality of residence of origin, scholarship award criteria, and initial education record (prior to *baccalauréat*) of *baccalauréat* holders.

4.2.1. Gender-related disparities

81.   Although efforts have been made in primary and secondary education, disparities between girls and boys remain significant in higher education. In 2012, the gender parity index in favor of girls amounted to 1.06 in primary school, 0.96 in lower secondary school, 0.59 in upper secondary school, and lastly, 0.74 in higher education. The parity index between girls and boys in higher education improved between 2011 and 2014, increasing from 43 to 73, but efforts remain to be made. The GER and NER gaps between girls and boys is wide, regardless of social status. The graph hereafter provides a detailed illustration of student distribution per gender and study program at FLSH in 2014.

82.   The gender inequality index of the Congo, as per the calculations of the United Nations, has not improved since 2000. This index combines indicators relating to the level of education, participation in the labor market, parliamentary representation, adolescent fertility, and maternal mortality. Although the gender gap in primary school enrollment has been bridged, girls make up only 45.0 percent and 39.0 percent of enrollments in secondary and higher education, respectively[6]. As a consequence, although 24.0 percent of young men ages 20 to 24 have completed their secondary education, only 14.0 percent of women in the same age group have. The high rate of teenage pregnancies is a potential, partial explanation to the gender disparities in educational attainment.

Figure 6. Distribution (%) of FLSH students per study program and gender in 2014.
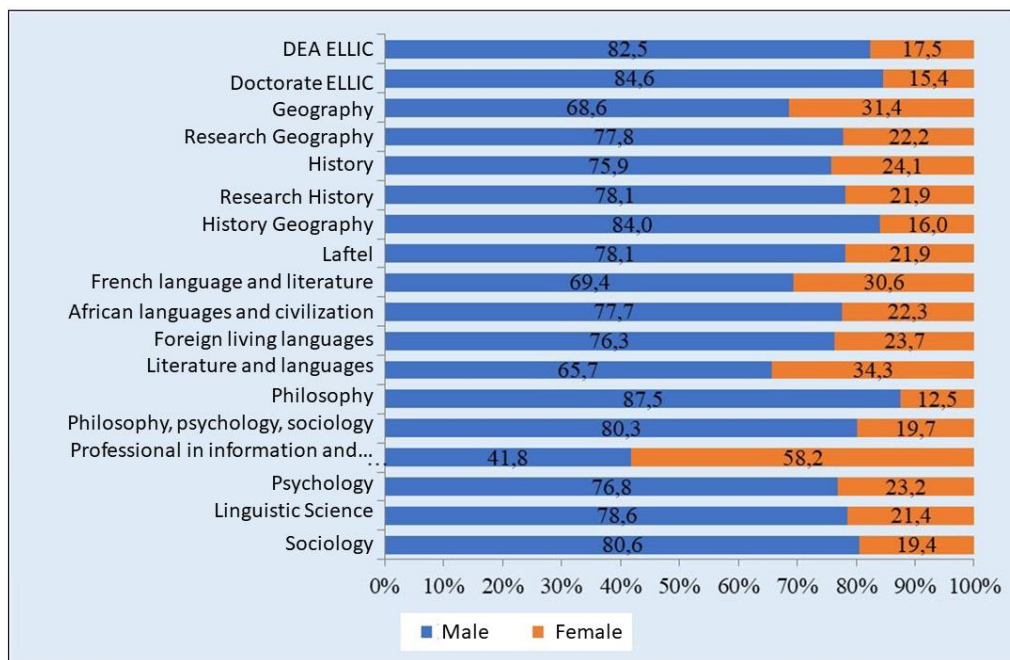
Source: Survey by the Directorate of ICT and Statistics/UMNG and DEP/MHE 2015.

4.2.2. Disparities linked to social origin

83.   The Survey on Transition to Working Life (ETVA, 2015) highlights the strong impact that households' financial situation have on the educational attainments of young people ages 15 to 29. Indeed, youth from households in financial difficulty are extremely few to reach university level - less than 1 percent of them do, against 16.7 percent of youth from well-off households. It should be noted that the majority of young people living in households in financial difficulty end their studies either with their primary education (42.6 percent) or before finishing primary education (26.9%), while among youth from well-off households these proportions amount to 24.2 percent and 14.3 percent respectively.

84.   Non-poor households appear to have better access to higher education. The school attendance rate has always been higher among the student population coming from non-poor households, than those coming from poor households. GER in higher education among students coming from poor households rose from 5.6 percent in 2005 to 8.6 percent in 2011. For students coming from non-poor households, this rate was higher and increased from 14.3 percent in 2005 to 34.4 percent in 2011 (Table 13 in Annex 2). The gaps noted between the GERs and NERs over this period may account for the odds ratio, according to the social origin of the students. In fact, these two rates are higher among students coming from non-poor households than among students coming from poor households. This suggests that students' standard of living is an important determinant of higher education attendance rate in the Congo. The Government must consider this aspect of demand and take corrective measures to support the most disadvantaged.

4.2.3. Disparities relating to scholarship award criteria

85.   The scholarship award criterion that limits it to students admitted into second year subject to a required age poses a problem of equity. Indeed, it could hinder the access and success of students from disadvantaged backgrounds who start their first year without financial support. Those coming from towns or departments other than Brazzaville may additionally experience accommodation issues.

86.   The problem may prove more acute for students who embark on scientific, technical and technological studies. This is a missed incentive to promote these study programs when country needs are unmet.

87.   Studying abroad is three times more expensive than the scholarships awarded to take up these same study programs in the Congo. Streamlining the scholarship award policy would allow for funding more local beneficiaries in the same study programs.

4.2.4. Disparities relating to the original place of residence

88.   The ETVA report shows that at the time of the survey, nearly 16 percent of young people living in urban areas attend university, whereas less than 1 percent of youth from rural areas do (ETVA P.17).

89.   In addition, since the country's only public university is located in Brazzaville, student populations living around it are favored over those coming from other departments. A locality like Pointe-Noire, for example, could have a university oriented on the socio-economic opportunities offered by this locality

and take in students of the area in priority. A university is planned to be opened in Pointe-Noire (Annex 1).

4.2.5. Disparities relating to prior education record

90.   Disparities relating to prior education record mainly apply to holders of a technical *baccalauréat*. Indeed, their orientation is problematic. Another reason why these *baccalauréat* holders struggle to successfully pursue a higher education is the inadequate technical higher education supply at UMNG.

91.   Technical and vocational *baccalauréats* recognize the learning of a technical/technological and vocational specialization, whose study can then be furthered with university-level technical studies. Because the study programs they can enroll in are limited in number, holders of a technical *baccalauréat* find themselves enrolling in study programs that do not match the profile they acquired by the end of their secondary education.

92.   Most of them fail from the very first year of university, increasing the number of dropouts. Such failures are especially due to the mismatch between secondary education curricula and the university study program supply, and the inadequate quality and quantity of the human resources available to METPFQE.

4.3. Access-related institutional problems

93.   Access to higher education in the Congo comes with major issues, whose causes are mainly of institutional nature. Indeed, problems are noted in the management of the transition from secondary to higher education. Added to this, UMNG has limited enrollment capacity and State support to the most disadvantaged students entering university is lacking.

4.3.1. Managing the transition from secondary to higher education

94.   Student transition from secondary school to higher education is made difficult by the lack of guidance and support on their orientation, the lack of preparation of technical secondary school graduates, and the lack of diversification of study programs in higher education.

95.   Stakeholders of the transition to higher education are the Directorates general of education, the Directorates of Studies and Planning (DEP), UMNG, heads of public and private institutions, and parents. Although the latter, like everywhere else, express their opinion on the type of education they wish their children to be able to attend, little guidance is provided, for lack of advisory and orientation structures.

96.   Higher education expansion through capacity increase and study program diversification does not befit the development dynamics of secondary education; also, secondary education graduates do not meet the requirements for quality higher education. The national higher schools that admit students through competitive examination have a means for assessing the level of *baccalauréat* holders and relevance of their type of *baccalauréat* to their study programs. However, feedback is not routinely provided to the Directorates of secondary education.

97.   Technical upper secondary school graduates attend general higher education at a disadvantage, as they are unprepared for such studies and often do not have the professional skills required to enter the labor market. No alternative gateway is available to them. The higher vocational training system is poorly developed. These technical *baccalauréat* holders struggle to pursue higher studies, for lack of study programs matching their training in higher education, and also because of their poor performance at scientific subjects, such as mathematics and physics. As a consequence, they find themselves pursuing economic and even literary study programs.

4.3.2. Accommodation capacity

98.   UNMG institutions lack the capacity to accommodate the flow of students that comes with every year. Premises are shared by the College of Law and that of Science and Technology, however, they were not designed to house university institutions but rather a general education college. The College of Economics wrongfully uses the premises of the city's upper secondary schools to provide certain courses. Pursuing studies in such an environment can prove challenging, especially for newcomers who may struggle to adjust to such a context. This finding is illustrated by the success rates in first year shown above.

99.   ENS, FSSa, ENSAF, ISG, ISEPS, ISG, and ENSP, institutions recruiting through competitive examination according to the places available and supervision capacity, have an extremely limited accommodation capacity. In 2014, for example, 3,200 prospective students sat the first-year entrance examination to ENS and only 300 were retained. ENSP has 6 study programs leading up to a *licence*, each having an average enrollment of only 30 students, 40 permanent teachers, and 30 lecturers.

100.   In addition to the lack of accommodation capacity, access to information and communication technologies (ICTs) is poor, when they could have filled certain gaps, especially by reducing the need for students to move from site to site through distance education. Speaking of which, distance education still needs to be developed in the current context of the COVID-19 pandemic, as appropriate teaching methods, relying preferably on distance education, are needed to ensure continued education during lockdowns and compliance with protective measures (social distancing).

101.   The three high-capacity lecture halls (1,600 seats) built between 2011 and 2016 have probably alleviated this premise shortage situation for common course provision, nevertheless, the classroom issue for specific teaching, such as tutorials and projects conducted in small groups, remains unaddressed. An assessment should also be made of these new infrastructures' capacity to adjust to the future development of UMNG which comes as part of the LMD reform and requires different types of infrastructure, and the areas where the professionalization of training sometimes requires specific and smaller spaces.

102.   DEPs do not provide academic authorities with a comprehensive and up-to-date basis for decision-making to guide the flow of students who aspire to pursue a higher education. This fully raises the issue of planning appropriate infrastructure, human resources for the country, and the use of limited budgetary resources.

4.4. Conclusion and recommendations

103. Despite the constraints mentioned above, higher education in the Congo has been steadily expanding since the 1970s and especially from the early 2000s to date. As such, an increase in the number of students per 100,000 inhabitants is noted, namely from 432 in 2008 to 1,104 in 2016, placing the Congo slightly above the sub-Saharan Africa average which stands at 972 (Table 15 in Annex 2).

104. With respect to the issues relating to access to higher education in the Congo, developing links between the various stakeholders of the transition to higher education and improving its management, appear necessary. The general higher education policy document states that one of its functions is *"to further contribute to the development of the whole education system, especially by improving teacher training, educational programs, and research".* The document goes on to say that *"to facilitate student transition from secondary to higher education at any age and take into account the needs of the increasingly diverse categories of learners, counseling and guidance services should be developed in cooperation with student organizations".* This will entail opening study programs to develop teacher orientation and training skills, especially for technical education where a tremendous gap exists.

105. There is a need to promote quality private higher education to improve access to this cycle of the system and promote study program diversification, and to accommodate and optimize the public resources allocated to the sub-sector. Additional incentives to develop the private development should be explored. The country does not have a long tradition of private education, whose beginnings date back to the 1990s.

106. To support the development of access, efforts must be provided to rehabilitate the infrastructure at UMNG and adapt some of them to the requirements of the current context relating to the COVID-19 pandemic by developing the infrastructure and equipment needed to provide distance education, on one hand; and on the other hand, to those of the pedagogy underlying the LMD system for the training of controllable groups in relation to teaching in large lecture halls and specific training in small groups or numbers. Preparations need to be made to admit more holders of scientific, technical, technological, and vocational *baccalauréats*. In expanding university mapping, preference should be given to short-term qualifying vocational training and the private training supply and needs of the labor market should be taken into account. Creating new institutes, while alleviating UMNG, should help revitalize it. Other limiting factors, such as equity, also affect access.

107. The Government does not grant scholarships for the first year of study at UMNG colleges whose admission is based on qualifications. As such, many students cannot materialize their aspiration to go to university because they come from poor households; and those who manage to access it drop out within the first year for lack of means.

108. The scholarship award criteria need to be reviewed. Awarding scholarships from the first year would be a wise move, paying special attention to scientific and technical study programs and especially girls from low-income families. Lastly, improving university mapping would help reduce regional disparities and promote rational development of higher education, based on better planning of material, technical, and human resources. In addition, to better support technical education which allows for training students to the high levels of qualification needed by the economy, such as senior technicians and engineers, the Government should plan to rework the content of the courses, on one hand, and, on the other, develop and implement a training plan for teaching and supervisory staff.

5. Quality and efficiency

109.   The issue of quality and efficiency will be reviewed from the perspective of integration of new students into the university environment, the quality of infrastructure, pedagogical supervision, internal efficiency, and professional integration.

5.1. Integration of new students

110.   The reception conditions and integration process for new students are not very effective in UMNG environment. A long enrolment process caused by a very limited number of poorly equipped counters, as well as a wide dispersion of classrooms over several sites, do not facilitate the adaptation of new students. This can be very constraining for those who do not benefit from scholarships and is a serious impediment for those in need. There is no structured information system that allows students to request the necessary information such as those related to their course, study conditions and the services offered by the institutions.

111.   The student satisfaction survey conducted in 2011 reveals that only 29 percent of students in the public sector are satisfied with the situation. The factors of dissatisfaction include in decreasing order overcrowding (47 percent), lack of books (45 percent), teacher absenteeism (22 percent), poor infrastructure (Table 19 in Annex 2).

5.2. Quality of infrastructure

112.   The development of university infrastructure has not kept pace with the growth in enrolments, nor with the implementation of the LMD reform which requires a certain type of pedagogical infrastructure that does not necessarily correspond to high-capacity amphitheaters, even if such infrastructure is also useful.

113.   A degradation of the infrastructure is observed due to demographic pressure and lack of maintenance, as there are no resources dedicated to maintenance. Many private higher education institutions do not have infrastructure that meets academic standards.

114.   Internet access is low or almost non-existent in the various higher education institutions due to the insufficiency or lack of computers and internet connection, which is not always of good quality due to poor transmission conditions. Indeed, according to data from the MHE statistical yearbook (2016-17), 12 public institutions (with 230 computers in total) have access to the Internet compared with 46 in the private sector (with 1,607 computers).

5.3. Introduction of the LMD system

115.   The LMD (License-Master-Doctorate) reform refers to a set of measures modifying the higher education system to bring it into line with international standards. It mainly sets up a structure of education based on three grades, namely license (bachelor), master and doctorate; an organization of teaching in semesters and teaching units; and the implementation of credits. It aims to harmonize higher education courses in the country and abroad and to promote student mobility at the national and international levels. The system emphasizes professionalization and entrepreneurship.

116.   The LMD system was introduced in Congo's higher education in 2006 to improve the difficult situation it was facing. However, the full implementation of the system is taking time to materialize. Fully implemented in all cycles since 2011, Congo's LMD system is more applied in its aspects of semester-based distribution of courses (with a weak system for monitoring credits) than in aspects of pedagogical orientations such as professionalization, initiation to entrepreneurship and management of courses through mastered credits. Moreover, UMNG does not yet have the means to monitor the progress of students, making it difficult to monitor their results and assess the system's internal efficiency.

5.4. Pedagogical supervision

117.   Pedagogical supervision is critical and a matter of concern, and the teacher recruitment policy remains a major challenge in terms of quality and profile adapted to the implementation of the LMD system.

118.   There is a shortage of teaching staff and especially of grade A teachers, as well as a high number of temporary teachers. In 2013-2014, UMNG had a body of 29,249 students and the teaching staff consisted of 718 permanent teachers and 1,259 temporary teachers. Women were in minority among permanent teachers (82). In 2016, UMNG counted 55,025 students for 521 teachers including 39 full professors, 15 associate lecturers (MCP), 61 MCF, 184 assistant professors (MA) and 218 Assistants. This teacher shortage is likely to continue in the coming years due to the retirement of 230 teachers between 2017 and 2023, or 26 percent of the current UMNG staff.

119.   In 2013-2014, the permanent teacher-student ratio was 1/41 for UMNG as a whole, with a disparity between colleges. It was 1/58 in the College of Humanities, 1/35 in the College of Sciences and Technologies 1/74 in the College of Economics and 1/134 in the College of Law. In 2016-2017, the permanent teacher-student ratio at UMNG increased to 1/47. As shown in Table 2, there has been a decline in the supervision rate by permanent teachers who are supposed to have more competence in teaching and in research supervision than non-permanent teachers.

Table 2: Supervision rate in colleges

Year	Establishment	Ratio Permanent teacher-students
2013-2014	FLSH	1/58
	FST	1/35
	FSE	1/74
	FD	1/134
	Overall	1/41
2016-2017	Overall	1/47

Sources: 2013-2014 and 2016-2017 Statistical Directories

120.   The annual needs for teachers at UMNG are estimated at around 200 on average for the next five years, but this does not take into account the effect of internal efficiency measures to be promoted for greater fluidity of enrolments and a reduction in repetitions, nor the uncertainty linked to the future creation of UDSN which will capture a number of students less than what UMNG would accommodate if nothing is done. In addition, the development of private higher education should also be taken into account, but also the possible transfer of teachers to this new university. The revision of the number of teaching hours required from the various categories of teachers could be considered. This need would be better understood if all of these elements were taken into account.

121.   Temporary (non-permanent) teachers have annual contracts and are involved in teaching in the same way as permanent teachers. They are not career teachers and often have no pedagogical training. Converting part of budget earmarked for non-permanent teachers who do not work outside of the university and who are eligible for pedagogical training into positions for permanent teachers would give the colleges concerned more control over the pedagogical supervision of their students and would allow for better allocation of their resources. This would also be a response to the recruitment of doctoral graduates who remain inactive for a long time after completing their thesis.

122.   Each year, UMNG makes use of about a hundred "permanent missionaries" at a cost of about XAF 2 to 3 million per person. These are Congolese teachers, often in specialized fields, living abroad and who have a local contract with the university. However, it has been observed that the user institutions do not control their intervention time, which is often insufficient in relation to the number of hours allocated for the courses concerned. Indeed, these missionaries frequently squeeze three or six months of teaching into a few weeks, which is incompatible with the required learning time. Sometimes they do not come, which penalizes the students and may be an aggravating factor in student failures.

5.5. Internal efficiency

123.   It has not been possible to have reliable and comprehensive information to understand the nature of the transition to the next year and next academic cycle for UMNG as a whole. The statistical yearbook is not published regularly. The first statistical yearbook available to the Ministry of Higher Education dates back to 2011 but was published in 2014 [[As part of the funding of the Basic Education Support Project (PRAEBASE) which was closed on June 30, 2013]. At that date, the average success rate

at UMNG was 40 percent at the college level, with 42 percent for girls compared to 89 percent for schools and institutes with 93 percent for girls. According to the targeted data collection carried out in 2013 as part of this review, admissions in the first and second years for the 2012-2013 academic year are as shown in the figure below.

Figure 7. Percentage of admissions to colleges in the first and second years for the 2012-2013 academic year.
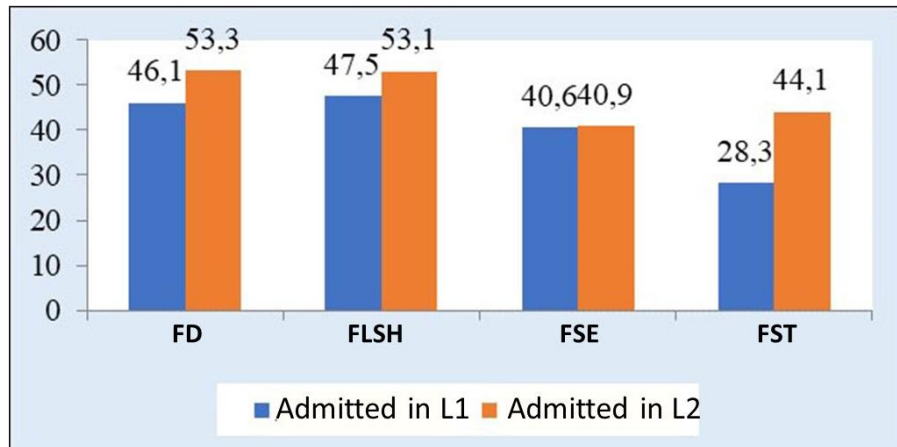
Source: DTICS/UMNG-DEP/MHE, 2015.

124.   This trend is also noted in schools and institutes with admissions by competition where the number of deferred students (repeaters) in the first and second years remains significant. Despite the selection at the entrance in these institutions, the passing rates in the first years are low. The level of *baccalauréat* holders and the quality of the selection are called into question.

Figure 8. Proportion of repeaters at UMNG, 2011 and 2014.
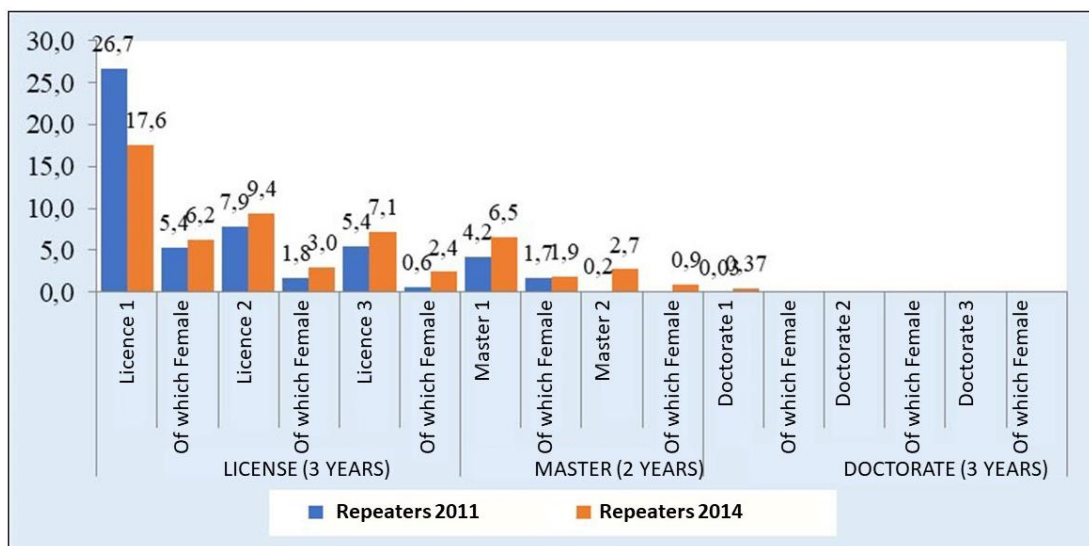
Source: Higher Education Statistical Yearbooks, 2010/2011 and 2013/2014

125.   On the other, the end-of-cycle results are rather good and for some schools, professional integration is ensured. The case of ISG is described in *Box 1*.

126.   In 2013-2014, 44.1 percent of UMNG students were repeaters, representing 34.2 percent in the bachelor cycle and 9.2 percent in the master cycle (Table 17 in Annex 2). This high repetition rate partly explains the decline in enrollments observed during the first years of the university cycle.

127.   This low internal efficiency is also illustrated by the demographic profile of UMNG students. There is a large proportion of students aged over 26, representing 37.3 percent of UMNG students [Education Sector Strategy, 2015-2025], which is also explained by the numerous repetitions in the system and as illustrated in particular by the low percentages of admissions of those enrolled in the first year of university. In 2014, more than 21 percent of repeat students were under 19 years old. Those aged 30 or older account for 12.2 percent.

Box 1: Case of the Higher Management School

The case of the Higher Management School (ISG) deserves attention with regard to the functioning and management of the institution. It had a total enrollment of 667 in 2014, which rose to 700 in 2015. It has 30 permanent and 49 temporary teachers. Access is by competitive examination. At the beginning of the course, students in series C and D are those who succeed best, as well as throughout the course of studies; on the other hand, graduates of the technical *baccalauréat* (apart from those in series F and E) have difficulties in pursuing their studies. They are criticized for having a low level of understanding and expression and therefore for their poor ability to follow the studies offered by the institute. One of the reasons for this is the lack of qualifications of the teaching staff in the technical high schools and the teaching content that is unsuitable to the courses offered by the ISG. On the other hand, these students do not receive advice and guidance for their future orientation, which only increases failure and drop-out rates. The preparation of secondary school students for higher education deserves special attention. The failure rate in the first year is about 40 percent, of which 15 percent are those who enroll and do not take the entrance exam. During the first academic year, the passing rate is low in the first term (10 percent rising to 40 percent in the second term and reaching 60 percent in the second year and almost 100 percent in the final year. All graduates find employment one year after graduation at the latest. The best students are often identified and recruited immediately upon graduation. Graduates are followed up by the ISG in collaboration with the ISG Alumni Association (IS GARD), which participates in their integration. The institute develops a partnership with the work environment through the involvement of members of the private sector in training, lectures, and support for the improvement of working conditions in the institution and supervision during internships within companies. The ISG supports the Pointe-Noire Chamber of Commerce's approved center for business monitoring and offers continuing education. Its board of directors is made up of public and private officials. Finally, it opens and closes its branches according to the demand from the private sector, in particular with employers that it consults regularly.

Source: DTICS/UMNG-DEP/MES, 2015

Table 3: Enrolment of early and late students in higher education, 2011 and 2014

Age of student	2011		2014	
	Enrolment	Percent	Enrolment	Percent
Under 19 years old	**866**	**2.5**	**6,305**	**21.3**
Of which girls	299	0.9	2,889	9.8
30 years old and over	**1,940**	**5.6**	**3,601**	**12.2**
Of which girls	451	1.3	1,413	4.8
Total repeaters	21,902	**100.0**	29,572	100.0

Source: Higher Education Statistical Yearbooks, 2010/2011 and 2013/2014

128.   These very low success rates are indicators of the system's low internal efficiency and highlight the need to improve transitions from one level to another and the success of students. These failures lead to high levels of repetition, which are a source of additional costs for higher education, and call for additional resources to improve quality while ensuring expansion of higher education to meet growing demand.

129.   In order to improve the success rate of technical education *baccalauréat* holders in higher education, it is important to review (i) the adaptation of the curricula in relation to demand, (ii) the link between secondary education and higher education and (iii) the level of qualification of the teaching staff in technical and vocational high schools.

5.6. Professional integration

130.   In terms of integration, the Survey on transition to the work life (ETVA) reports that the unemployment rate for young people with a university education level is 41.9 percent and the unemployment rate for young people with a primary level is 38.1 percent. On the other hand, the unemployment rate for young people with a level below primary education is 18.8 percent. The high unemployment rate among university graduates may reflect their reluctance to settle for a job that does not meet their expectations in terms of wages and status (ETVA p. 21). Young people at the primary or lower level, often from modest families, may however be motivated by the survival reaction.

131.   ETVA findings consistently show that when young people enter the labor market after their studies, it takes them almost one year before they get their first job. When taking a closer look at the duration of the transition, the findings show that young people wait on average 26.5 months before getting their first stable and/or satisfactory job. However, for young people for whom the transition is not direct (i.e. they have not managed to obtain a first stable and/or satisfactory job), 31.9 months pass before they find a stable and/or satisfactory job.

132.   The duration of the transition to a first stable and/or satisfactory job for a university graduate is half that of a young high school graduate (11.4 and 20.5 months respectively) and a third of that of young

primary school graduates who take 33.2 months (almost three years) to complete their transition (ETVA p. 46).

5.7. Conclusion and recommendations

133.   Particular importance must be given to quality. A good teaching staff policy must be developed including the improvement of teachers' pedagogical skills, the alignment of curricula and teaching structures with LMD standards as well as the sensitization and training of teachers in this new context of the COVID-19 pandemic, putting digital technologies and educational practices at the heart of learning.

134.   More specifically, the MHE will: (i) develop a teacher training plan for higher education in line with the university mapping to be developed, (ii) create the necessary and appropriate space for teachers to carry out research, in order to improve the quality of their teaching and provide the work environment with the results of their research; (iii) develop inter-university cooperation to give and receive; (iv) accelerate the implementation of the Quality Assurance system that will also contribute to improving the quality of teaching. This system requires logistics and an entire organization to be put in place in order to prepare the university and its constituent institutions. Thus, this arrangement will aim to guarantee to the various actors, users and providers of training, that the programs taught are of good quality and contribute to proven internal and external efficiency, and that the establishments meet standards with an environment conducive to studies.

6. Governance

135.   The governance of the higher education system is fairly weak. The organization of higher education and its management face several challenges: institutional challenges, lack of human and material resources, and the absence of an information and management system.

6.1. System coordination

136.   A Higher Education Council has been established that meets once a year, but it is inoperative due to weaknesses in the implementation, monitoring and evaluation of the various decisions and recommendations made.

137.   Public higher education is concentrated in UMNG. The MHE has little control over this institution because of its weak capacity to coordinate the system.

138.   There is weak planning capacity throughout the higher education system, both at the Ministry and at UMNG levels. At the MHE level, the Directorate General for Higher Education (DGES) does not have sufficient resources nor staff, qualified and capable of leading policy formulation, monitoring and evaluation of its implementation. The same applies to the Directorate of Studies and Planning (DEP). These structures have little authority over UMNG and are unable to obtain reliable data that would help review the sector's performance. There is neither internal nor external control of the quality and efficiency of the institutions receiving public resources.

139.   UMNG has little accountability for its results. It seems to be neither subject to an obligation of results nor accountable for its performance. The data available at UMNG are neither processed nor used to provide an integrated information system capable of providing timely administrative, educational and financial data that would allow for reviewing the system's efficiency and quality.

140.   This weak institutional capacity can be observed at a time when the sector is undergoing rapid change, through the many projects that the Government has launched or is planning to launch in order to broaden access and diversify the supply of training, including the expansion of private education.

6.2. Autonomy of UMNG and its components

141.   UMNG is neither in a position to adapt its workforce to be recruited according to its possibilities and the areas of training it would like to offer in relation to signals from the workplace, nor to explore additional resources. The Government is aware of this situation and intends to give more autonomy to universities under its new policy.

142.   Moreover, the colleges, schools and institutes that make up UMNG have little autonomy in mobilizing their resources and in managing staff. For example, decisions on the budget and its execution follow the long procedure for approving public finances and the Rectorate's expenditure chain. In order to use temporary contractors, an authorization request must be addressed to the Rector who must approve it beforehand so that the user institution can then make use of temporary contractors.

6.3. Control of incoming students at UMNG

143.   Access to higher education is subject to obtaining the *baccalauréat*. The schools and institutes of UMNG as well as the FSSa organize competitive examinations for their students, while the other colleges welcome *baccalauréat* holders based on qualifications. This approach disparity means that the other colleges are overcrowded with the entailing problems of excess students.

144.   Furthermore, the organization of the *baccalauréat* is poorly managed due to the absence of a dedicated central body. There are inexplicable fluctuations in the number of *baccalauréat* holders from one year to the next, which has repercussions on the management of the university's enrolment and makes it difficult to forecast the number of future admissions. Historically, the separation of the Ministry of National Education into three ministries in charge of higher education, primary and secondary education, technical and vocational education has led to conflicts in managing the organization of the *baccalauréat* exams. As the *baccalauréat* is the first higher education qualification whose teaching staff chairs the examination boards, it would be natural for this department to play a leading role in the organization and management of this examination.

6.4. Quality management

145.   The introduction of the LMD system, which is a major challenge for improving the quality of education, does not seem to be coordinated by the MHE. Each institution has its own pace and training program, with no control mechanism for possible duplication as in areas where teaching units could be pooled (examples: SE and ISG on the one hand, ENSP and SST on the other hand). If due attention is not paid, there is a great risk that the same situation will prevail with the new universities to come.

146.   Following the promulgation of Memorandum #056/MES-CAB dated February 16, 2013, a draft general policy for quality assurance in higher education had been drawn up. This draft was approved and adopted by the second ordinary session of the National Council for Higher Education (CNES), held on December 16 and 17, 2013 in Brazzaville.

147.   There is no formal system for quality assurance or auditing of educational institutions or monitoring of academic programs. With the multiplication of private higher education structures and the establishment of the LMD system, this is a gap that needs to be filled. To this end, the Government is planning to set up a quality assurance structure that will make it possible to establish an accreditation system for training programs in private higher education institutions, promote mutual recognition of diplomas and remove barriers to student mobility. This system will require the organization of statistical information, which is lacking as described above. The Government considers that the establishment of a quality assurance structure is a priority and a MHE team is working on the matter with the assistance of UNESCO and the Education improvement support project (PRAASED). In February 2018, the Ministry of Higher Education set up a Higher education quality assurance project, which needs to be supported in order to function effectively, autonomously, independently and operationally, following the example of Senegal's National Quality Assurance Agency (ANAC-Sup de Dakar), where the Quality Assurance Project team with the support of PRAASED carried out a study trip in December 2018.

148.   The development of such a quality assurance policy requires the availability and sufficient high quality human resources who will intervene independently in the evaluation of public and private higher education institutions, on behalf of a structure external to UMNG and the MHE, in order to ensure better transparency and governance of the process.

149.   Given the small market for expertise outside UMNG, interventions at the university can be problematic unless foreign expertise is used in the first instance. This can be expensive and requires a substantial budget for the quality assurance system. On the other hand, private institutions in the early stage of their development will find it difficult to cope with the resources necessary for internal evaluation, although all promoters adhere to the policy. Another source of significant expenditure is the revision of curricula required to gain accreditation and to continue to operate.

150.   Therefore, the expansion policy that the Government is considering with the creation of three academies and the new higher education institutions must accommodate this new quality assurance policy with adequate resources. Finally, the acceptance of an independent quality assurance body and its coexistence with UMNG, the only structure offering training in public higher education, must be supported in order to overcome any resistance to this new context.

6.5. Human resources management

151.   One of the fundamental problems in solving the problem of the quality of human resources at UMNG is the recruitment of teachers with the desired or required profile in sufficient numbers and of high quality, in particular in the social sciences fields where student/teacher ratios are very high. Retirements are not systematically offset and the extensive use of temporary contractors and missionaries is not a guarantee of a controlled policy of educational supervision and of an effective and lasting system.

152.   On the other hand, the number of administrative and technical staff of UMNG is 712 and seems disproportionate and unbalanced with regard to the needs for this type of human resources on the one hand and with regard to the number of teachers and students present at UMNG on the other. In addition, some profiles are unsuitable for the position needs of UMNG. A good human resources policy should be implemented.

6.6. Use of information and communication technologies (ICT)

153.   The use of ICTs is still embryonic due to the quality and the problems related to bandwidths and energy supply. The lack of adequate infrastructure is another problem that adds to the dispersion of what exists. The promotion of ICT can help to partially fill the gaps in governance.

6.7. Conclusion and recommendations

154.   In order to promote a dynamic that would give more autonomy to higher education institutions, the MHE would need to: (i) initiate the establishment of an efficient EMIS; (ii) establish a contractual relationship between the Government and the higher education institutions which will be accountable for their results and will have negotiated means to deliver the service expected of them, (iii) set up as soon as possible the quality assurance system.

155. Despite the desire to expand the education offer with the creation of three academies and the opening of new universities and schools, UMNG will remain for a time the main provider of higher education. It will need to have an efficient and effective EMIS, integrating staff, financial and student management. It will also need to strengthen administrative and financial management (generating its own resources, training student affairs staff and introducing computerized management of these services). UMNG is still under construction, and it is now that the regrouping of the key infrastructures of certain institutions is done.

7. Funding

156.   Although the emergence of a private sector has resulted in the transfer of part of the financial burden to households through tuition fees, the resources of higher education remain essentially of public origin.

157.   The Government of Congo wishes to engage in the creation of university centers in order to broaden the access base and to specialize the future university institutions according to the potentialities of the regions that they will cover. On the other hand, a private sector support policy has been initiated and focuses on quality assurance as a prerequisite for the promotion of an incentive system for the development of private institutions. The challenge that the Government will face is to meet the objectives of maintaining the effort to cover the country's current needs while continuing to improve access to quality higher education according to school demographics and the country's future needs. Can the current structure of higher education funding meet the future challenges mentioned above?

158.   In this section, we will conduct an overall review of the level of funding for higher education with benchmarking with countries in the sub-region and beyond, the future needs to increase access while improving quality, funding trends and finally funding policy and strategy recommendations.

7.1. Centralization of resource management

159.   The legacy of centralized resources and institutions management continues to characterize the higher education system. As is the case in many French-speaking countries in sub-Saharan Africa, the Government decides on the number of staff to be recruited by universities and the beneficiaries of social works and consequently, on the budget to be allocated.

160.   The salaries of UMNG staff are borne by the Government. UMNG establishments generate little of their own resources. The latter represent barely 3 percent of the University budget and are essentially made up of student enrollment fees, which have hardly changed since 1971 when UMNG was founded. This centralized system does not require or encourage the University to deliver the expected results. Thus, there is no results framework to measure performance in relation to the resources made available. Such a framework would require the University and its constituent institutions to be granted more autonomy. As mentioned in the governance section, institutional inefficiencies can be a source of costs and, conversely, effective governance can help optimize the limited resources of the university institution.

7.2. Level and characteristics of current funding

161.   Public expenditure on education grew between 2010 and 2013 and public spending on higher education has followed the same trend. The education budget in Congo increased from XAF 136.2 billion in 2010 to XAF 364.8 billion in 2013 [fn12: 2013, Year of basic education and vocational training with a budget of XAF 124,485,528,000] and at the same time that of higher education more than doubled from XAF 27.5 billion to XAF 59.4 billion. However, its relative share fell from 20.2 percent to 16.8 percent over this period. The Government's exceptional decision to increase the resources allocated to vocational training in 2013 explains these positive variations in the education budget over the last two years. However, the Republic of Congo does not yet comply with the international recommendation to increase the share of the education budget to 6 percent of GDP. In 2013, Congo spent 5.5 percent of its GDP on education and 0.90 percent on higher education. By way of comparison, Table 29 in Annex 2 shows the

share of education spending in GDP for a number of African countries and their performance in terms of enrolment.

Figure 9. Changes in public expenditure in education (in billions XAF) over the 2010-2013 period.
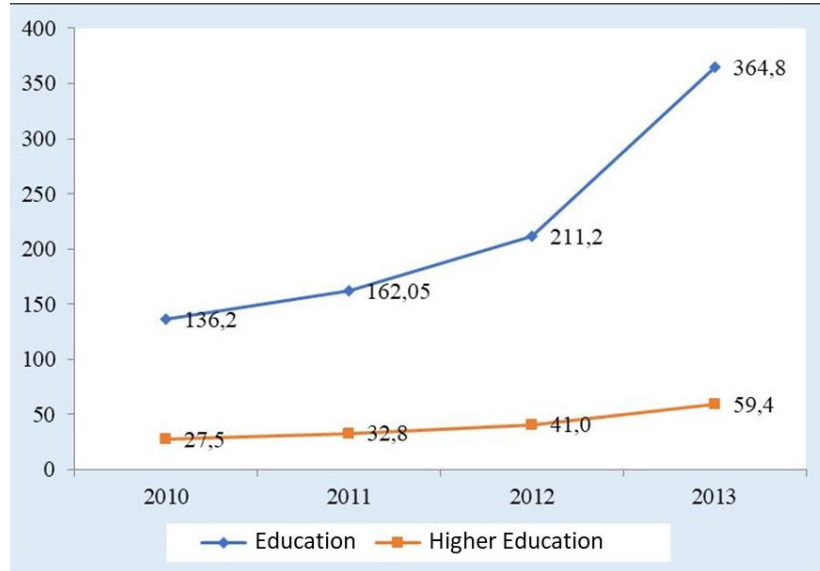
Source: GDP/MFI (budget doc sectoral strategy 2015-25).

162.   With regard to operating expenditure, while the share of other levels of education has fallen relatively, the share of higher education has rather increased over the whole period, from 24.2 percent in 2010 to 28, 8 percent in 2013.

163.   The bulk of higher education operating expenditure goes to UMNG and scholarships. In 2012 and 2013, UMNG's budget represented respectively 56 percent and 53 percent, and 80 percent of the budget was made up of payroll costs in 2014. The share for scholarships was 37 percent in 2013. Between 2016 and 2017, the number of scholarship recipients increased at a rate of 11.6 percent (SSE, 2021-30).

Table 4: Breakdown of public operating expenditure by sector (in millions of XAF).

Sector	2010		2011		2012		2013	
	In millions XAF	Percent	In millions of XAF	Percent	In millions of XAF	Percent	In millions of XAF	Percent
Primary, secondary education and literacy	67,034	63.3	68,115	59.8	76,863	57.3	95,385	57.6
Technical and vocational education, skills training and employment	13,254	12.5	16,933	14.8	21,117	15.7	22,643	13.6
Higher Education	25,633	24.2	28,984	25.4	36,278	27	47,685	28.8
Total	105,921	100	114,032	100	134,258	100	165,713	100

Source: Education sector strategy document (2015-25)

164.   Scolarships account for a large share of recurrent expenditure, but their number is decreasing, especially for studies abroad. For the 2011-2012 academic year, 14,990 UNMG students (57 percent of the total) were awarded scholarship, down from 68 percent recorded in 2007-2008. The relative number of students receiving scholarships for in-country study has increased (from 68 percent in 2008 to 78 percent in 2012) compared with the number of beneficiaries for studies abroad. Moreover, the respective weight of national and international scholarships has been reversed. In 2012, the value of in-country scholarships represented 57 percent of the total compared to 40 percent in 2008. This development seems to indicate a trend towards a gradual reallocation of financial support towards the in-country tertiary education system. This is a significant shift in financial terms, as scholarships for study abroad cost three times as much as those awarded for further in-country studies. Overall, scholarships awarded for higher education absorb 37 percent of the total budget for this level of education [fn13: Public expenditure review in the education sector World Bank, 2014].

165.   According to the public expenditure review report, in 2011, the unit cost in higher education was estimated at about XAF 1,300,000 compared with XAF 500,000 in technical and vocational education and XAF 100,000 in general secondary education. The unit cost of higher education is equivalent to 105 percent of the per capita income in 2013. It is 67.7 percent in Madagascar, 104.7 percent in Rwanda, 56.7 percent in Tunisia and 38.7 percent in South Africa (Source WDI).

166.   External funding is very marginal at the level of higher education. Over the 2008-2012 period, it was about USD 70 million for the entire education sector. Real education expenditure, for all three ministries, is stable at around XAF 200 billion over the 2015-2017 period. The actual expenditure is generally lower than the expenditure presented in the provisional budgets. Expenditure for higher education has a lower implementation rate and current expenditure represents between 80 percent and 90 percent of implemented education expenditure, a little less in the initial budgets due to the lower implementation of capital expenditure. Public investments in education are more oriented towards higher education with great variations in their execution.

Table 5: *Changes of education expenditure - State budget between 2015 – 18*

	2015		2016		2017		2018	2019
	Forecasts	Execution	Forecasts	Execution	Forecasts	Execution	Forecasts	Forecasts
MEPSA								
Current expenditures	105.5	111.3	97.2	113.0	104.4	96.9	102.8	106.6
Investments	12.5	6.7	28.2	14.3	13.1	11.5	14.1	10.5
Of which external	*7.2*	*1.5*	*11.6*	*2.3*	*6.1*	*2.1*	*10.0*	*3.2*
Total	**117.9**	**118.0**	**125.4**	**127.4**	**117.5**	**108.4**	**116.9**	**117.1**
METPFQE								
Current expenditures	21.6	23.2	25.4	27.6	32.0	27.4	31.5	29.1
Investments	6.4	4.1	17.4	5.5	12.1	4.0	7.6	11.5
Of which external	*1.4*	*0.2*	*3.7*	*0.7*	*4.1*	*0.6*	*4.1*	*6.5*
Total	**28.0**	**27.3**	**42.8**	**33.1**	**44.1**	**31.5**	**39.1**	**40.5**
MHE								
Current expenditures	55.0	38.6	57.8	38.4	52.1	38.6	58.5	58.3
Investments	46.4	18.6	20.9	0.4	16.0	23.6	2.1	16.1
Of which external	*1.4*	*8.3*	*0.8*	*0.3*	*0.0*	*0.0*	*0.0*	*0.0*
Total	**101.4**	**57.1**	**78.8**	**38.8**	**68.1**	**62.2**	**60.6**	**74.4**
All 3 Ministries								
Current expenditures	182.1	173.1	180.5	179.0	188.5	162.9	192.9	194.0
Investments	65.3	29.3	66.5	20.2	41.2	39.2	23.8	38.0
Of which external	*10.0*	*10.0*	*16.1*	*3.4*	*10.2*	*2.8*	*14.1*	*9.7*
Total	**247.3**	**202.4**	**246.9**	**199.2**	**229.7**	**202.0**	**216.7**	**232.0**

Source: Education sector strategy 2021-30

167. State education expenditure represents 14.7 percent of real public expenditure in 2017, exclusive of interest on the debt, and 16.5 percent when considering only current expenditure exclusive of interest on the debt.

168. The estimate of household education expenditure in higher education for the year 2011 as indicated in the ECOM for the same year is XAF 2,377 million for higher education. The income generated by higher education institutions in 2013 amounted to about XAF 6,337,350,000 based on their enrolment of 14,083 and the average tuition of XAF 50,000 per student. Finally, household expenditure on public higher education represents 2.8 percent of the sector's total current expenditure.

7.3. Future needs

169. Based on the assumption that the higher education access rate would reach 28.9 percent at the end of the period, the Government's 2015-2025 education sector strategy envisages an increase in the number of students in higher education from 41,528 students at the beginning of the period to 64,133 students by 2025. The sub-sector's operating expenditures, associated with this development, will reach XAF 132 billion at the end of the period and the cumulative investment expenditure would be XAF 85 billion. The assumptions underlying the coverage of such an amount by the budget are as follows: "The oil GDP would increase at an annual rate of 2 percent and the non-oil GDP at a rate of 7 percent. A projection of Government budget total budget expenditure was made taking into account a slight improvement of the fiscal pressure on non-oil GDP. With these assumptions, the total public current expenditure could amount to XAF 2,100 billion in 2024, and total investment expenditure to XAF 2,479 billion. Potential budgets for education have been estimated by gradually increasing the share of current state expenditure on education to reach 20 percent in 2024. The planned changes will lead to readjustments in the distribution of current budget expenditure in the education sector, with an

increasing share to be allocated to the secondary level to finance the expansion of the secondary school level." [fn14: Education sector strategy 2015-2025]. By 2025, the target operating budget for the Education sector, increased to 20 percent, would be XAF 420 billion. The target operating budget for higher education estimated at XAF 132 billion would represent 31 percent of the sector's budget compared with 28 percent in 2013. This budget configuration would lead to tensions in the allocation of the education budget within the sector if readjustments had to be made to take into account the expansion of secondary education, as indicated previously in the assumptions of the sector strategy.

170.   In addition, alternatively, with regard to higher education, an approach that takes into account the student unit cost at a 2013 constant value and the target enrollments projected for 2025 (XAF 1,300,000 at constant value over the period and an enrollment of 64,133 students), current expenditure would amount to XAF 83.3 billion at 2013 value, at an average inflation rate of 3.5 percent. This amount would be XAF 125.8 billion instead of XAF 132 billion, or 30 percent of the future education budget. These figures are not far from the results projected according to the assumption of the sector strategy.

171.   In order to contain higher education expenditure within the limits compatible with the intra-sectoral allocation constraints facing the Government, it would be possible to act on the unit cost of training in higher education. It will then be critical for the Government to contain this cost, which in 2013 represented 105 percent of per capita GDP.

172.   The implementation of the efficiency measures mentioned above will help to optimize the allocated resources. The same applies to cost control - and therefore to finance more services for the sector; and the contribution of the private sector in financing the expansion of access will also help to contain public expenditure on higher education to the acceptable level as a percent of GDP.

7.4. Financing of UMNG and private institutions

173.   The state budget is the sole source of funding for public higher education. In 2013 out of a budget of XAF 44.6 billion, 53 percent has been allocated to UMNG and 37 percent to scholarships. The graph below illustrates the distribution of the sole source of funding, which is the State budget, between the main user, which is UMNG, the sole public education institution, and scholarships for 37 percent.

Figure10. Breakdown of the higher education budget for 2013.
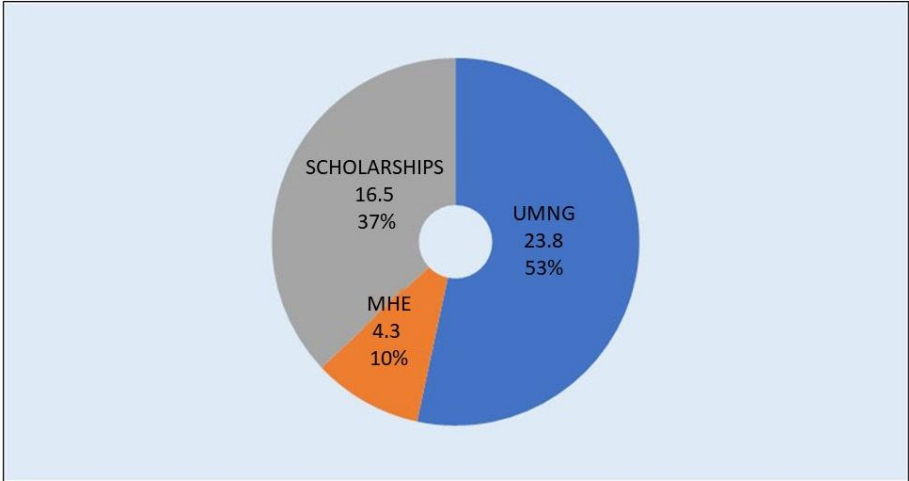
Source: Ministry of the Economy, Finance and Planning, 2015. Budget execution 2013

174.   Provisionally accredited private institutions, in their diversity and performance, are developing. They started with a few dozen students and now welcome hundreds of students, most of them in the traditional fields around the tertiary sector. However, their ambition is to open up technological fields of study. Tuition fees vary between XAF 40,000 and 65,000/month depending on the cycle and the type of institution or training structure. The promoters are making self-financing efforts and access to credit remains problematic.

175.   The still low transition rates which consequently lead to significant repetitions have a negative impact on the finances of the State and of households. Problems related to access and quality as well as the cost of training are sources of inefficient use of resources. Salaries and scholarships are the main parameters influencing unit costs in higher education. Apart from those who are in the first year of the colleges, except in medicine, all students, including those in competitive institutions, receive a scholarship.

176.   Finally, an effort must be made with regard to access to resources. Following the review of expenditure in the education sector, it emerges that the proportion of children from poor families enrolled in secondary and higher cycles remains extremely low and during the period under review, there has been a strong increase in the number of children from very well-off families in secondary education and even more in higher education.

7.5. Conclusion and recommendations

177.   The expansion of higher education must be carried out through a controlled progression that takes into account the possibility of having quality teachers in sufficient number; by ensuring that the courses that the institutions created will have are relevant to the needs of the local economy and the labor market demand; and by containing such progression within the limits of available financial resources and the recurrent costs generated by new investments.

178.   The objectives set are ambitious and the projected needs are very high; the level of spending on higher education is in line with what is commonly accepted. This gives little room to reallocate public resources from other education sub-sectors in favor of higher education, especially since the education sector strategy recommends an internal reallocation of sector funding in favor of secondary education (lower secondary schools). The room for maneuver is therefore limited. Thus, it is time to initiate a reform in the structuring of the higher education budget; to move away from the practice of renewing the budget according to historical trends or new measures, and to focus the process on what the student would actually cost for the structure. This has the advantage of encouraging UMNG and in the future, other institutions that will be created (or in the process of being created) to reduce inefficiencies. This is an opportunity to explore the performance-based contract system under which part of the resources are made available to institutions or the structure only if they meet some contractual requirements.

179.   A public policy that takes into account the improvement of quality in higher education aims to encourage households to participate more in the funding of higher education and to reduce the pressure on public finances that have reached their limit to mobilize more resources at the expense of other sectors.

180.   Finally, a targeting effort must be undertaken. It will be necessary to target students who are really in need and to be able to fund research and development as well. It is therefore necessary to use public funds more strategically and to ensure that the goal to be achieved is actually funding students.

181.   The future development of Congo's higher education system must include a policy of supply diversification based on the public and private sectors as its two pillars. Public institutions must also be encouraged to offer for-fee services, particularly in the field of research.

182.   This is why the future formats for budgets allocation to higher education must include an increased share for incentives for research - acquisition of equipment and materials - and for the development of partnerships with the working environment and especially the industrial sector. Partial cost recovery and control of unit costs are needed to improve service efficiency.

183.   On the other hand, there is a need for: (i) incentives for the mobilization of private funding and mechanisms for access to credit for private promoters who want to develop their structures and who already do a lot of self-funding; (ii) diversifying the sources of funding for higher education and promoting a legal framework for the development of private higher education; for example, encouraging partnerships through which it would be possible to provide financial support for certain aspects of the activity of private institutions and to raise funds from the private productive sector to support public higher education.

8. Transition to the labor market

184.   There is no adequate knowledge of data on employment and unemployment. The population censuses that address this matter are widely spread over time and very few specific surveys on employment are conducted. The most recent one, the Survey on Employment and the Informal Sector in Congo (EESIC) dates back to 2009 and covers only Brazzaville and Pointe-Noire. The World Bank's study on Growth and Employment in September 2011 served as a basis for the analysis to have a clearer understanding of the labor market.

185.   One of the conclusions of this analysis is that the Republic of the Congo has experienced strong sustained growth in previous years, but such growth has not been accompanied by sufficient job creation in the formal sector. One of the challenges that came out of the situation analysis is the improvement of the quality of education and the establishment of training programs to equip the workforce with the skills required. It is noted that in addition to the high labor supply due to demographic trends, there is a mismatch between the skills offered by job seekers and the skills sought by employers. The quality of the workforce, which is linked to the quality and delivery of education services, is then crucial.

186.   This chapter will address the employment situation, labor productivity and the relevance of higher education training.

8.1. Drivers of job demand: economic progress and growth sectors

187.   The past decade has been marked by a positive trend in terms of job demand. This positive dynamic has been supported by the growth in average annual employment in the private sector, in particular thanks to the construction and service sectors. Under the municipalization program, major infrastructure works were initiated, which boosted the construction sector. Over the period, services in telecommunications and the financial sector expanded following the opening up and restructuring reforms undertaken in these areas. In terms of workforce, the forestry and manufacturing industries are the largest employers, accounting for 20 percent and 22 percent of to the total workforce respectively, followed by the construction industry and trade (15 percent each), and financial and petroleum services (10 percent). [fn15: *Etude sur la Croissance et l'Emploi au Congo*. Banque Mondiale, September 2011].

188.   While oil remains the economy's main staple, a clear progress of the non-oil sector has been nevertheless observed in the recent economic growth, which constitutes an encouraging sign of diversification as reminded above.

189.   Sectors capable of boosting economic growth and diversification include: (i) agriculture and livestock, (ii) manufacturing industry, (iii) construction and public works, (iv) transport and telecommunications, (v) trade and hospitality. These five sectors have performed strongly and are already rooted in the economy as they employ a large part of the workforce.

190.   However, the traditional professions in services, telecommunications, banking and administration that used to be the only references are about to reach saturation, unlike the construction sector where, according to employers, there has been a glaring and persistent unmet need for skilled workers and middle managers over the last decade, with the major projects born out of the municipalization policy. In addition, emerging professions in the sectors of economic diversification and growth support were not

listed. In addition to construction, there are also the woodworking, mining and hospitality trades among others. On the other hand, mining companies with an operating permit are slow to launch their operations due to constraints linked to infrastructure and fluctuations in the price market for their products.

8.2. Changes in employment

191.   The number of employees with higher education was estimated at 153,469 in 2011, or 13 percent of the total workforce for that year. They were 72,426 in 2005. According to the most recent data from Congo's 2010 Statistical Yearbook, employment in the civil service stood at 179,504 in 2010, against 134,900 in 2006, which constitutes an increase by 33 percent. Table 29 in Annex 2 provides the workforce of State-owned enterprises and the modern private sector, showing there was a growth of 17 percent for the private sector and a decrease of 1 percent for SOEs.

192.   For the year 2014, statistics from ONEMO (which has become the Congo's Employment Agency since November 2019) show that there are 47,468 job seekers and 26,192 job offers, among which only 2,486 were filled. Data from the ONEMO remain fragmented. Some job seekers do not go through this entity for some of the job offers. The information received shows gaps as regards the age structure of job seekers from one region to another. It was then not possible to make a homogeneous analysis of the demography of job seekers. According to partial data collected from ONEMO (see Annex 3), out of 26,192 offers received in 2014, including 25,186 from the department of Kouilou-Pointe-Noire, only 2,486 were filled, including 2,324 from Kouilou- Pointe-Noire.

8.3. Performance and earnings - higher education and labor productivity

193.   According to Kuepié and Nordman (2012), educational attainment and the type of studies pursued play an important role in access to the formal sector. Vocational training is a more effective way than general education to access the formal public as well as the private sector.

194.   There is an increase in earnings when individuals complete secondary education and enter university. But the sharp increase in the earnings of individuals with higher education may also reflect the Dutch disease effect, as employees in the petroleum sector meet a strong demand for highly qualified personnel and adjust their salary requirement accordingly [fn16: Etude sur la croissance et l'Emploi; referring to the work of Kuepié and Nordman]. The authors demonstrated in the same study how in the Republic of Congo, the last years of high school and higher education are more profitable while the returns to primary are generally lower.

Table 6: Distribution of employees with higher education degrees, 2005 and 2011.

Educational attainment	Employees in 2005		Employees in 2011	
	Number	%	Number	%
None	719	0.1	2,686	0.2
Preschool	0	0.0	287	0.0
Primary	212,580	27.4	256,576	22.7
Lower secondary school	342,619	44.1	473,525	41.9
Upper secondary school	147,712	19.0	244,890	21.6
Higher education 1st/2nd Year	35,912	4.6	84,661	7.5
Higher education 3rd/4th Year	26,593	3.4	49,827	4.4
Higher education 5th Year and +	9,921	1.3	18,981	1.7
Total	776,056	100.0	1,131,433	100.0

Source: Estimates based on data from ECOM 2005, ECOM 2011

195.   An analysis of employees' average monthly salary by educational attainment shows that, overall, the average salary received by an employee is XAF 127,088. The salary is XAF 130,676 for men and XAF 116,653 for women. When educational attainment is taken into account, it appears that the salary of employees with a university level is fairly higher than that of their counterparts at other levels. The lowest salary is found among those with primary education only. Compared to young employees, the results of the Survey on Transition to Working Life (ETVA) 2015 show that young self-employed workers earn half as much as young employees. In fact, the average monthly income of self-employed workers is XAF 64,931.

196.   An analysis by educational attainment shows that on the whole, self-employed with a university level have a higher monthly income than other workers. Taking into account educational attainment, it appears that, among young people who are in transition, almost 60 percent are unemployed among those who have reached university level, or technical secondary level or post-secondary vocational level. (ETVA, p. 42).

197.   In view of the ETVA findings, there is good reason to suspect that young people who have transitioned have jobs that are more stable jobs as their educational attainment increases. Indeed, most of the young people who have completed their transition with university, post-secondary vocational and technical secondary education have stable jobs, at the rates of 89.7 percent, 73.1 percent and 57.4 percent respectively (ETVA, p. 44).

8.4. Relevance of higher education to labor market needs

198.   From discussions with the main players in the sector and from the analysis of data (although insufficient), it appeared that Congo's higher education does not meet the expectations of users and is not of good quality despite the significant resources allocated. This view is confirmed in the sector studies

used. The lack of appropriate professional skills appears to be a strong constraint for sectors such as transport, hospitality, construction and processing companies (chemicals, plastics, metal products and manufacturing industries) [fn17: *Etude sur la Croissance et l'Emploi au Congo*. World Bank, September 2011. p.7].

199.   The labor market remains mainly concentrated in Congo's two largest cities that represent 56 percent of the total population. According to the study "*Education et marché du travail*" in these two cities, the labor market is marked by a hypertrophy of the informal sector, which reflects high and growing unemployment in connection with the level of study on the market [fn18: Report by Mathias Kuepié and Christophe J. Nordman, January 2011]. The big number of unemployed with a certain educational attainment shows that there is a mismatch between the qualifications demanded by the private sector and those offered by job seekers. In Brazzaville, 65 percent of workers with higher education are found in the public sector, against 13 percent in the formal private sector [fn19: Idem p. 14]. The education system does not meet the needs of the private sector.

200.   A large portion of students have historically preferred general education to technical and vocational training. In fact, at UMNG most of the students follow a training course in generalist fields (humanities, law, economics, social sciences) to the detriment of scientific fields (physical sciences, chemistry, biology, etc.) and specialized training (agriculture, forestry, hydraulics, mines, geology, etc.).

8.5. Employers, training needs and supply: constraints linked to the relevance of higher education to the labor market

201.   Potential employers include the nascent manufacturing industry, mining companies with an operating agreement, timber industries, protected areas for ecotourism, hotels in Brazzaville and Pointe-Noire, construction companies, and transport companies. Skills and vocational training can also lead to self-employment and meet the multiple demands of households for services such as construction and carpentry.

202.   The lack of qualified workforce is listed among the main constraints for an increase in the demand for employment in the Congo and in particular in economic diversification sectors. This is the case for companies in the forestry sector which have to call upon foreign workers. The prospects for job creation in this sector are good, as the ONEMO statistics in Annex 3 show. The mining sector also offers employment potential but a training plan is needed to meet the employment opportunities in the sector. Other sectors that frequently come up in discussions as presenting a significant need for qualifications include construction and public works at the level of skilled workers and middle managers, mining, hospitality, the timber industry, transport and logistics.

203.   The main actors involved in the issue of employment report that there is some stagnation in the fields of finance (banks) and telecommunications although the latter has ample room for generating additional employment opportunities in the digital economy sector if appropriate reforms are pursued and room is given to small operators in the field of ICTs.

204.   Private operators of a certain size (TOTAL and MTN) develop training plans and call on public and private training institutions to implement the plans. Oil companies typically arrange and pay for training on specializations that are not offered in the country. Employers express their needs to training providers,

often in generic terms. This could be seen as a starting point for the engineering and preparation of training programs and can serve as a basis for sustained collaboration between training providers and employers.

205.   The current higher education system does not offer better opportunities on the labor market, thus raising the issue of higher education relevance and internal and external efficiency. The transition rate to higher education is high, but only a small number of students enroll in technical studies, while the majority study humanities, which limits their employment opportunities mainly to public administration or education, given the small size of the market. In 2011, among students enrolled at UMNG, only 15 percent were enrolled in scientific and technical fields (College of Science and Technology, Higher National School of Polytechnics, College of Health Sciences, and National School of Forestry and Agronomy). The rate increased to 19 percent in 2013. The rest of the students are enrolled social sciences, humanities, economics, and finance.

206.   On the other hand, the Teachers' Training School (ENS), the Higher Institute of Management (ISG), the National Higher School of Agronomy and Forestry (ENSAF), the College of Health Sciences (FSSA) and the National Higher School of Polytechnics (ENSP) recruit students through competitive examination and can also train on demand, but a large number of their graduates cannot find jobs. ENSP liaises with the private sector only when developing its curricula. It enters agreements with the private sector according to their training needs, but then does no follow-up.

207.   In general, the constraints related to the relevance of higher education to the needs of the labor market are gradually resolved over time through actions and policy measures aimed at resolving the issues of access improvement, supply diversification and quality improvement. In the Republic of Congo, these constraints are institutional and financial and are also linked to relations between the sector and the workplace.

208.   The existence of two ministries, one in charge of higher education and the other of scientific research and technological innovation is not conducive to developing the synergy required between these two components to achieve a relevant and quality higher education. Under this situation, the teaching and research staff fall under a two-pronged supervision, which may dilute energies depending on whether the heads of the two sectors define programs based on their administrative responsibility. Despite the good intentions of creating collaboration relationship, red tape often takes precedence over the goodwill of actors.

209.   In addition and due to this arrangement, research and innovation that should allow for strengthening linkages between enterprises and in particular the industrial environment and the university environment, further drive teaching away from the production environment. As a consequence, opportunities for having the industrial sector finance research are reduced and the public financing is not often oriented towards demand.

210.   Finally, due to their lack of autonomy, UMNG establishments often have to go through a long bureaucratic and hierarchical process to initiate any form of collaboration with the workplace. The heads of training institutions met at UMNG all expressed the difficulties they experience in initiating partnerships with the private sector because of this process which in reality constitutes a real impediment to diversifying and mobilizing external financial resources. They also point to two limiting factors: the lack of trust between the two parties and especially the insufficiency of grade A teachers who would be able to redeploy in cooperation tasks in addition to their heavy supervision workload due to the plethora students

in their department. Consequently, the financing of public higher education depends exclusively on public resources.

8.6. Actors of the transition to the labor market

211.   The actors in charge of supporting transition between education and the workplace operate in a fragmented manner and without formal coordination with employers.

212.   ONEMO's role was to coordinate job requests and offers, but it was not equipped to play this role effectively. It also does not have an information base that would allow for analyzing offers and requests that pass through it. It does not have regular statistics on offers and requests received and there is no framework for liaising with training providers so as to convey market signals to them. It no longer has access to the resources of the apprenticeship tax that once had given it the resources to carry out its mission and that would have favored the linking with training providers. It has difficulties to meet the offers it receives. As a stopgap measure to its failure to meet demand, it is in charge of promoting self-employment programs which are currently are struggling to take off due to lack of adequate funding. The reform of this entity in November 2019 resulted in the establishment of two structures: Congo's Employment Agency (replacing ONEMO) and the National Employment and the Apprenticeship Fund (FONEA). These two structures should play an essential role in the socio-professional integration of young people (based on supply and demand from companies) as well as in the sustainable funding of apprenticeship/conversion of young people.

213.   The Directorate of Skills Training and Employment on which ONEMO depends is not better equipped either. It does not have an updated directory of trades. In addition, the Ministry in charge of the Public Service and the sectoral ministries that have training schools under their supervision take care of the supply and demand of public employment in their sector. This function should normally be performed by ACPE which is not yet fully operational.

214.   UMNG has weak institutional links with the productive sectors and should develop a strategy of strengthening linkages and partnerships with the working environment through its directorate in charge of relations with the working environment. It should also develop and equip study programs preparing to professions.

9. Overall conclusion

215.   Over the last ten years, the higher education system in Congo has gone through significant changes in terms of access and significant resources have been mobilized for the sector. However, the resource allocation model and inefficient budget practices limit the sector's growth potential to effectively contribute to the country's development. Whether it concerns criteria for awarding scholarships or the method of making funds available to UMNG and its institutions, there are reforms to be carried out in order to improve budget implementation, the expenditure chain and achievements in relation to the needs and priorities expressed by the sector.

216.   The Government plans to implement a new higher education development policy with the aim of increasing access, improving quality and strengthening the system's governance in order to improve the relevance and efficiency of the higher education system. All of this will require embarking on a series of bold reforms to ensure the success of this new policy. Under this policy, improving the quality and effectiveness of teaching will be a priority; higher education institutions will have more autonomy; stronger incentives for the development of private higher education are considered; and one of the priorities will be to promote significant expansion of ICT and distance education with the development of the network of university institutions.

217.   Although its orientations and objectives are relevant, this policy will require a significant increase in the level of funding for the sector. In 2013, public resources injected into the sector accounted for 5.5 percent of GDP. To achieve the objective of the 2015-2025 sector strategy, the funding will have to be increased to at least 6 percent of GDP, a generally accepted standard, for the entire sector with inter and intra sector trade-offs. Such an increase, supported by the necessary trade-offs, will require innovation in the funding of higher education in addition to the efficiencies to be introduced, as noted above. A vigorous public-private partnership policy will have to considered. It will be necessary to revise the system for granting scholarships in order to promote more deserving students in need who are enrolled in promising study programs. Higher education establishments should be encouraged to mobilize more funds and should be made more accountable in the execution of their expenditure within the framework of a new governance of institutions. If the allocated funding follows students, institutions will be encouraged to improve quality and reduce inefficiencies.

218.   In addition, "For education to make it possible to obtain significant gains in the labor market, it is important to develop post-primary education and in particular higher education. This is all the more imperative given that in the short term, the informal sector will remain the main source of employment for young people knocking on the door of the labor market. However, our results show that in both the formal public and private sectors and the informal sector, wages increase with the number of years of education" [fn20: Report by Mathias Kuepié and Christophe J. Nordman: *Education et marché du travail à Brazzaville et Pointe Noire* - January 2011].

219.   The place and importance of higher education in the country's development policy and strategy is well established. Both to support the higher education diversification policy and to promote employment, higher education will have to be of quality, be in line with the work world and expand in a controlled way with adequate and effective governance as well as strategic options for its funding policy. These are the challenges that the Republic of Congo must address. More specifically, with reference to the education sector strategy, the following actions will have to be carried out:

- develop access to higher education and ensure a better distribution of the training offer across the country;

- offer quality training and direct student flows towards scientific and professional study programs and develop distance education;

- improve governance and management of the sector, endow the ministry with a steering and needs analysis capacity and strengthen partnerships with the productive sector.

220.   A first step towards this would be to finalize and adopt the new general higher education policy, and to initiate the key reforms that would place the sector on the track of development, in line with the priorities of the National Development Policy (2018-22) including the priority relating to the development of the human capital needed economic diversification and the country's development. This will require improving the sector's governance, supported by strengthened structures of the Ministry and the adoption of a policy to promote private higher education.

10. General recommendations

221.   The analysis carried out shows that the higher education system in Congo must be revitalized. The country's authorities are aware of this need and a higher education development policy has been drafted to serve as a basis for the future development of the sub-sector. However, the ambitions demonstrated in the policy are not in line with the pace of its implementation. The delay in the adoption and implementation of the general policy for the higher education development by the Government is a factor limiting the progress expected in the implementation of the reform agenda.

222.   By way of recommendations, the measures, reforms and critical actions that would contribute to the implementation of this policy are presented below. The proposed reforms and actions stem from this review of the sub-sector and would contribute to operationalizing the new higher education policy in such a way as to be in line with the challenges of higher education in the national and international context for better socio-economic development through the production of a qualified and competitive workforce. The recommendations revolve around (i) the strategy, governance and legal framework as well as (ii) the need to develop the educational offer while improving quality; and finally (iii) the rationalization of expenses. They are presented by phase (short and long term), highlighting the advantages they offer and the risks associated with their implementation if appropriate measures are not taken.

Short term measures		
Recommendations	**Benefits/scope**	**Associated risks to be taken into account**
1. Strategy, governance and legal framework		
(a) Urgently adopt the new policy and disseminate it to all stakeholders.	- Policy framework that demonstrates government commitment. - Supervision of activities around this base and in connection with the education sector strategy.	- Discredit if the adoption is deferred and stops the momentum created during its preparation - Lack of operational decision-making framework. - Lack of coherence, rationalization and efficiency in the actions carried out which often do not form part of a strategic approach
(b) Strengthen the sector's technical capacity and performance monitoring.	Ensuring availability of effective and operational management and steering resources for the implementation and monitoring of the policy.	- Weakening of supervision at the risk of the new policy becoming ineffective. - Less efficiency in obtaining the desired results

(c) Prepare a budgeted and quantified sectoral program to support the general higher education policy based on a university mapping established through a documented trade-off and aiming to improve the offer (quality and access), effectiveness and efficiency.	- Having a base for mobilizing resources and prioritizing investments. - Having a university mapping drawn up based on economic and social development needs and taking into account demographic trends. - Ensuring availability of resources to develop, implement and monitor a short- and medium-term expenditure framework/sector needs and priorities.	Failure to control the recurring costs that these investments would generate.
(d) Progress more rapidly in the implementation of the Quality Assurance System with a budgeted action plan and a clear and well-articulated roadmap.	Having a mechanism to regulate and strengthen quality control and efficiency within higher education (public and private). - Control of the offer (access and quality) by the private sector and more consistency in public-private synergies - Providing the MHE with a legal reference framework, a structure and strengthened means for the private establishments assessment system (accreditation system). - Support to the quality policy. - Filling the current gap in accreditation of programs and recognition of establishments. - External credibility of Congo's higher education. - Development of a culture of governance, including the evaluation dimension; guaranteeing to the various actors, users and providers of training that the programs taught are of good quality and will contribute to proven internal and external effectiveness.	- Failure to guarantee the independence of the quality assurance body would contribute to failure. - Fight resistance to departures in higher education. - Failure to strengthen the public-private partnership by implementing this quality assurance system could be a limiting factor for the development of higher education (offer diversification, training quality), access, the success and integration into the labor market of students, especially the most vulnerable.

	- The establishments are up to standard with an environment conducive to studies.	
(e) Redefine the institutional framework for the organization and management of the *baccalauréat*, while restoring/strengthening the information and guidance-counseling function for holders of *baccalauréat*.	- Impact on the quality of *baccalauréat* holders and on internal efficiency through proper guidance of students; balancing of enrollments n higher education institutions, offering career perspective to students.	Failure to take into account a revised institutional framework could contribute to reinforcing the current problems linked to fraud in the *baccalauréat* exams
(f) Revise the texts and criteria for granting scholarships for greater equity among students and provide special emphasis for girls and studies in scientific and technological study programs.	Allowing for restoring equity for deserving new *baccalauréat* holders and for encouraging students to pursue studies in scientific fields at the College of Science and Technology. Increasing the proportion of children from poor families who have access to higher education, which currently remains extremely low.	Controlling misconducts in the granting of scholarships, which put a strain on the budget of higher education.
2. Streamline and improve the funding system.		
a) Carry out a specific review of expenditure in the higher education sector.	Control of expenditure and development of a resource allocation mechanism in the sub-sector.	Spending without an allocation base.

Medium-term measures		
Recommendations	**Benefits/scope**	**Associated risks to be taken into account**
1. *Strategy, governance and legal framework*		
a) Strengthen the information system and set up an efficient EMIS in order to have a good database allowing policy decisions to be made for the sub-sector based on reliable evidence. Train staff to use this tool.	Improvement of the sub-sector's steering; allowing actors to be accountable for the use of resources according to the results assigned and achieved.	Persistence of "playing it by ear" due to the absence of current and reliable information on the sub-sector.

b) Improve the governance and management of the sector by adopting legal instruments that grant authority to the supervisory authorities and central structures, provide them with effective means to steer the sector and grant more autonomy to higher education institutions (HEI) with governance bodies to ensure such autonomy. Autonomy should come along with accountability for HEIs that will have to report on their results against resources made available to them. A performance-based contract system will be established between the Government and each HEI.	Having an institutional and legal framework that promotes result-based performance and encourages accountability. Increased HEI's efficiency and performance. - Granting HEIs operating autonomy which would help generate own funds needed to strengthen and develop these structures (to be reformulated) Having a management and governance tool for HEI (including the private sector) to allow for better mastering of access, quality and efficiency. Expanding the training offer and reducing pressure on public resources while improving the quality of private education. Allowing parents and students to make the right choices for type of higher education with access expanded.	Giving educational institutions autonomy without being accountable for results and their performance.
c) Define a policy for the promotion of private higher education and the development of public-private partnership, including, incentives for the mobilization of private finance, possibilities to raise funds from the productive sector, a mechanism of access to credit for private promoters, financial support for certain aspects of private establishments' operations.		Proliferation of private educational institutions that are not up to standards.
2. Improve the quality of the offer and its relevance to the workplace		

d) Revise curricula for better support to technical and technological education and in such a way as to train at the high levels of qualification needed by the economy, such as the advanced technicians and engineering levels.	Link with the needs of the local economy and labor market demand.	The lack of qualified teachers in these areas can compromise the implementation of new revised curricula.
e) Define an ICT development program aimed at strengthening the capacities of teaching and supervisory staff, improving information and services for students and promoting distance education.	Work that would also contribute to the evaluation of the different curricula implemented under the LMD system.	Choice of technologies that do not meet requirements; failure in student supervision.
f) Develop and implement a teacher training plan and supplement it with a recruitment plan for qualified non-permanent teachers who would benefit from this teacher training.	Improving access and reducing the cost of training by limiting investments in construction. Reducing structural costs; Possibility of unified supervision by grade A teachers; pooling of medicine, S&T, and ENSPT laboratories	Lack of a concerted training policy for doctorate level in order to meet needs.

3. Streamline and improve the funding system.		
g) Use the recommendations of the education expenditure review report.	Rationalization of expenses.	Failure to take this into account may result in the higher education being penalized in the intersectoral allocation of education spending.
h) Redefine the budget allocation system for HEIs and bring it into line with the contracting policy. Budgets could include a fixed component and a variable part that would be mobilized according to the performance achieved by each HEI	A more strategic use of public funds.	Resistance to submitting to the demands of the trade-offs to be made.

	Optimization of the use of available resources.	Fight the routine of rolling budgets being renewed from year to year. Lack of reliable statistical basis.

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- Country Partnership Strategy – Republic of the Congo- For the Period FY13-FY16 Report N° 71713.
- Enquête de transition vers la vie active, République du Congo 2015.
- Enquêtes consommation auprès de ménages 2005 et 2011.

ANNEXES

Annex 1: Development plan for higher education by 2025

University centers	Topics	Universities
Center 1	Science and Technology	- Denis Sassou Nguesso University of Kintélé (FST, EMHE, ESBTP, ESP, EN SET, ISEPS, ESTTIC, ISTA, ISSTC, ISTAK)
	Humanities, Social, medical, economic and legal sciences	- Marien Ngouabi University of Brazzaville (FSE, BUSINESS School, ENAM, ENS, ISG, FD, ENSAF, FLSH, ISTI, FSS with its "pharmacy" dimension
Center 2	Technological and economic sciences oriented towards maritime professions (petroleum, oceanography, maritime fisheries, law, etc.)	University of Pointe Noire (Colleges of Science and Technology, Colleges of Economics, Polytechnic School of Pointe Noire, National School of Commerce and Management)
Center 3	Agronomy, Architecture, Arts and Crafts	University of Dolisie (Colleges of Sciences and Techniques, Colleges of Humanities and Social Sciences, Higher National School of Tropical Agronomy (Sibiti), School of Architecture of Nkayi, National Higher School of Arts and Crafts (Dolisie)
Center 4	Humanities, Social Sciences, Health Sciences, Continental Fisheries, Agro-industrial Engineering	University of Makoua (Colleges of Letters and Human Sciences of Makoua, Colleges of Law and Political Sciences of Makoua, Higher Institute of Continental Fisheries (Mossaka), National Higher School of Health Auxiliaries (Owando) University of Oyo (Colleges of Science and Technology, Institute of Mines and Geology (Ewo), Higher Institute of Agro-Industry (Oyo), National Higher School of Fine Arts (Djambala)
Center 5	Environment, Eco-tourism and sustainable development	Inter-State University of Ouesso (College of Sciences and Techniques, Instituts Sup du Bois (Ouesso), Institute of Telecommunications (Ouesso) Higher Institute of Environment and Tourism (Impfondo)

Source: ICT and Statistics Department/UMNG and DEP/MES 2015 survey

Annex 2: Data on the higher education sector

Table 7: Changes in UMNG student numbers between 2002-2003 and 2017-2018

Year	Number
2002-2003	11,514
2003-2004	10,640
2004-2005	12,424
2005-2006	14,685
2006-2007	13,890
2007-2008	14,667
2008-2009	18,589
2009-2010	18,759
2010-2011	20,315
2011-2012	26,492
2012-2013	23,670
2013-2014	29,249
2014-2015	32,878
2015-2016	28,545
2016-2017	35,118
2017-2018	24108

Source: UMNG/Department of Education and Examinations (2020).

Table 8: Distribution of students at UNMG, by type of establishment, 2010-2011 and 2016-2017

Year	Number of students enrolled at UMNG			
	Schools	Colleges	Institutes	Overall
2010-2011	3,052 (15.0%)	16,127 (5.6%)	1,136 (79,4%)	20,315
2016-2017	4,426 (12.6%)	29,340 (83.5%)	1,352 (3.8%)	35,118

Source: UMNG/Department of Education and Examinations (2020).

Table 9: Distribution of public sector students, by level, in 2013-2014 and 2016-2017.

Year	Number of students enrolled in the public sector			
	License	Master	Doctorate	Overall
2013-2014	22,149 (74.9%)	6,618 (22.4%)	666 (2.3%)	29,572
2016-2017	29,178 (79.2%)	6,653 (18.1%)	821 (2.2%)	36,838

Sources: Statistical yearbooks for higher education 2013-2014 and 2016-2017.

Table 10: Percentage of new entrants in relation to total new entrants

Training structures	New entrants 2011		New entrants 2014		2014/2011 Report
	Number	%	Number	%	
Schools					
Total 1	1,334	13.3	4,065	21.5	3,0
Of which girls	334	10.2	2,036	27.2	6,1
Colleges					
Total 2	7,806	78.1	8,477	44.8	1,1
Of which girls	2,608	79.3	2,825	37.8	1,1
Institutes					
Total 3	861	8.6	6,362	33.7	7,4
Of which girls	348	10.6	2,619	35.0	7,5
Total 1 + 2 + 3	10,001	100.0	18,904	100.0	1,9
Of which girls	3,290	100.0	7,480	100.0	2,3

Source: Statistical yearbooks of higher education, 2010/2011 and 2013/2014

Table 11: Summary of the main variable's characteristic of higher education

SECTOR	ESTABLISHMENTS	NEW ENTRANTS		ENROLLMENTS		REPEATERS		FOREIGN STUDENTS		GRADUATE STUDENTS		TEACHERS		PATOS	
		Total	of which Girls	Total	of which Girls	Total	of which Girls	Total	of which Girls	Total	of which Girls	Total	of which Girls	Total	of which Girls
PUBLIC	11	9,206	3,040	29,572	10,945	13,056	4,314	176	44	3,627	1,014	1,366	113	596	306
PRIVATE	35	9,698	4,440	15,087	7,838	3,583	1,836	319	129	4,599	2,572	1,268	63	297	101,
TOTAL	**46**	**18,904**	**7,480**	**44,659**	**18,783**	**16,639**	**6,150**	**495**	**173**	**8,226**	**3,586**	**2,634**	**176**	**596**	**306**

Source: Statistical yearbook of higher education, 2013/2014

Table 12: Number of early and late students at UMNG, 2011 and 2014

Student's age	2011 Enrollments		2014 Enrollments	
	Number	%	Number	%
Under 19	**866**	**2.5**	**6,305**	**21.3**
Of which girls	299	0.9	2,889	9.8
30 years and over	**1,940**	**5.6**	**3,601**	**12.2**
Of which girls	451	1.3	1,413	4.8
Total repeaters	21,902	**100.0**	29,572	100.0

Source: Statistical yearbooks of higher education, 2010/2011 and 2013/2014

Table 13: Gross/net enrollment rates of in higher education (%)

Poverty status	GER (%)		NER (%)		Deviations (%)	
	2005	2011	2005	2011	GER	NER
Poor						
Boys	7.4	9.2	1.2	3.2	1.8	2
Girls	3.8	7.8	0.2	2.3	4	2.1
Overall	5.6	8.5	0.8	2.7	2.9	1.9
Not poor						
Boys	19.6	38.4	4.1	17	18.8	12.9
Girls	10	31.2	3.6	10.6	21.2	7
Overall	14.3	34.4	3.8	13.5	20.1	9.7
Overall						
Boys	13.2	24.5	2.6	10.4	11.3	7.8
Girls	7.1	20.4	2	6.8	13.3	4.8
Overall	10.1	22.3	2.3	8.5	12.2	6.2

Source: Authors' calculations from 2005 and 2011 ECOM

Table 14: Percentage of graduates by educational attainment in the labor force, 2005 and 2011

Educational attainment	Survey year: 2005		Survey year: 2011	
	Number	%	Number	%
None	54,014	2.6	109,463	4.7
Preschool	27,453	1.3	55,296	2.4
Primary	1,101,649	53.7	1,090,222	46.5
Lower secondary school	912,116	44.4	1,033,625	44.0
Upper secondary school	332,869	16.2	468,175	19.9
Higher education 1st/2nd Year	69,897	3.4	137,408	5.9
Higher education 3rd/4th Year	45,894	2.2	65,655	2.8
Teach. sup. 5th Year and +	13,848	0.7	24,808	1.1
Active population (15-65 years)	**2,053,000**	-	**2,347,000**	-

Source: Estimates based on data from 2002 ECOM, ECOM and Directories.

Table 15: Number of students per 100,000 inhabitants.

No.	Country	Number of students per 100,000 inhabitants (year 2013 or around 2003)	No.	Country	Number of students per 100,000 inhabitants (year 2013 or around 2003)
1	Algeria	3,195	27	Liberia	1,047
2	Angola	1,018	28	Libya	..
3	Benin	1,127	29	Madagascar	423
4	Botswana	2,728	30	Malawi	79
5	Burkina Faso	439	31	Mali	655
6	Burundi	442	32	Mauritania	495
7	Cameroon	1,154	33	Morocco	1,577
8	Cabo Verde	2,619	34	Mozambique	496
9	Central African Republic	277	35	Namibia	..
10	Chad	202	36	Niger	127
11	Comoros	842	37	Nigeria	..
12	Congo	833	38	Rwanda	655
13	Côte d'Ivoire	834	39	Sao Tome and Principe	755
14	Democratic Republic of Congo	656	40	Senegal	711
15	Djibouti	..	41	Seychelles	256
16	Egypt	3,019	42	Sierra Leone	..
17	Equatorial Guinea	..	43	Somalia	..
18	Eritrea	210	44	South Africa	1,92
19	Ethiopia	..	45	South Sudan	..
20	Gabon	..	46	Sudan	1,686
21	Gambia	..	47	Sudan (pre-secession)	..
22	Ghana	1,37	48	Swaziland	645
23	Guinea	932	49	Togo	952
24	Guinea-Bissau		50	Uganda	399
25	Kenya	..	51	United Republic of Tanzania	321
26	Lesotho	1,16	52	Zambia	..
			53	Zimbabwe	665

Table 166: Students' results by college, gender and passing rate in L1 and L2

2011-2012									
L1									
	Women			Men			TOTAL		
Establishments	Registered	Admitted[1]	Passing rate[2]	Enrolled	Admitted	Passing rate	REGISTERED	ADMITTED	PASSING RATE
FD	518	266	51.4	871	407	46.7	1389	673	48.5
FLSH	1460	706	48.4	1973	1105	56.0	3433	1811	52.8
ESF	482	183	38.0	1066	336	31.5	1548	519	33.5
FST	215	71	33.0	894	191	21.4	1109	262	23.6
Total	2675	1226	45.8	4804	2039	42.4	7479	3265	43.7
L2									
	Women			Men			TOTAL		
Establishments	Registered	Admitted[1]	Passing rate[2]	Enrolled	Admitted	Passing rate	REGISTERED	ADMITTED	PASSING RATE
FD	227	116	51.1	381	176	46.2	608	292	48.0
FLSH	599	461	77.0	841	600	71.3	1440	1061	73.7
ESF	339	175	51.6	569	297	52.2	908	472	52.0
FST	94	38	40.4	275	145	52.7	369	183	49.6
Total	1259	790	62.7	2066	1218	59.0	3325	2008	60.4
2012-2013									
L1									
	Women			Men			TOTAL		
Establishments	Registered	Admitted[1]	Passing rate[2]	Enrolled	Admitted	Passing rate	REGISTERED	ADMITTED	PASSING RATE
FD	395	198	50.1	702	308	43.9	1097	506	46.1
FLSH	820	332	40.5	1324	687	51.9	2144	1019	47.5
ESF	487	233	47.8	889	326	36.7	1376	559	40.6
FST	271	81	29.9	903	251	27.8	1174	332	28.3

	Women			Men			TOTAL		
Total	1973	844	42.8	3818	1572	41.2	5791	2416	41.7
L2									
	Women			Men			TOTAL		
Establishments	Registered	Admitted[1]	Passing rate[2]	Enrolled	Admitted	Passing rate	REGISTERED	ADMITTED	PASSING RATE
FD	393	216	55.0	594	310	52.2	987	526	53.3
FLSH	765	286	37.4	1091	700	64.2	1856	986	53.1
ESF	357	147	41.2	676	276	40.8	1033	423	40.9
FST	58	31	53.4	275	116	42.2	333	147	44.1
Total	1573	680	43.2	2636	1402	53.2	4209	2082	49.5

1: These are the students authorized to register for the next level after the final exams.

2: The passing rate is calculated as the ratio of admissions to registered students expressed as a percentage.

Table 17: Proportion of repeaters at UMNG, 2011 and 2014

Cycle and level of study	Repeaters 2011		Repeaters 2014	
	Number	%	Number	%
License (3 years)	**8,758**	**40.0**	**10,118**	**34.2**
Master (2 years)	**948**	**4.3**	**2,724**	**9.2**
Doctorate (3 years)	**11**	**0.1**	**136**	**0.5**
Total repeaters	9,717	44.4	12,978	43.9
Of which girls	2,060	9.4	4,300	14.5
Total university students	21,902		29,572	,
Of which girls	3,290	,	10,945	,

Source: Statistical yearbooks of higher education, 2010/2011 and 2013/2014

Table 18: Distribution of educational attainments, 2005 and 2011

Level of education completed	Survey year: 2005		Survey year: 2011	
	Number	%	Number	%
None	54,014	2.1	109,463	3.7
Preschool	27,453	1.1	55,296	1.9
Primary	1,101,649	43.1	1,090,222	36.5
Lower secondary school	912,116	35.7	1,033,625	34.6
Upper secondary school	332,869	13.0	468,175	15.7
Higher education 1st/2nd Year	69,897	2.7	137,408	4.6
Higher education 3rd/4th Year	45,894	1.8	65,655	2.2
Higher education 5th Year and +	13,848	0.5	24,808	0.8
Total	**2,557,740**	100.0	**2,984,652**	100.0

Table 19: Proportion (%) of students mentioning various inadequacies in higher education, 2005, 2011

Deficiencies observed in higher education	Sector of establishment							
	Public		Private		Managed otherwise*		Overall	
	2005	2011	2005	2011	2005	2011	2005	2011
No problem (% satisfaction)	16	29	60	64	67	83	31	47
Lack of books/supplies	52	45	24	18	26	-	42	31
Lack of teachers	5	4	4	4	-	-	5	4
Too many students	26	47	4	6	-	-	19	25
Establishments in poor condition	21	15	2	5	-	-	14	10
Teachers often absent	15	22	6	4	-	-	11	13
Teachers of poor quality	12	8	3	2	-	2	9	5
Other problem	20	4	6	13	6	17	15	9
As a reminder, distribution of students by type of establishment (%)	74	61	21	35	5	4	100	100

Source: Estimates based on data from 2005 ECOM, 2011 ECOM and school statistics for 2004/2005, 2010/2011

* Managed otherwise by a Church, the community or an entity other than the State and the secular private.

Table 20: Distribution of teaching staff in public structures by status and gender

Establishments	Academic year 2010 - 2011				Academic year 2013 - 2014			
	Teaching staff				Teaching staff			
	Total number of teachers		of which permanent teachers		Total number of teachers		of which permanent teachers	
	Total	of which Women	Total	of which Women	Total	of which Women	Total	of which Women
College of Humanities	225	19	103	11	288	23	117	16
College of Sciences and Technologies	210	18	93	8	269	32	103	7
College of Economics	162	8	61	3	263	13	79	4
College of Law	70	6	41	2	96	11	54	7
College of Health Sciences	109	16	77	12	162	27	107	18
S/total Colleges	776	67	375	36	1,078	106	460	52
Teachers' Training School (ENS)	169	18	60	12	193	26	74	14
National Polytechnic School	119	11	39	4	166	17	54	6
National School of Administration and Magistrature	148	7	31	1	191	5	32	1
S/total Schools	436	36	130	17	550	48	160	21
Higher Institute of Physical and Sports Education	154	9	12	0	206	10	25	1
Institute of Rural Development *	54	5	35	4	78	9	39	4
Higher Institute of Management	68	5	25	2	65	7	34	4
S/total Institutes	276	19	72	6	349	26	98	9
Overall	1,488	122	577	59	1,977	180	718	82

Source: Ministry of Higher Education * IDR became in 2013 the National Higher School of Agronomy and Forestry (ENSAF)

Table 21: Distribution of employees with higher education degrees, 2005 and 2011.

Level of education completed	Employees in 2005		Employees in 2011	
	Number	%	Number	%
None	719	0.1	2,686	0.2
Preschool	0	0.0	287	0.0
Primary	212,580	27.4	256,576	22.7
Lower secondary school	342,619	44.1	473,525	41.9
Upper secondary school	147,712	19.0	244,890	21.6
Higher education 1st/2nd Year	35,912	4.6	84,661	7.5
Higher education 3rd/4th Year	26,593	3.4	49,827	4.4
Higher education 5th Year and +	9,921	1.3	18,981	1.7
Total	**776 056**	100,0	**1 131 433**	100,0

Source: estimates based on 2011 ECOM data

Table 22: Estimated household education expenditure for years 2005 and 2011 (Public)

Education	Number of students in 2005 (school statistics)	Household expenditure in 2005 (millions XAF)		Number of students 2011 (school statistics)	Household expenditure in 2011	
		Per student (Cu1 in XAF)	Aggregated (millions XAF)		Per student (Cu1 in XAF)	Aggregated (millions XAF)
Preschool	23,320	77,145	1,799	47,287	89,111	4,214
Primary	611,679	6,827	4,176	722,718	15,993	11,558
Secondary	223,770	27,360	6,122	282,870	41,756	11,812
Lower secondary school	190,193	25,864	4,919	218,998	34,846	7,631
Upper secondary school	33,577	35,830	1,203	63,872	65,449	4,180
Higher education	11,710	59,311	695	21,902	108,510	2,377
Total	870,479	,	12,792	1,074,777	,	29,960

Source: estimates based on data from 2005 ECOM, 2011 ECOM and school statistics 2004/2005, 2010/2011

Table 23: Estimated household education expenditure for years 2005 and 2011 (Public)

Education	Number of students in 2005 (school statistics)	Household expenditure in 2005 (millions XAF)		Number of students 2011 (school statistics)	Household expenditure in 2011	
		Per student (Cu1 in XAF)	Aggregated (millions XAF)		Per student (Cu1 in XAF)	Aggregated (millions XAF)
Preschool	5,380	39,933	215	5,807	84,219	489
Primary	456,313	4,413	2,014	449,747	7,242	3,257
Secondary	172,091	21,277	3,662	183,511	29,415	5,398
Lower secondary school	144,927	18,534	2,686	138,494	21,968	3,042
Upper secondary school	27,164	35,907	975	45,017	52,326	2,356
Higher education	7,798	52,589	410	10,743	70,757	760
Total	641,582	,	6,300	649,808	,	9,904

Source: estimates based on data from 2005 ECOM, 2011 ECOM and school statistics 2004/2005, 2010/2011

Table 24: Estimated household education expenditure for years 2005 and 2011 (Private)

Education	Number of students in 2005 (school statistics)	Household expenditure in 2005 (millions XAF)		Number of students 2011 (school statistics)	Household expenditure in 2011	
		Per student (Cu1 in XAF)	Aggregated (millions XAF)		Per student (Cu1 in XAF)	Aggregated (millions XAF)
Preschool	17,940	59,171	1,062	41,480	70,253	2,914
Primary	155,366	20,086	3,121	272,971	37,252	10,169
Secondary	51,679	49,240	2,545	99,359	58,998	5,862
Lower secondary school	45,266	51,389	2,326	80,504	55,802	4,492
Upper secondary school	6,413	34,065	218	18,855	72,645	1,370
Higher education	3,912	66,428	260	11,159	114,110	1,273
Total	228,897	,	6,987	424,969	,	20,218

Source: estimates based on data from 2005 ECOM, 2011 ECOM and school statistics 2004/2005, 2010/2011

Table 25: Estimated household expenditure per child by level of education and some socio-demographic characteristics, 2011

	Preschool			Primary			Secondary			Higher education		
	Total	Public	Private	Total	Public	Private	Total	Public	Private	Total	Public	Private
Average expenditure per child	89,111	84,219	70,253	15,993	7,242	37,252	41,756	29,415	58,998	108,510	70,757	114,110
According to the place of residence												
Urban	62,002	41,298	72,863	69,594	50,452	86,937	93,313	60,635	123,667	169,948	101,835	215,257
Rural	7,494	7,011	23,062	8,550	7,536	25,770	13,040	11,363	40,802	67,628	54,182	222,000
According to gender												
Boy	4,826	6,116	6,923	7,002	4,760	11,888	13,591	12,204	22,090	14,134	13,442	17,968
Girl	10,243	3,230	13,661	8,700	5,040	15,186	11,361	3,616	16,072	34,072	15,821	38,624
According to standard of living												
Q1 (poorest 20%)	6,162	6,151	16,234	9,677	9,597	46,896	11,717	10,748	33,111	1,500	1,500	-
Q2	14,978	12,497	31,530	25,141	20,052	65,647	31,303	27,314	66,633	68,921	40,320	143,048
Q3	34,346	25,815	48,586	42,670	33,423	67,210	60,034	35,907	94,277	91,411	64,268	109,655
Q4	40,917	27,328	47,038	61,595	43,931	78,483	79,307	61,632	99,646	98,931	73,631	131,593
Q5 (richest 20%)	84,241	65,495	94,650	99,767	72,568	114,500	140,649	93,636	170,681	233,129	155,383	283,851

Source: estimates based on 2011 ECOM data

Table 26: Total household expenditure on higher education and determination of the share of national expenditure borne by households (2005 and 2011)

Macroeconomic indicators	Higher education (Public and Private)	
	2005	**2011**
Average expenditure per student (in thousands) (A)	59.3	108.5
Enrollment (in thousands) (B)	11.7	21.9
Total household expenditure (in billions) (C = AXB)	0.7	2.4
Total current public expenditure (in billions) (D)	16.1	25.9
National expenditure on education (in billions) (E = C + D)	16.8	28.3
% of national expenditure borne by households ((C/E) * 100)	4.1	8.4
	,	,
GDP at constant prices (billions)	1,071.0	1,433.0
Total population (in millions)	3.6	4.1
GDP per capita at constant prices (XAF)	302,000	350,000
	,	,
Household expenditure per student/GDP per capita at constant prices (%)	19.64	31.00

Source: estimates based on 2005 and 2011 ECOM data

Table 27: Total household expenditure on higher education (public) and determination of the share of national expenditure borne by households (2005 and 2011)

Macroeconomic indicators	Higher education (Public)	
	2005	**2011**
Average expenditure per student (in thousands) (A)	52.6	70.8
Enrollment (in thousands) (B)	7.8	10.7
Total household expenditure (in billions) (C = AXB)	0.4	0.8
Total current public expenditure (in billions) (D)	16.1	25.9
National expenditure on education (in billions) (E = C + D)	16.5	26.7
% of national expenditure borne by households ((C/E) * 100)	2.5	2.8
	,	,
GDP at constant prices (billions)	1,071.0	1,433.0
Total population (in millions)	3.6	4.1
GDP per capita at constant prices (XAF)	302,000	350,000
	,	,
Household expenditure per student/GDP per capita at constant prices (%)	17.41	20.22

Source: estimates based on 2005 and 2011 ECOM data

Table 28: Total household expenditure on higher education (private) and determination of the share of national expenditure borne by households (2005 and 2011)

Macroeconomic indicators	Higher education (Private)	
	2005	2011
Average expenditure per student (in thousands) (A)	66.4	114.1
Enrollment (in thousands) (B)	3.9	11.2
Total household expenditure (in billions) (C = AXB)	0.3	1.3
Total current expenditure of the State (in billions) (D)	16.1	25.9
National expenditure on education (in billions) (E = C + D)	16.4	27.2
% of national expenditure borne by households ((C/E) * 100)	1.6	4.7
GDP at constant prices (billions)	1,071.0	1,433.0
Total population (in millions)	3.6	4.1
GDP per capita at constant prices (XAF)	302,000	350,000
Household expenditure per student/GDP per capita at constant prices (%)	22.00	32.60

Source: estimates based on 2005 and 2011 ECOM data

Table 29: Comparison of education expenditure as a percentage of GDP with other African countries

Country	Public expenditure for Education as % of GDP	Primary net enrollment rate	Higher education enrollment rate
Cabo Verde	4.9	98	23
Mauritius	3.7	98	41
Morocco	6.3	98	-
Republic of Congo	5.5	90	10
Rwanda	5.0	93	8
Cameroon	3.0	95	-
Mozambique	6.6	87	5

Source: World Developement Indicators (data year 2014)

Table 30: Changes in the number of employees in public and private companies

Companies	Years				
	2006	**2007**	**2008**	**2009**	**2010**
Public	9,949	9,695	9,642	9,803	9,878
Modern private	32,624	34,330	36,217	37,438	38,247
Total	42,573	44,025	45,859	47,241	48,125

Source: Congo directory 2010. September 2012 Edition.

Table 31: Distribution of new entrants in all training structures by type of establishment and gender according to the type of diploma and the *baccalauréat* section (year 2014)

Type of diploma/series		Schools		Colleges		Institutes		Total	
		Total	of which Girls	Total	of which Girls	Total	of which Girls	Total	of which Girls
General baccalauréat	A (Humanities)	812	476	3 599	1 082	874	448	5 285	2 006
	C (Mathematics)	459	97	849	351	666	117	1 974	565
	D (Natural sciences)	1119	456	3 522	1 103	1 516	462	6 157	2 021
	S (Scientific = C and D)	2	1	0	0	4	0	6	1
	Total	**2392**	**1030**	**7 970**	**2 536**	**3 060**	**1 027**	**13 422**	**4 593**
Technical baccalauréat	B/G (Commercial technical)	212	164	158	82	483	336	853	582
	G (Management technical)	895	680	339	204	1 881	1 116	3 115	2 000
	E (Mathematics and techniques)	102	19	0	0	72	19	174	38
	F (Mechanics and electrical engineering)	188	20	1	0	697	15	886	35
	H (IT)	0	0	0	0	84	78	84	78
	R (Agriculture)	133	33	9	3	74	23	216	59
	Total	**1530**	**916**	**507**	**289**	**3 291**	**1 587**	**5 328**	**2 792**
Other diplomas	CFEEN	129	79	0	0	11	5	140	84
	DEMA	10	10	0	0	0	0	10	10
	CAPT	4	1	0	0	0	0	4	1
	Total	**143**	**90**	**0**	**0**	**11**	**5**	**154**	**95**
Overall		4065	2036	8 477	2 825	6 362	2 619	18 904	7 480

Certificate of End of Teachers' Training (CFEEN)

Diploma of Medium Artistic Studies (DEMA)

Certificate of Technical and Professional Qualification (CATP)

Table 32: UMNG establishments listed for the 2016-2017 academic year

UMNG establishments	Year of creation
College of Humanities	1971
College of Sciences and Technologies	1971
College of Economics	1988
College of Law	1988
College of Health Sciences	1975
Teachers' Training School (ENS)	1976
National Polytechnic School	1996
National School of Administration and Magistrature	1972
Higher Institute of Physical and Sports Education	1975
National Higher School of Agronomy and Forestry	1975
Higher Institute of Management	1998
National Institute of Social Work	2014

Source: DEP/MES, data collection 2016-2017

Table 33: Breakdown of establishments by sector according to type of establishment

Sector	Type of establishment			Total
	College	Institute	School	
Public	5	3	4	12
Private	4	28	14	46
Total	9	31	18	58

Source: DEP/MES, data collection 2016-2017

Annex 3: National distribution of job vacancies by branch and by professional qualification

Department	Industry	Professional qualification										Total
		G1	G2	G3	G4	G5	G6	G7	G8	G9	ND	
Kouilou/Pointe-Noire	I		16	43				43				102
	B		265	415	138			193		350		1,361
	VS		135	641	15			2,721		149		3661
	I		135	434				953		58		
	E											
	F		10	101				1,381		86		
	G		49	444	175	32		4				704
	H		71	577	163			351	3503	1,361		6,026
	I			35	6	120		280		47		488
	J		126	629	135			38				928
	K		310	1,748	277			4				2,339
	T											–
	M		52	442	624			731				1,849
	N		206	926	567	568		40		1519		3,826
	O		2	12	200							214
	P			2	43							45
	Q			8	71	175						254
	R											
	S											
	T									231		231
	U											
Total			1,377	6,457	2,414	895	0		6,739	3503	3,801	0	25,186
National Total													26,192

Source: ONEMO, 2014

LEGEND A- Agriculture, Forestry and Fishing; B- Extractive activities; C- Manufacturing activities; D-Production and Distribution of electricity, gas, steam and air conditioning; E- Water distribution, sewerage network, waste management and rehabilitation activities; F-Construction G-Wholesale and retail trade, repair of motor vehicles and motorcycles; H-Transport, warehousing; I-Hospitality ; J-Information and communication; K-Financial and insurance activities; L-Real estate activities; M-Professional, scientific and technical Activities; N-Administrative and support service activities; O-Public administration and defense, compulsory social security; P-Education; Q-Health and social action activities; R-Arts, entertainment and

recreation; S-Other service activities; T- Activities of private households employing goods and services of private households for own use U-Activities of extraterritorial organizations and bodies.