

# Higher Education's Curriculum and Challenges of the 21<sup>st</sup> Century: The Case Study of Cameroonian Public Universities

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## Abstract

Higher education is worldwide recognised very crucial in socioeconomic development. University's education generates new knowledge, innovates and stirs critical thinking that contribute to the economic growth and social development. In this regard, this study aimed to explore Cameroonian university programmes and their capacity to face socioeconomic development challenges. Based on one of the researchers' own experience partly as Cameroonian university alumni, and a student enrolled at a university abroad; but also based on the documents' analysis, the study used qualitative method to throw a critical view on the extent to which the quality implemented curriculum in Cameroonian state universities can or not meet the country's economic development objectives. The results showed that state university's programmes are mostly based on social sciences and humanities, which, yet, have no big significant impact on economic growth. Based on these results, critical socioeconomic development programmes such as STEM curriculum have been suggested so that state university programmes match the country's needs as well as the international labour market.

**Keywords:** Higher education, university curriculum, skill, socioeconomic development, Cameroon

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## 1. Introduction

Inherited from the colonial legacy, shaped on French and English system (Ngwana, 2001), Cameroon's higher education like in many other African countries, face lots of challenges such as educational policy conception and implementation, governance, funding, among others. All these problems hinder the proper development of higher education. Today, higher education has been proved to be very crucial for the development of any country in the world. The discourse regarding the return of investment in the education sector has changed. Despite the criticism of some existing literature regarding the current discourse contradicting the one in the late 1980s which seemed to highlight that investment in tertiary education yields a smaller return than that of lower sectors of education (Eta & Vuban, 2018; Schendel & Mccowan, 2014), higher education has become the sector, which has the biggest return. Since the publication in 2000 of the report "*Higher Education in Developing Countries: Peril and Promise*" which pointed out the actual and potential contribution of quality higher education to social, economic and political development, higher education has become the sector per excellence in shaping human capital instead of basic education sector as it has been proved in the 1990s by many international organisations and economists (Bloom, Altbach, & Rosovsky 2016). Montenegro & Patrinos (2013) carried out a study on the returns of schooling and found out that tertiary education sector across the regions of the world has the highest returns, and Sub-Saharan Africa has the biggest rate with 21.9% return from tertiary education compared to 13.4% at primary and 10.8 at secondary level. Higher education allows to attain economic growth, poverty reduction and sustainable development, especially in developing countries such as African countries which face growth and development challenges on all fronts (Magdalin, 2014).

With a population of relatively well educated, Cameroon is a lower middle-income country (World Bank, 2016). In 2016 the youth unemployment rate (age 15-24) was 9.024% (World Bank, 2016). The country average annual gross domestic product (GDP) growth has stood between 5.5% and 5.9% between 2013 and 2015 (Systematic Country Diagnostic[SCD], 2016) with GDP per capita estimated at US\$1,429 in 2014 (World Bank, 2016). The pace of economic growth over the last decade has been too slow to lead to sustainable development, significant poverty reduction, and shared prosperity. Since 2001, an estimate of 40% of the population has been living below the poverty line, and around one-quarter of the population is considered chronically poor (World Bank, 2016).

Contrary to its rich potential in natural resources, with active young working population, Cameroon remains a poor country with a high unemployment rate and low productivity. One of the goals of the 1993 reform in higher education in Cameroon was to expand and increase higher education opportunities and make university programmes more professional and more responsive to the market forces (Ngwana 2001). However, until to date, there is no significant progress made in terms of key programmes related to the economy's modernisation and

development, such as STEM (Sciences, Technology, Engineering, and Mathematics) curriculum. To meet the goals of becoming a higher middle-income status country by 2035, as it is set by the state government, it is critically relevant that people should be equipped with new knowledge and skill-based economy. “The dawning of the twenty-first century is being recognised as the knowledge era, and higher education must play a central role”(Teferra & Altbach, 2004).

Some developing countries such as China and India have long understood the relevance of higher education, and especially the key programmes contributing to socioeconomic development. Higher education constitutes a policy priority in both countries (Altbach, 2009). Constituting both together one-third of the world’s population, but also the most rapidly growing economies, they have been awakened to the significance of higher education for technological development and the global knowledge economy (Altbach, 2009). To meet the needs required for economic growth, China, for instance, has initiated many higher education reforms with the primary purpose of introducing the market forces to liberate education (Cai, 2013). Through the “project 211” and “project 985” for example, China has given priority to the higher education by strengthening about 100 higher institutions and a series of key disciplines, and it has created world-class universities to take on challenges in the 21<sup>st</sup> century (Cai, 2013).

Regarding India, it has been attaching special importance to tertiary education. A multitude of higher institutions and key disciplines have been created so far. Since independence, the growth has been very remarkable; the number of universities has been increased by 18 times, the number of colleges by 35 times and the enrolment rate more than ten times (Suresha & Mylarappa, 2012). We agree with P. Altbach and D. Teferra statement that if Africa is to succeed economically, culturally, and politically, it must have a strong postsecondary sector because academic institutions are central to the future (Teferra & Altbach, 2004).

Addressing this issue of higher education to contribute to the development, this article attempts to explore the quality of the programmes that Cameroonian universities offer to meet the socioeconomic development of the country, especially with its ambition to become an emergent Cameroon (a strong middle-income economy) by 2035.

## 2. Theoretical and conceptual basis

This study is grounded on human capital theory, and on UNESCO’s Education for Sustainability Development (ESD). Human capital is “the skills, knowledge and experience possessed by an individual or population, viewed in terms of their value or cost to an organisation or country” (Oxford Dictionary, 2019). In a wider meaning, human capital is considered to comprise not only knowledge, expertise, skills and other individual attributes, namely a range of personalities, economic and social values accumulated through education and training, but may also reflect innate capacities or some aspects of motivation and behaviour, as well as attribute such as the physical and mental health of individuals (OECD, 2001). The human capital theory originated from the conception that spending in human resources is an investment that contributes to the growth of individuals’ productivity, and subsequently in the economic development of a nation. The theory was above all developed by British economists William Petty (1623-1687) and Adam Smith (1723-1790). However, the connection with human capital theory and education was established in the 1960s by the American economist Theodore Schultz. Relating to education, T. Schultz said “I propose to treat education as an investment in man and to treat its consequences as a form of capital. Since education becomes a part of the person receiving it, I shall refer to it as human capital” (Holden & Biddle, 2016).

From the same opinion, the UNESCO’s Education for Sustainability Development states that the purpose of education is to allow every human being to acquire knowledge, skills, attitudes and values necessary to shape a sustainable future (Ndille, 2016). In its Sustainable Development Goal 4 and its targets, UNESCO sets among others, the objectives to ensure that by 2030 learners acquire knowledge and skills needed to promote sustainable development through education for sustainable development and sustainable lifestyles. To support the initiative, it extends its number of scholarships for developing countries in key programmes such as engineering, sciences, information and communication technology (ICT), and vocational training, judged all crucial to gain necessary knowledge and skills for the socioeconomic development of those countries.

Speaking of African countries, Ehizuelen (2018) stated that African countries have to know that the increase of investment in human capital and a strong education system are drivers of economic growth. The world’s giant economies such as Germany, the US and Japan are so because they invested heavily in human capital; and emerging countries, namely China and South Korea have also been able to expand and invest tremendously in skilled workers (Ehizuelen, 2018). The rate of return is related to how big the investment is made, and where the investment is made. Cameroon or African countries in general may face financial challenges regarding the investment in education. However, it is to say with World Bank (2010) that the key to economic success lies in assimilating knowledge and building a comparative advantage in selected areas. Thus, targeting areas and investing sufficiently in these areas is a very strategic approach to shape human capital able to carry on the development of a country and to respond to the global economic competitiveness.

### **3. Research Methodology**

The paper aimed at addressing the role that Cameroonian universities play in shaping human capital to meet economic growth and overall development by looking into its programmes. It is a critical study on university programmes relating to the national and international market demand. This study intervenes at this time when Cameroon is in a full struggle to reach an emergent country by 2035; and also, at the time when higher education is judged and proved very significant for the economic growth. Many studies carried out on higher education in Cameroon mostly concern the reform of 1993, the bilingualism in the universities, the higher education governance, and the quality of higher education. Few of them have tackled the issue of the curriculum which is not in line and does not contribute much to the economic development of the country. The study area mainly includes the eight (8) current public universities in Cameroon namely the University of Bamenda, University of Buea, University of Douala, University, University of Dschang, University of Maroua, University of Ngaoundéré, University of Yaoundé 1, and University of Yaoundé 2. The investigation employs a qualitative method based on the exploration and analysis of data collected through document content and the researchers' own experience and observation. The documents' content includes official documents such as the national and institutional legislative documents and administrative files which were collected from the government agencies and websites-based institutional documents, and the review of literature such as national and international organisation reports, journal articles, books and dissertation thesis related to the topic.

The analysis of these documents enables to understand whether the programmes' offer in public universities in Cameroon can provide job-relevant competencies to its outputs in order to meet strategies for industrial development, economic growth and job creation. Cameroonian government is committed to becoming an emergent country by 2035 and university's programmes needs to suit new knowledge and skills for the economic demands and fulfil learner's interests. The global higher education environment is changing, and universities must not be left behind; they should shape human capital able to respond to the economic needs (Yahaya & Dahlan, 2019).

### **4. Outlook on higher education in Cameroon and nature of the state university's programmes**

Higher education in Cameroon is generally divided into two tracks, namely Universities (faculties) and "Grandes Ecoles" (Elites Schools). The Grandes Ecoles are specialised and professional high institutions in which the admission is through a highly competitive nationwide examination and enrol only a small number of students, whereas "traditional" universities offer non-professional programmes and welcome many students. The admission into this latter is an open system through a simple document submission. The universities are composed of various faculties, and each faculty includes various departments or majors.

As previously mentioned, there are currently eight states running universities in Cameroon. Below is a table giving a macro picture of how Cameroonian university's programmes look like:

<i>Universities</i>	<i>Faculties</i>
<i>University of Yaoundé 1</i>	-Faculty of arts, letters and Human Sciences - Faculty of Education -Faculty of Medicine and Biomedical Sciences -Faculty of Sciences
<i>University of Yaoundé 2</i>	-Faculty of Law and Political Sciences -Faculty of Economics and Management Sciences -Faculty of Arts -Faculty of Law and Political Sciences -Faculty of Economics and Management Sciences
<i>University of Bamenda</i>	-Faculty of Education - Faculty of Science -Faculty of Health Sciences -Faculty of Letters and Human Sciences -Faculty of Economics and Applied Management
<i>University of Ngaoundéré</i>	-Faculty of Law and Political Sciences -Faculty of Sciences -Faculty of Letters and Human Sciences -Faculty of Economics and Applied Management
<i>University of Douala</i>	-Faculty of Law and Political Sciences - Faculty of Sciences -Faculty of Letters and Human Sciences -Faculty of Law and Political Sciences
<i>University of Dschang</i>	-Faculty of Economics and Management Sciences -Faculty of Sciences -Faculty of Agronomy and Agriculture Sciences -Faculty of Letters and Human Sciences
<i>University of Maroua</i>	-Faculty of Law and Political Sciences -Faculty of Economics and Management Sciences -Faculty of Sciences -Faculty of Social and Management Sciences -Faculty of Education
<i>University of Buea</i>	-Faculty of Health Sciences -Faculty of Veterinary Medicine and Agriculture -Faculty of Science -Faculty of Engineering and Technology

The table shows that the nature of the programmes in Cameroonian state universities stresses more on social sciences and humanities rather than STEM programmes. Surprisingly, the analysis shows that out of eight (8) universities, six (6) of them have each the faculty of law and political sciences, and the faculty of economics and management. Again, six (6) of them present either the faculty of arts or letters, or even both of them. Only one University (the University of Buea) has the faculty of Engineering and technology. In 2010, the faculties of law and social sciences alone enrol 70% of the total tertiary enrolment while the engineering programmes (which is supposed to train students for infrastructure projects in accordance with the country's objectives for construction) and agriculture programmes (which is the main source of growth and livelihood of the population) count for only 5% and less than 0.4% respectively (World Bank Group, 2016). A general observation shows that almost all universities present the same programmes with a strong emphasis placed on social sciences and humanities. Nowadays, these fields are likely to be less significant with the new missions ascribed to the higher education to provide knowledge and skills for a competitive labour market critically relevant for the development of any country. In a similar vein, Ehizuelen (2018) argued that the state of underdevelopment of Africa and the struggle to pursue economic transformation is not only due to the dearth of capital, but more importantly to the dearth of adequate knowledge and skills to enhance productivity and promote innovation. His investigation from 36 African countries showed that 56% of economic experts reported an acute knowledge and skills mismatch, while 41% noted the lack of skills at all. Hence, the non-suitability of the skills that graduates possess with those needed by the labour market is a main challenge in the education system in Africa in general and in Cameroon in particular.

Having noticed this decline, it can be said that there is no significant link between the programmes taught and the skills required for the labour market. It lacks flexibility between the knowledge received from state

universities and the skills needed in the private sector. Economic development is one of the priorities of Cameroon at the moment, but few things are done regarding the curriculum content related to this field. There is, therefore, an urgent need for curriculum reform. Graduates from those institutions need to be empowered with new knowledge and skills for the advancement of socioeconomic growth.

### **5. Historical legacy plaguing on present higher education curriculum**

The historical legacy of European colonisation explains to some extent the fact that the curriculum at the university level as well as at the secondary level has been deeply built on social sciences and Humanities. Researches showed that the colonisers had specially developed letters (foreign languages), political sciences and other social sciences in Cameroonian schools in order to better administrate the territories under their influence and for the sake of civil service. Later, in the aftermath of the independence, those disciplines were kept to train local people for the purpose of public administration when taking over the colonisers after their leave. There was no intention of designing curriculum for the purpose of economic growth.

In fact, during the colonisation and regarding foreign languages for instance, European languages were introduced and taught in schools at the mercy of local languages. The teaching of those languages was to facilitate communication between the colonisers and the natives. Today, apart from French and English which are official languages, many other foreign language majors in the universities such as German, Spanish and Arabic are the illustration of the colonial legacy. Unfortunately, those languages are still taught until to date, at many universities. Many others are even being introduced into the education system. It is a pity that things have not changed in the right direction. While others are turning towards development-oriented programmes, Cameroonian universities embrace curricula of less importance. Such curricula have few impacts on producing human capital to sustain economic growth.

Speaking of the same historical legacy, many other African countries are in a similar situation. In South Africa, for instance, Quinn & Vorster (2017) highlighted the 2015 and 2016 student protests calling for the higher education curriculum reform. Indeed, those students denounced the inadequacy of higher education curriculum with their local realities. Protesting students reported the fact that the knowledge drawn on in curricula comes predominantly from the global north not from their south. Therefore, they called for the decolonisation of the curricula (Quinn & Vorster, 2017).

Another historical reason besides the colonial legacy that might explain the preference of certain programmes instead of others (such as social sciences instead of technical programmes, namely technology, engineering, and vocational training) has an origin long in the history, and reflects the social division. A lot of literatures such as John Dewey's book *Democracy and Education: An Introduction to the Philosophy of Education*, in its chapters entitled "Nature of Subject Matter" and "Labour and Leisure", explains how a certain kind of disciplines were designed to some group of people (Dewey, 1915). Back to the time of the ancient Greeks and due to class division, it may be found in studies, programmes which accomplish results for leisure and those for labour. There were those (masters) who study for mental development in order to control and dominate others, and there were those (slaves) studying to train the body for physical work. Unfortunately, nowadays, the trends regarding those cleavages still exist in our society. In Cameroon, there is quite the same conception about some programmes. The General education programmes in opposition to technical, and vocational training (which trains to fit into particular trades (Ndille, 2016)), are the most preferred. Technical programmes are regarded as for the less competent persons, thus less prestigious. Similarly, in the state universities, for instance, some programmes like law and political sciences, economics and management sciences are the ones enrolling the most of the students. That choice of students is explained by the fact that many students want to work in the public service and become public officers (white collar persons). It is also due to the fact that the state government, ignoring the contribution of technical programmes to a sustainable development, did not emphasise and promote these programmes.

Although many remain attached to this ignorance, some have understood it through the high unemployment rate due to the training mostly in the field of social sciences, to the detriment of the subjects such as technology and engineering critically important for the labour market and economic growth. As these technical and scientific subjects are underdeveloped in the education system, students look for those skills abroad. This partly witnesses the growing number of Cameroonian international students abroad. Cameroon is one of the largest African countries in terms of countries of origin. Campus France (2017)'s publication report on "global statistics of international mobility of African students" from 2015, placed Cameroon third largest African sending country, with 23510 international students. Another study carried out by Ngwé (2014) on "Globalisation et mobilités internationales des étudiants Camerounais" [Globalization and international mobility of Cameroonian students] showed that 28 per cent of students from his sample seek for education abroad because of the lack of the programmes they wish to study in Cameroon. Those students are looking for marketable skills for the job, especially for the private sector (Ngwé, 2014). The dream that Cameroonians students had to work in the public service and become a public officer has progressively changed to an "old dream" for many of them (Ngwé,

2014).

## 6. National policies analysis of higher education in Cameroon

Cameroonian government has long misunderstood the assets that higher education can bring to its development. The recent major reforms made in higher education policy were those of 1993. Those reforms mainly emphasise the quantitative aspect, namely the extension of higher education opportunities. It is to note that, until 1993, there was only one university in Cameroon: The University of Yaoundé. Due to a dramatic growing demand for higher education at that time, the reforms aimed at creating new universities and transforming university centres to the full universities. In addition to the existing university (University of Yaoundé), five new universities were then created across the country (Ngwana, 2001). Unfortunately, the observation shows that all those new universities have almost the same programmes, with a special focus on social sciences and humanities. There was a lack of a deep analysis regarding the diversification of programmes. STEM education, especially technology and engineering are remarkably under-represented in the education system, with a very low enrolment rate. The law N° 005 of 16 April 2001 on the orientation of higher education in Cameroon assigned to higher education the promotion of social and economic development, but there is no a clear definition of skills and competencies-based curriculum in accordance with the market demand and the needs of the country. Professionalisation of higher education, as very much vaunted, has never been effective; moreover, the professionalisation of programmes that do not respond to the real needs is a mere utopia. It could be a very good initiative if the programmes and courses taught in those universities really responded to the socioeconomic needs. As mentioned, there is no significant link between university curricula and the socioeconomic needs, especially the economic ones. A prerequisite for any professionalisation of higher education should be the suitability of the university programmes with the country socioeconomic objectives. Therefore, relevant programmes conception is the first and most important challenge to be undertaken. Educational policy making and decisions should be not only a matter of political actors, but also those of educational experts as well as the socioeconomic actors.

The absolute control of education sector by the political actors is very often the main cause of educational problems. In Cameroon, higher education is under the control of the ministry of higher education in which it has an absolute control on the state universities and higher institutions all over the country. The university leaders such as rectors, chancellors (university presidents) and faculty deans are all appointed by the president of the republic. As stipulated in the Law n°005 of 16 April 2001 organising higher education in Cameroon, the state exercises a permanent control all over the areas of tertiary education, including the academic and pedagogical activities (Law, 2001). Yet, to have an effective and successful academic system in which the curriculum will impact the socioeconomic development, institutional governance must be adopted in order to stir competitiveness among universities and higher institutions, not only in terms of marketable programmes but even more in terms of offering quality training. Studies have shown that the more self-governance and autonomy universities have, the more effective they are (Altbach, 2009). Hence, this appeals for a New Public Management (NPM) practices in which private management methods and techniques are transposed to the public sector. NPM “conjures up an image enmeshed with a minimal government, debureaucratisation, decentralisation, market orientation of public service, contracting out, and performance management” (Kalimullah, Alam, & Nour, 2012). That is the reason why, according to the proponents of the NPM, public administration must break off with certain traditional practices and introduce new ones, such as a decentralization of control regarding resources, the use of private sector management style, a quasi-autonomous unit of the structures, and a management with a clear statement of goals and performance measurement.

## 7. State higher education vs Private higher education

In many African countries, the provision of higher education by private institutions is growing dramatically (Teferra & Altbach, 2004). According to the statistics from the ministry of higher education, Cameroon counts 235 legal private higher education institutions (MINESUP, 2018). Because of the aforementioned problems which affect public universities, private higher education institutions play a significant role in tertiary education in Cameroon. Although state higher education is so far the sector enrolling the big number of students, the private universities and institutions' enrolment rate is growing faster than that of the public sector. In 2006 for instance, the public sector enrolled 88% of the total number of higher education students with only 12% in the private sector. Four years later, in 2010, the private sector enrolled 15%, while the public sector dropped from 88% to 85% (DSSEF, 2013). The enrolment in private higher education is progressively increasing. Private higher institutions have grown to meet the demand expressed in the labour market and especially in the fields non-provided by the public sector. Private institutions offer new programmes such as STEM education which enables students to get new knowledge and skills required for the job market. Researches reveal that the increase of the students' enrolment rate in private sector is driven by many reasons such as the rise of the demand for higher education, and the decline capacity of the public sector (Teferra & Altbach, 2004). In addition, in private sector, the curriculum is more diversified and relatively linked to the market demand. Moreover, the education

quality in private higher institutions is much better than that of the public sector, with sometimes a practical training in the enterprises. In other words, students from private institutions are quite prepared to face the challenges of world-of-work. The sake for offering good programmes and good quality education, the competitiveness and attractiveness are a ‘daily fight’ within the private higher education sector.

However, as mentioned above, the public sector remains the sector which enrolls the majority of students. This high rate of enrolment may depend upon two main reasons: the first is that the tuition fees in the public sector are much more affordable for many students than those in the private sector. The second reason is due to the fact that the admission into public universities (not Grandes Ecoles) is relatively an open system. It is open to any holders of secondary school leaving diploma. Thus, the non-existence of competitive entrance examination, to a certain extent, pushes students to choose state universities.

## 8. Conclusion

In recent decades, higher education has been proven by many studies as a sector per excellence for economic growth of any country. However, the question that arises is to figure out, the kind of higher education programme that can really drive that economic growth. It is for this reason that in this study we began to reflect critically on higher education in Cameroon by looking into state universities’ curricula. This study is relevant because it intervenes not only in a context where higher education is considered and proved as an education sector tremendously crucial for socioeconomic development, but also when Cameroon aspires to become an emerging country (high middle-income country) by 2035, and partly counts on the contribution of its higher education. Since it was a question of analysing the university’s curriculum relating to the world-of-work, the study showed that there is no significant link between the nature of the programmes and courses taught in Cameroonian state universities and the knowledge and skills needed for the labour market, and to reach its emergence. The study revealed that almost all Cameroonian state universities have similar programmes focusing strongly on social sciences and humanities which are from an economic point of view, less important to shape valuable human capital for economic purposes. The higher education system and many of its contents date back to the colonial times and contribute very little to the today’s needs of economic growth. STEM education which is very important for socioeconomic development is not valued. Nowadays, studies show that new students entering to the higher education and particularly into doctoral programmes are more likely to be enrolled in STEM fields than any others (OECD, 2018). Despite, this global trend towards socioeconomic-based disciplines, Cameroonian universities still continue to produce lots of graduates in unproductive programmes whose pathways lead very little in the job market. The high unemployment rate of young graduates is largely due to this model of education system which lacks vision. The system of Grandes écoles which is professional should include more relevant disciplines necessary to offer knowledge and skills which suit national and international labour market, and should accommodate a large number of students. The decline from the public actors has also been noted regarding the lack of educational policy’s implementation. According to Bilola & Doh (2016), the imaginary labour market is very often in their policy documents and speeches but they are not executed. Institutional autonomy is advocated so that universities involve more in making policy, and better implementing and adapting them to the labour market.

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