MINISTERE DE L'ECONOMIE DE LA PLANIFICATION ET DE L'AMENAGEMENT DU TERRITOIRE
MINISTRY OF ECONOMY PLANNING AND REGIONAL DEVELOPMENT
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National Human Development Report

Inclusive growth and human development

The role of human capital

2013

SUMMARY

FOREWORD

The theme of the Cameroon National Report on Human Development 2013 is "Inclusive Growth and Human Development: the Role of Human Capital." This report focuses on the importance of human capital in fostering strong, sustainable and inclusive economic growth in Cameroon as envisaged in Vision 2035 for the country.

Under the general supervision of the Minister of Economy, Planning and Territorial Management and the Resident Representative of the United Nations Development Programme, the production process of the 2013 edition was jointly coordinated at the technical level by the Division of Demographic Analysis and Migration (DADM) of the Ministry of Economy, Planning and Territorial Management (MINEPAT) and the United Nations Development Programme (UNDP).

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Preface

Minister of Economy, Planning and Territorial Management

United Nations Development Programme Resident Representative

The National Human Development Report (NHDR) aims to stimulate debates on the integration of the human development approach in national policies and strategies.

According to Amartya Sen[1], human development is " a process to expand the range of choices available to individuals ; the opportunity to improve their access to education and health care, increase their incomes and access to employment "[2]. From this point of view, the publication of national human development reports, aims to sensitise the public and to raise the awareness of political and economic decision-makers on the importance of placing people at the heart of public policies and strategies. The fruitfulness of this approach lies in the fact that the quality of growth matters; hence economic growth while necessary for development is not an end in itself.

In doing so, the human development approach laid the foundations for a new paradigm for people-centered growth, the relevance of which is confirmed by the serious consequences of economic and social policies known as structural adjusment policies implemented by most developing countries in the 1990s.

These policies were supposed to restore macroeconomic stability and to boost growth. However, it is now established that these policies annihilated social progress in the countries concerned. Budget cuts in the social sectors especially in education left the educational system in profound lethargy, significantly reducing its capacity to produce the necessary human resources for national development.

To accelerate growth and development in the country, the Government has a vision to make Cameroon an emerging country by 2035 and a Growth and Employment Strategy (GES) for operationalising the vision.

To do this, it is appropriate to highlight possible links between human development and inclusive growth on the one hand and the impact of human capital to these links on the other hand.

That is the rationale for the theme for the NHDR 2013 which is in its 6th edition focuses on **" Inclusive Growth and Human Development: the Role of Human Capital ."**

Through this theme, the NHDR 2013 is intended to stimulate debates about accelerating inclusive growth and the creation of decent and sustainable jobs to boost

[1] Nobel Prize in Economics, 1998

[2] World Report on Human Development 1990

development while taking into account all the components of the Cameroonian society. Noting that economic growth in Cameroon in recent years has neither been sufficient nor inclusive enough to drive sustained human development in the country, through this theme, the NHDR 2013 highlights the interrelations between three key concepts: inclusive growth, human capital and human development.

Inclusive growth refers to a situation where growth is assured and described so as to reach the largest possible number of people normally through mechanisms for the redistribution of wealth. Human capital on its part refers to the investment made by society in knowledge and people (in terms of education and health) to ensure growth. Considering the definition of Amartya Sen mentioned above, the relationship between investment in education and health and human development is well established as evidenced by the experiences of countries such as Korea, Singapore, Brazil.

More recently, national consultations undertaken in 2013 in the framework of the post 2015 development agenda clearly show the importance of investment in human capital as critical to sustanable growth.

That is why the main concern throughout this report, is to answer some major questions :

- Is education and its current system adapted and adequate to meet the long-term economic and social needs of the country?
- What innovative strategies have been put in place or are being put in place to improve productivity and stimulate youth employment ?
- What are the impacts of health policies on economic and social progress ?

In doing so, the report also establishes a relationship between the health status of populations on the one hand, and economic and social dynamics on the other hand to lead to optimal choices both in terms of economic and social efficiency.

On this basis, the report leads to the following major recommendations :

- Create conditions for inclusive growth by improving policy frameworks for social protection;
- Improve the business climate through strenthening transparent democratic processes and the fight against corruption;
- Develop mechanisms for job creation with a special emphasis on the needs of young people;

- Migrate the informal to the formal sector with agriculture as an engine of growth and taking concrete steps to transform the rural economy for decent job creation.
- Increase the efficiency of public spending by identifying social priorities particularly those relating to development that fits with the expectations, real needs and rights of the people..

Combined with achievements in democratic governance, notably the establishment of the Senate, the parliamentary and local elections, strengthening the management of public wealth and the fight against corruption, the implementation of these recommendations will strengthen in a more holistic manner the measures put in place to achieve the objectives of the GESP and shall consolidate the foundation of a virtuous process towards sustainable human development.

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ACRONYMS AND ABBREVIATIONS

ADB	African Development Bank
ADF	African Development Fund
BCG	Bacille Calmette Guérin
BMI	Body Mass Index
BUCREP	Central Bureau of Census and Population Surveys
CARMMA	Campaign for Accelerated Reduction of Maternal Mortality in Africa
CEDAW	Convention on the Elimination of all Forms of Discrimination Against Women
CEMAC	Central African Economic and Monetary Community
CGER	Combined Gross Enrolment Ratio
CHS	Cameroon Household Survey
CPI	Corruption Perception Index
DHS	Demography Health Survey
DPT	Diphtheria Tetanus Pertussis
DRDC	Debt Reduction-Development Contract
EPI	Expanded Program for Immunization
FCFA	Franc of the Financial Community of Central Africa States (BEAC)
FDI	Foreign Direct Investment
GAD	Gross Admission Rate
GCR	Gross Completion Rate
GDI	Gender-Related Development Index
GDP	Gross Domestic Product
GEC	General Enterprise Census
GER	Gross Enrolment Rate
GES	Growth and Employment Strategy
GESP	Growth and Employment Strategy Paper
GGR	Gross Graduation Rate
GIR	Gross Intake Rate

GNI	Gross National Income
GNP	Gross National Product
GOANA	Home-Grown Agricultural Campaign for Food and Abundance
GPHC	General Population and Housing Census
HDI	Human Development Index
HDR	Human Development Report
HILF	High Intensity of Labour Force
HIPC	Highly Indebted Poor Countries
HIV	Human Immunodeficiency Virus
HPI	Human Poverty Index
IHC	Integrated Health Centres
IHDI	Inequality-Adjusted Human Development Index
ILO	International Labour Organisation
IMF	International Monetary Fund
MDG	Millennium Development Goals
MDRI	Multilateral Debt Relief Initiative.
MIDEVIV	Mission for the Development of Food Crops
MINEDUB	Ministry of Basic Education
MINEPAT	Ministry of Economy, Planning and Regional Development
MINESEC	Ministry of Secondary Education
MINESUP	Ministry of Higher Education
MINSANTE	Ministry of Public Health
MPI	Multidimensional Poverty Index
MTBF	Medium Term Budgetary Framework
NACC	National Anti-Corruption Commission
NASE	National Advanced School of Engineering
NER	Net Enrolment Ratio
NFDR	National Fund for Rural Development
NGO	Non-Governmental Organisation
NHDR	National Human Development Report
NHSCE	National High School for Civil Engineering

NIR	Net Intake Rate
NISC	National Institute of Statistics for Cameroon
NPMB	National Products Marketing Board
OAU	Organisation of African Unity
ODA	Official Development Assistance
OECD	Organisation for Economic Cooperation and Development
OLS	Ordinary Least Square
PCR	Primary Completion Rate
PPP	Purchasing Power Parity
PRGF	Poverty Reduction and Growth Facility.
PRSP	Poverty Reduction Strategy Paper
PS	Public Services
QGLS	Quasi Generalized Least Squares
QUALY	Quality Adjusted Life Years
REP	Regional Economic Program
SDMC	Sub-Divisional Medical Centres
SEIS	Survey on Employment and Informal Sector
SME	Small and Medium-Sized Enterprises
SMI	Small and Medium-Sized Industries
SPX	Subcontracting and Partnership Exchange
SWAP	Sector Wide Approach
TFP	Technical and Financial Partners
UNDP	United Nation Development Program
UNESCO	United Nations Educational, Scientific and Cultural Organisation
USD	United States Dollar
WDI	World Development Indicators
WHO	World Health Organisation

HIGHLIGHTS

BOX

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EXECUTIVE SUMMARY

The National Human Development Report (NHDR) is a flagship document jointly prepared by MINEPAT and UNDP on a regular basis and serves as an important policy tool for influencing decision making on inclusive economic growth through the human development lens. In this context, it is intended to stimulate debates and discussions and to provide policy options for an inclusive economic transformation that appropriately benefits all groups, sectors and areas in Cameroon. This edition examines the link between inclusive growth and human development; with human capital investment being considered as an important transmission channel. In other words, it reviews the conditions and level of human capital that can trigger strong, sustainable and inclusive economic growth in the country.

This report makes use of three methodological tools namely, literature review, descriptive analysis and econometric modelling techniques. It is divided into five chapters.

Chapter 1 deals with the theoretical links between economic growth and human development. It provides a definition of the concept of human development. Through literature review, this chapter leads to three main findings. First of all the concept of economic growth is broad and multi-layered hence it is important to define it and to identify some issues that shall be accorded special attention particularly the concept of inclusive growth. Inclusive growth could be understood as economic growth that benefits all strata of the population and which enables each and every individual to both benefit from and contribute to economic growth. Growth that is inclusive will normally accelerate the poverty reduction process of a country. Secondly, the Human Development Index (HDI) is undoubtedly a relevant measure of well-being and social progress. However, this index has a number of weaknesses. One such is its failure to take into account inequalities. This led to the development of an alternative index - the Inequality-Adjusted Human Development Index (IHDI) which measures human development by integrating inequalities in income, health and education. Finally, the link between economic growth and human development is not automatic. It depends on several factors with focused policy orientation for promoting the equitable distribution of the fruits of growth and an increase in the supply and quality of public services such as education and health.

Chapter 2 concentrates on the "human capital" aspect of human development and highlights its specific impact on economic growth. Through literature review and analysis of trends, it emphasises three main findings, including two theoretical ones. The most important elements of human capital are education and health status since their level and enhancement contribute to economic growth and national competitiveness through improved labour productivity. Overall, Cameroon features some improvement in human capital indicators but the marginal nature of this progress means that there is a need to accelerate progress especially if the national vision to achieve an emerging country status is to be realised.

Chapter 3 describes the dynamics of economic growth in Cameroon and its impact on human capital. These dynamics are assessed using descriptive analysis to highlight the three main phases in Cameroon's economic growth. Phase 1 in the seventies was a period of prosperity and strong growth boosted by the oil boom. During this phase, there was progress in terms of human capital indicators through the establishment of the first modern health centres, schools and university infrastructure. Phase 2 in the eighties was marked by the economic crisis and subsequent structural adjustments. It was characterized by economic downturn, fiscal austerity and the depletion of human capital. Phase 3 was marked by recovery in growth and was punctuated by three defining moments, namely the pre-PRSP/HIPC phase, the implementation phase of the first PRSP between 2003-2006, (the results of which were far below those envisaged and which was not poverty reducing), and the current phase of the growth and employment strategy implementation (GESP 2009-2020) with its ambitious target of setting the pathway towards becoming an emerging country. In this context, a strong political will for creating an enabling environment to include forward looking management and investments in human resources is critical.

Chapter 4 provides a path simulator for human development indicators in Cameroon assuming that the country sticks to projections contained in its GESP and subscribes to international standards underlying budgetary allocations. Through both descriptive and econometric approach, this chapter provides the prospects for economic growth and human development in Cameroon. It subsequently presents global and sectorial outlooks of Cameroon's economy by 2020, public expenditure outlook in human capital and the impact of economic growth on human development from a baseline and alternative scenarios perspective. Assumptions of the baseline scenarios are based on GESP and on data

of the Medium-Term Fiscal Framework (MTFF).The alternative scenarios are based on three simulations with the following hypothesis to increase (a) public expenditure on education to 20% of the budget by 2020, (b) public health expenditure to 15% of the budget by 2020, and (c) public expenditure on education and heath to respectively 20% and 15% (35%) of the budget by 2020.

The analysis shows that: (i) Cameroon's economy is on a track in medium and long term at both global and sectorial levels; (ii) trends in public budget diminution on human capital continue despite improved debt position since 2006 as a consequence of the completion point of the HIPC initiative, and (iii) compared to the baseline scenario, the economic outlook will lead to a noticeable improvement in human development through indicators such as life expectancy at birth, the gross enrolment rate and the HDI. However, the economic outlook remains dim with regard to Cameroon's economic emergence by 2035, (iv) alternative scenarios point only to a slight improvement in human development despite the adoption of international standards concerning budget allocation. This is due to constraints such as continuing institutional bottlenecks, inefficiency of public expenditure, obsolete and inefficient health and educational system that are not adapted to the current and future requirements of the country.

Chapter 5 provides recommendations for improving development policies and general recommendations for stimulating growth that is inclusive and job creating. This comprises of facilitating enabling conditions such as improved business climate, enhancing participation to include establishing dialogue and partnership with civil society and the private sector and diversifying sources of growth. It also provides specific recommendations to reinforce the links between economic growth and strengthening human capital. This includes amongst others, increasing the efficiency of public expenditure, adapting and tailoring the educational system to better respond to long-term development requirements, enhancing reach and access to health care and developing social protection programmes to address socio-economic vulnerabilities of excluded and marginal groups.

GENERAL INTRODUCTION : AN OVERVIEW

With the launch of its Vision 2035, Cameroon has articulated its ambition to become an emerging country by 2035. In this context, the Growth and Employment Strategy (GESP) provides the operational framework for translating this vision into concrete reality for the period 2010-2020. The GESP aims not only to significantly improve the living conditions of the population, but also ensure a stronger human capital capable of responding to and benefitting from the current and emerging economic growth priorities of the country.

The theoretician and economist, François Perroux defines economic growth as "an increase, for one or longer periods of an indicator which captures the size of the net income of a country calculated in real terms". In this sense, there is a difference between economic growth and economic expansion (a concept commonly used in the analysis of fluctuations and cycles), technical progress (which is technological evolution) and economic development (much broader in meaning). Since economic growth can be tackled from many angles, it is a multi-layered concept. It may indeed be viewed from several perspectives: sectorial (balanced or unbalanced growth), factorial (extensive or intensive growth), and entrepreneurial (internal or external growth).

At an empirical level, various concepts are referred to such as *"zero growth",* a concept initiated by the Rome Club in the 1970s in relation to sustainable development; *"inclusive growth"* propounded by the World Bank as a framework for development which benefits all; along with *"pro-poor growth"* where the poor benefit proportionately more than others from the growth dividends.

Various attempts have been made to measure quality of growth going beyond income-based calculations. In this regard, the human development

framework pioneered by UNDP provides a ground-breaking contribution to capturing human progress beyond income poverty. The first report published by the United Nations Development Programme (UNDP) in 1990, states that *"human development is a process that offers a wealth of opportunities for everyone,"* and *"that three basic requirements should be met: live a long and healthy, acquire knowledge, and access to resources to enjoy a decent standard of living. If these conditions are not met, many opportunities will remain farfetched"*. In human development approach *"concepts as crucial as political, economic and social freedom are as important as creativity, productivity, self-respect and the guarantee of fundamental human rights."*

This definition of human development emphasises the importance of human capabilities (acquired) and human choices (as an interplay between endogenous and exogenous factors) as both a means to an end and as a consequence of economic growth. This particular relationship juxtaposed against the growth priority of Cameroon to stimulate economic growth grounded on a human development approach provides the rationale for the choice of this report. It buttresses the concept of inclusive growth taking into account factors of production (capital and labour) available in an economy, while ensuring fair distribution to all strata of the society along with ability of all population to engage and to participate effectively.

Today, inclusive growth is a priority for developing countries for at least three reasons: *(i)* it embodies a long term vision of the quality of growth, which increases the income of the poor and eradicates poverty; *(ii)* it creates and facilitates access to economic opportunities and services for all segments of society, especially the poor; *(iii)* it encompasses the concept of pro-poor growth by having special provisions for addressing their concerns and vulnerabilities.

Therefore, inclusive growth can be embodied on human rights to address discrimination (or exclusion) at least on two levels:

- Targeting investments and inputs which not only move the economy up

the growth trajectory, but most importantly directly benefit and address the needs of the poor and marginalised.

- In terms of growth benefits, inclusive growth through applying the human rights approach ensures all segments of the population are empowered to benefit and participate so as to effectively reduce inequalities and fight against all forms of discrimination.

On this basis, it is pertinent to analyse the link between inclusive growth and human development outcomes in Cameroon. For the period between 1994 - 2001, Cameroon experienced economic growth with accompanying improvements in standards of living and accumulation of human capital. But since then, the impact of economic growth on human development has not been perceptible with poverty incidence stagnating around 40%. Moreover, the investments in improving human capital (health, education, nutrition) so far does not seem to have secured the intended results given that the informal sector accounts for approximately 90% of the jobs workforce and its capacity building needs are specific and therefore investments need to be tailored.

As attested by the Human Development Index (HDI) which has been on the increase in Cameroon since 1980, the country has made some progress on some of the human development indicators. However, the country still lags behind in terms of progress when compared to other countries with the same level of economic performance thirty years ago (Malaysia, China etc.)

Macroeconomic environment and socio-political climate explain the evolution in the HDI. However, inefficient targeting of public expenditure, institutional capacities, gender lacunea and poorly targeted policies are some reasons for the evolution of the HDI index. The Inequality adjusted Human Development Index (IDHI)[1] is quite illustrative of this reality. When applying the IHDI, the global Cameroon ranking regresses (with the difference between the HDI and the IHDI moving from 0.156 to 0.161 between

[1] The Human Development Index adjusted for inequality (IHDI) covers human development deficits due to inequalities in health, education and income.

2010 and 2011). This trend shows an increase in inequality in living standards as far as health, education, and income are concerned. Economic growth, without fully considering and capitalising on the efficiency and productivity of factors of production, with special attention to the human dimension aspects, will remain sub-optimal growth at best.

It is therefore deemed important to analyse the links between human development and inclusive growth. Such analysis, which allows for highlighting issues such as exclusion and discrimination of some classes of the population and the effect of inequitable redistribution of the growth, will feed into proposals for improving Cameroon's performance in achieving economic growth with tangible human development outcomes.

The purpose of this report is to stimulate discussion on the topic and provide policy options. It uses literature review and quantitative techniques, establishes the nature and meaning of various causal relationships between inclusive growth and human development, with human capital as the main channel. The main results reveal that growth is broad and multi-layered while the Human Development Index (HDI) is a multidimensional indicator ; that the link between the two is not automatic. This link depends on several factors with the important ones being targeted policies for assuring the distributive aspect benefits of growth and leveraging public investments in human development (increase in quality and access to health (including nutrition) and education services.

Human capital accumulation would sustain long term economic growth and national competitiveness by directly affecting not only workforce productivity, but also through positive externalities. However, the low progress in human capital formation in Cameroon makes it difficult to be a catalytic force in the growth process.

Since independence, Cameroon has experienced three major phases of economic growth ; a period of prosperity (1960-1986), a period of decline (1987-1994) and a recovery phase (since 1995), with specific impacts on changes

in indicators of Human Capital, the growth engine and development of a modern economy which Cameroon needs to accumulate in order to achieve the emerging country status. Government effort in terms of public expenditure on human capital development (education, health and nutrition) continues since the completion point of the HIPC initiative in 2006. Judging from Human Development Indicators (HDI), a qualitative leap is foreseen to radically change Cameroon's status from a country with a low HDI to a country with a medium HDI.

On global and sectorial plans, Cameroon's economic outlook in the medium and long term is showing progress due to growth-generating projects that the country intends to implement, an increase in real growth rate and a continued improvement in non-oil receipts. However, Cameroon will have to undergo deeper structural reforms and better integrate the down-trodden in its transformational growth agenda. Besides effective public governance and responsible institutions, establishing a good monitoring policy from the primary to the secondary and tertiary sectors, stimulating rural multiplier effects by laying emphasis on the modernisation of agriculture and local transformation to include development of production, industrial processing and marketing capacities are needed.

This report is organized into five chapters:

Chapter 1 is the theoretical part of this study in which the notion of economic growth is analysed within a general conceptual framework by establishing a clear cut distinction between the concept of inclusive growth and other concepts of growth (pro-poor growth and inclusive growth or "shared growth"). Our discussion equally includes: an explanation of the concept of human development and the theoretical link between economic growth and human development.

Chapter 2 focuses on the "human capital" aspect of human development to show its specific impact on economic growth. It portrays layers of

understanding and characteristics of human capital, an insightful view on the link between human capital and economic growth and finally an introduction of stylized facts regarding human capital in Cameroon.

Chapter 3 attempts to characterize economic growth in Cameroon highlighting trends and correlations in the three major phases of economic growth experienced by the country so far, to include review of various policies and their impact on growth and poverty.

Chapter 4 presents scenarios of progress in indicators of human development on the basis of international commitments in budget allocation. It shows that human development will improve only slightly, even if international standards are adopted.

Chapter 5 articulates recommendations to implement socio-economic policies to deal with identified bottlenecks, namely ; business environment, corruption, low redistribution of growth benefits, mismatch between the educational system and development priorities and a poor health system.

CHAPTER 1 :

UNDERSTANDING THE LINK BETWEEN ECONOMIC GROWTH AND HUMAN DEVELOPMENT

Conceptual and theoretical elements necessary for understanding the link between economic growth and human development can be better understood through the definition of economic growth, a characterization of the concept of inclusive growth in relation to human development and the nature of the relationship between the latter concept and economic growth.

1.1.1. The Concept of economic growth

Perroux defines economic growth as " an increase, for one or longer periods of an indicator which captures the size of the net income of a country calculated in real terms". As such, it is a long term quantitative phenomenon[2]. To François Perroux, the term economic growth surfaced after the industrial revolution in England. It is often confused with other economic terms and concepts. Hence it is always very important to make the clear cut distinction between economic growth and other two related economic terms: - economic progress and economic development.

Economic growth unless otherwise should lead to economic development defined by Perroux as *"the set of transformations of the economic, social, institutional and demographic structures followed by sustainable growth that improves the living standards of the population as a whole"*. It actually refers to the set of transformations and technical, social, demographic and cultural changes that come along with increased growth. Thus, development depicts the structural and qualitative aspects of growth often triggered by the choice of economic policies implemented. It could be associated with economic progress which unlike growth is not only quantitative in nature but also takes into account the equitable distribution of the fruits of growth. Hence, it does not limit itself to the volume of economic activity but also includes the human cost/implication of this activity.

Technical progress on its part refers to the rapid and cost-effective diffusion of innovations which integrates in the network of economic activities to become accessible to all. So, technical progress includes collective

[2] A sudden increase in domestic production does not correspond to economic growth. Such an increase over a short period signifies economic expansion.

Box 1.1: GDP as a contestable indicator for measuring well-being

GDP remains the leading indicator of national accounts. It is difficult to avoid its use in the purpose for which it was conceived. However, its capacity to be the standard method for measuring welfare has been contested. In 2009, the Stiglitz-Sen- Fitoussi commission reviewed the main approaches available in the field of sustainable development. The design of a benchmark index that would allow for a more appropriate assessment of the overall sustainability however was considered an unattainable goal. It is not enough to consider 'green' practices in the measurement of gross domestic product to obtain clear information on the sustainability of a growth model. The commission rather adopted an approach called the "stocks" approach which regardless of their economic nature, seeks to monitor levels of different factors or barriers to growth.

knowledge and capacity enhancement which is thereby applied in the economic activities.

Economic growth is generally understood as a sustained increase in overall production in a given economy. Unlike other indicators, it has the advantage of being available and comparable across a large number of countries and also reflects changes in the Gross Domestic Product (GDP). To measure economic growth, economists use GDP[3] as the main indicator for production. Therefore, this value is equal to the growth rate of GDP[4] and is conventionally calculated by taking into account only goods and services produced using the factors of production. It measures what is produced during a given period of paid work. This agreement translates into a dual consent; that of individuals to pay for goods and services as reflected in the accounting of commodity production and related market price and on the collective choices of a given society reflected in the integration of public expenditure on the basis of their cost of production.

From these different layers for understanding the concept of economic growth, it is necessary to dwell on the more encompassing concept of inclusive growth, excluding what it is not before advancing a definition of what it is.

1.1.2. What inclusive growth is not

Other two related terms to inclusive growth include pro-poor growth and shared growth.

1.1.2.1. Inclusive growth is not pro-poor growth

At first glance, inclusive growth could be associated with the concept of pro-poor growth; that is growth characterized by policies that favour the poor by reducing poverty and inequalities. Pro-poor growth is not necessariy inclusive. Although pro-poor growth tends to share some similarities with inclusive growth, a closer analysis reveals some distinct characteristics between the two concepts. Pro-poor growth is a theoretical contribution of post Keynesian, Institutionalist and Marxist economists. It is based on two main ideas. The first states that growth is considered pro-poor when the growth rate of income for poor people is higher than for the

[3] GDP calculations are important. They provide the possibility to sum up the monetary value of finished goods and services produced by all sectors in a given country. This makes it possible to know how wealth is created, used and distributed. GDP, as a measure of national accounts enables an understanding of how the economy functions and how economic policy can be steered.

[4] GDP does not take into account the nature of the output produced or its distribution. These deficiencies question the extent to which this indicator can be used to measure the level of development. That is why other complementary indicators are now available, especially the human development index.

non-poor (White and Anderson, 2000; Klashen, 2003). In other words, it is growth which benefits the poor relatively more than the non-poor. This view focuses on changes in income distribution following a period of growth in the economy. The second approach on the other hand, stresses pro-poor as one that reduces poverty rates in absolute terms (Ravallion and Chen, 2003; Ravallion, 2004).

This approach highlights the link between poverty and growth by focusing on changes in the poverty index following an episode of growth in the economy. The common feature between pro-poor growth and inclusive growth is their substantial contribution to poverty reduction. The difference lies in the fact that inclusive growth causes growth to emerge from the bottom before benefiting the entire population; that is through a bottom up movement that accelerates the mechanisms of poverty reduction.

1.1.2.2. Inclusive growth is not shared growth

Inclusive growth is not shared growth whose principle is based on the fact that we must seek growth while assuring that it is spreads over different strata from top to bottom. Shared growth favours distributive policies and social protection as a primary means of inclusion. Shared growth calls for a redistribution of growth benefits between different economic actors, including those who have not contributed to it. Inclusive growth goes a little bit further. It is not only about redistributing some of the benefits of economic growth, but also about establishing a socio-political and economic program to offer the same opportunities for gainful employment and livelihood for the poor and marginalized.

1.1.3. What inclusive growth truly is

The concept of inclusive growth remains ambiguous in economics due to the lack of theoretical foundation. However, it involves a long-term perspective in that it focuses on the creation of income generating activities instead of income distribution with a view to increasing incomes for excluded groups. Meanwhile, some redistribution mechanisms may be needed in the short term (Lanchovichina and Lundstrom, 2009). But there are many obstacles and constraints to inclusive growth.

1.1.3.1. Defining inclusive growth

According to the World Bank, inclusive growth benefits the entire population by stepping up poverty reduction mechanisms. In short, inclusive growth enables each and every single individual to contribute to and benefit from the economic growth at the same time. It is growth that does not only create economic opportuni-

ties, but also ensures equal access to available opportunities for all segments of society, especially the poor.[5] Thus, this growth should include: *(i)* all sectors, *(ii)* all socio-economic groups, *(iii)* all levels of education, *(iv)* all areas (urban and rural), *(v)* gender and all age groups (gender approach), *(vi)* all regions (inclusive-growth must neither be limited nor supported only by some parts of the country while others lag behind[6]). The measurement of inclusive growth is closely linked to its definition. Table 1.1 summarizes the determinants and elements of inclusive growth and Box 1.2 provides a method used to measure it.

1.1.3.2. Limits and constraints of inclusive growth

In geographical terms, the majority of the poor live in remote areas with poor access to benefits from public policies in terms of infrastructure and services. These populations are likely to have less access to other livelihood enhancing opportunities such as financial services especially as banks avoid operations in remote areas due to high operating costs. Microfinance institutions, that could fill in this gap in the traditional banking system mostly prefer to operate in urban areas. This situation is compounded by credit rationing to populations with a low-income due to lack of collaterals, and high administrative fees that hinder their ability to open and

Table 1.1 : Determinants and elements of inclusive growth

Macroeconomic Determinants	Microeconomic Determinants	Elements of Inclusive Growth
- Macroeconomic stability: • moderate taxation and deficits in the current account; • low debt / GDP ratio; • moderate inflation. - Political stability and democratic institutions - Progressive tax policy • Protection of vulnerable social groups • Openness to trade • Promotion of FDI in key sectors (agriculture sector for low-income countries) - Industrial policy - both vertical and horizontal • Low rate of population growth.	- Investment in human capital: • health • education • Water and Sanitation - Investment in physical infrastructure - Reduction of horizontal inequalities in terms of basic services: • discrimination according to gender, ethnicity, religion, etc. - Facilitating access to finance: • microfinance; • SME finance; • FDI/capital market. - Encouraging overall development of skills and employment.	- High rate and sustained growth: • particularly for low-income countries. Sustainable growth model: • avoiding crisis, environmental degradation. - Transformation-determining structural competitive advantages: • specialization in production; • export diversification; • good business climate; • Decent production and widespread employment opportunity; • equal access to opportunities for all, in terms of education and health; • significant reduction of absolute poverty; • reducing vertical and horizontal inequalities.

Source: Addison and Niño-Zarazúa (2012).

[5] However, some authors argue that facilitating pro-poor growth opportunities is not sufficient to ensure inclusive growth. According to these authors, attention should also be given to the quality of their participation in available growth opportunities.

[6] Stylized facts of growth in developing countries show that it has been exclusive. That is to say, the fruits of growth are not sufficiently redistributed among all segments of the population. This however, is not only a developing countries peculiarity. According to Stiglitz, Sen and Fitoussi (2009), the relationship between the average growth of GDP per capita and inequality in industrialized countries is growing and more and more "people can become worse off even if average income increases."

maintain bank accounts.

Unenabling economic condition such as information assymetry, low investment and financing options limit the participation of the poor in the labour, credit and consumer market. Poor health and limited education and training also reduce the productivity of most people. In addition, various risk factors, economic insecurity and high levels of vulnerability imply that the poor are less likely to take advantage of profitable activities.

1.2. The Concept of Human Development: overview and trends

Human development has been widely defined as *"a process that leads to a widening in the range of opportunities available to everyone"*. Such opportunities imply *"that three basic requirements be met: live long and healthy, acquire knowledge, and access resources to enjoy a decent standard of living. If these conditions are not met, many opportunities remain inaccessible"*. Human development also includes *"concepts as crucial as political, economic and social freedom..., creativity, productivity, self-respect and the guarantee of fundamental human rights."*

Human development is measured using a composite indicator: the human development index (HDI). Fundamental concepts of the HDI revisit and expand on ideas developed by Amartya Sen (1987) where it is the well-being of individuals and not the quantity of available goods that matter the most. The Human Development Reports (HDR) aims at providing a credible alternative to GDP that stems from the orthodoxy of the Bretton Woods institutions (much criticized in the 1980s for their structural adjustment policies and their devastating effects in developing countries), indicating that economic growth does not necessarily guarantee social progress.

The HDI is being published annually by the UNDP since 1990 through its global HDR reports[7]. It measures the level of a country's development by focusing on improving the quality of people's lives.

A new formula for calculating this indicator was adopted in 2010 by the

Box 1.2: Measuring Inclusive Growth

Ali and Hwa (2007) propose a simple and creative way of measuring inclusive growth. These authors start by acknowledging the existence of a function of social desirability or social integration that is similar to the function of social welfare. In this case, growth is inclusive if it increases the function of social desirability. It depends on two complementary factors: *(i)* average opportunities available to people and *(ii)* how these opportunities are distributed in the population. The inclusiveness of growth is captured in an opportunity curve closely associated with the function of social desirability. To fill out shortcomings in the opportunity curve in particular, partial classification, authors also develop the opportunity index to provide a complete ranking. This approach has been applied in the Philippines to analyze the fairness and equality of opportunity when it comes to accessing education and health services. This approach is especially advantageous in the sense that it enables to assess changes that occur over time.

Source: Ali and Hwa (2007)

[7] Subsequently, the UNDP on an annual basis published three other indices. First, in 1995, it published the gender-specific human development index (GDI), which measures the differences in the situation of men and women in terms of the three required criteria for characterizing human development. In 1995, it published the index on participation of women in economic and political life (IPF) which complements the previous one. Finally, the Human Poverty Index (HPI) was published in 1997 which indicates shortages, deprivation or exclusion of populations with two variants: one for developing countries and the other for developed countries.

Box 1.3: Refining the Human Development Index

In the knowledge dimension, the average length of schooling replaces the literacy rate and the gross enrolment rate is reformulated according to the expected duration of schooling - namely, the expected number of years of schooling for a child, taking into account gross enrolment today. The average length of schooling is frequently estimated for a larger number of countries and allows a distinction between countries, while the expected duration of schooling is part of the crop of this dimension in terms of years

To measure the standard of living, the gross national income (GNI) per capita replaces the gross domestic product (GDP) per capita. In a world marked by globalization, there are often important differences between the income of the population of a country and its domestic production. Part of the income of inhabitants is sent abroad, some residents receive transfers from abroad and some countries receive substantial financial aid.

In addition, a geometric and non-arithmetic average is now used across the three dimensions. This method expresses the degree of balance of each country in terms of performance in all three dimensions. As a basis for comparing successes, this method also respects much better intrinsic differences between a simple average dimensions. It acknowledges that health, education and income are all important, but it is difficult to compare these different dimensions of well-being and that we should seriously consider a potential change in one of them

Kovacevic, 2010 and HDR, 2010

UNDP to include the geometric mean of three representative dimensions of human development; index of life expectancy at birth, education index and index of gross national income per capita. This new formula responds to the criticism against the previous one (the linear combination), which made possible a perfect substitution between all dimensions. The adoption of geometric average lowers index values, the most significant changes occurring in countries with unequal development between dimensions. The geometric average has a moderate effect on the ranking of countries in terms of HDI. The fact of considering maximum values recorded as upper limits has less impact on the overall values of the index and has a lesser impact ranking[8].

Recently, thanks to methodological breakthroughs and data availability, we came out with new ways of measuring real human development by integrating inequality and multidimensional poverty. These innovations can be applied globally, enabling comparisons and new insights. It is in this context that a new index has been proposed by UNDP's Human Development Index adjusted for inequality (IHDI[9]). It covers human development deficits due to inequalities in the health, education and income sectors. Deficits in these three dimensions vary from one country to another and tend to be more pronounced in low HDI countries. The HDI provides averages, which do not reflect the disparities in human development between individuals of the same country. Estimates of inequality in previous studies and reports were partial (for example covering only income) or applied only to a few countries.

The IHDI has very useful statistical properties for supranational estimates and enables combining data from different sources, such as health related data, included in the tables for life expectancy, and those on income in studies on households. The IHDI does not only take into account the country medium human development

[8] Countries are now grouped based on their ranking by quartile distribution and not based on the value of the HDI. One implication of the formula of 2010 is that the thresholds for grouping countries are no longer fixed. For a full explanation of the method and its rationale, see Klugman and al. (2011).

[9] There are many criticisms of the HDI but only the most recurrent ones are cited here. The arbitrary choice of the three dimensions used is often highlighted. The heterogeneity of data is also problematic because social indicators (rate between 0 and 100% or years) are blended with national economic flows (numbers without limit) divided by the population before they are all reduced to an index from 0 to 1. Lastly, the HDI uses a revenue ceiling which to an extent discriminates among deve-loped countries. With regards to Cameroon, the evolution of the HDI and its implications are given in Chapter 2 of this report.

measured using health, education and income indexes, but also how the development is spread.

The IHDI takes into account inequalities in terms of life expectancy, education and income, by imposing a "penalty" to the average value of each dimension, depending on the degree of inequality. The IHDI equals the HDI when there is no inequality between individuals, but is less than HDI when inequality is high. In other words, we can consider the HDI as a "potential" index of human development (or as the IHDI maximum that we would obtain if there was no inequality), while the IHDI is the actual level of human development (taking into account the inequality). The difference between HDI and IHDI is the "deficit" of potential human development due to inequality.

Scholars called the method of calculating HDI into question, while professionals mainly discussed the limitations related to this index as well as its interpretation. In order to integrate various shortcomings, methods for calculating the HDI have evolved since 1990. From 2010 for instance, the editing team of the HDR has been proposing significant changes in view of measuring progress in terms of education and income, and even in the way they should be aggregated (see Box 1.3).

At the global level, the HDI reveals a general improvement in well-being in the world, because the number of countries with high HDI rose from 0 to 28 over the 1975-2005 period.

Over the same period, the number of countries with average HDI has evolved differently in different ranges. However, we note a positive evolution over the period. Finally, the number of countries with low HDI decreased significantly over time. For example, no country belongs to the slice from 0.2 to 0.299 in 2005.

Compared to 2005, human development went down further in 2010 and 2011. There was a relative decrease in the number of high HDI countries and a noticeable increase in low HDI

Table 1.2 : Changes in the number of countries per HDI ranges worldwide

HDI	1975	1980	1985	1990	1995	2000	2005	2010	2011
0,900 – 1,000	0	1	4	11	20	24	28	11	12
0,800 – 0,899	22	29	27	33	22	22	42	32	31
0,700 – 0,799	15	19	23	30	37	38	45	45	46
0,600 – 0,699	16	18	26	23	23	15	15	36	35
0,500 – 0,599	14	18	14	10	12	17	25	17	18
0,400 – 0,499	16	14	17	19	19	15	14	24	24
0,300 – 0,399	11	12	11	10	10	10	8	14	13
0,200 – 0,299	7	5	3	2	1	1	0	2	2

Source: Various annual HDRs.

countries. Only the number of medium HDI countries (that is to say, the class 0.600 to 0.799) experienced an upward trend since 2005.

The level of human development seems to have differential impacts on inequalities and growth. When negatively correlated with inequality, it is positively correlated with growth. The third section of this chapter presents the mechanisms from which human development positively affects economic growth.

Figure 1.1 : Causal connections between growth, human capital and human development

Source: Authors

1.3. The link between growth and human development

Economic growth can foster human development on the one hand, and on the other hand, human development boosts economic growth. Public investments in human development contribute to improving health and education in households. More specifically, the focus on education and health increases the quality of human resources through human capital, thereby increasing productivity, when the employment landscape is conducive.

The dual relationship between economic growth and human development using human capital as a transmission channel can be summarized as follows:

When the impact of growth prevails over human development, it is transmitted through two main channels. First, its through distributive economic growth which increases the standard of living for all population. It enhances the purchasing power of households and this improvement leads to a dual-fold effect on the consumption behaviour of households that increase their well-being; a quantity and a quality effect. The quantity effect is reflected in the increase in the volume of goods consumed (maximum satisfaction of basic needs); while the quality effect is reflected on the change in the structure of consumption.

This change focuses on meeting secondary needs such as leisure expenses or the purchase of cultural goods.

Secondly, economic growth through

consumption changes and expanded options contributes positively to social indicators such as health and life expectancy of the population. Improvements in health and nutritional status will directly increase current and future productivity, allowing children to grow stronger and healthier from childhood to adulthood. Experience has shown that healthy, well-fed children are able to better perform at school and acquire and retain productive skills and attitudes. Unlike educational expenses that only increase human resource quality, health expenditures go the extra mile to increase both its quality and volume in the future and by so doing so, enlarge the pool of resources available for active duty. So it deepens investment dividend in education.

The aim of this chapter was to establish theoretical links between economic growth and human development. First it revisits various layers of understanding of the concept of economic growth, including that of inclusive growth, and then articulates the concept of human development and its recent ramifications. Three major lessons can be drawn from this chapter as follows:

- the concept of growth is broad and multi-layered and for this reason, it is important to define it so as to target aspects to be brought to the limelight such as growth that is inclusive;
- Human Development Index (HDI) with its revised IHDI is a suitable measure of well-being and social progress, a credible alternative to GDP which is the fundamental economic indicator in the orthodox view of Bretton Woods institutions. Nevertheless, the HDI demonstrates that economic growth does not in any way guarantee social progress; that the link between economic growth and human development is not automatic, it is subject to several considerations with the two main ones being a more equitable distribution of the fruits of economic growth and increased supply of quality health services.

Economic growth is generally a by-product of several determinants that are not always easy to come to grips with and whose respective specific roles are not easy to specify. So, before characterizing economic growth in Cameroon, it is worthwhile underscoring in advance the specific role of human capital focusing on health and education, whose influence seems undeniable. That is the purpose of Chapter 2.

CHAPTER 2 :

THE ROLE OF HUMAN CAPITAL IN ECONOMIC GROWTH

Past experiences in development have shown that, in industrialized nations, high income does not guarantee protection against the rapid rise of problems such as drug addiction, alcoholism, sexually transmitted diseases, all forms of violence, and broken family ties. In some developing countries, it has been observed that despite a high growth rate in GDP, a significant portion of the population continues to live in socio-economic deprivation. At the same time, some low-income countries have proven that it is possible to achieve high levels of human development by skilfully using available means to increase human capacity. These experiences have shown that increased production and wealth were necessary but not sufficient for improving human capital. As defined by the UNDP flagship HDR launched in 1990, the objective of development is to expand the choices available to people and create an environment conducive for them to develop so that they can enjoy a long, healthy and creative life. Indeed, if people are the real wealth of a nation, then they must be the primary beneficiaries of the development process. For this, development planning and analysis should focus on people, their basic rights and not only products.

This expansion of choice is based on one essential element: human capital, that is, the range of human capacity that determines what people can do to earn a living. What then is "human capital" and how can it be measure it? What are the characteristics of human capital in Cameroon? What is the connection with economic growth?

2.1. The concept of Human Capital: content and facets

By analogy with physical capital[10], human capital concept was created and developed by Schultz (1961), then deepened and democratized by Becker (1964), Nobel Prize winner for Economics in 1992. Both authors reviewed Jean Bodin's statement: "there is no wealth other than men." In short, men are an asset, not only because of their number but most importantly because of their quality. Thus, they view human capital as a set of skills or abilities, talents, experiences accumulated by an individual, which partly determine his ability to work or to fend for himself or for others. Human capital, as well as physical capital can

[10] In economic theory, capital means any unconsumed wealth which can be used for the production of new wealth or for generating income. It can be in the form of stocks and flows. As stock, its use gradually leads to exhaustion. Hence the need is to create flow from stock available. This lead to investments whose performance is measured through the wealth created and the increase in the initial stock of capital available

be acquired, preserved and developed through specific investments. It must be able to generate profit. Human capital has many facets that can be summarized in various dimensions, namely education, health, nutrition and other aspects such as migration and cultural movements.

2.1.1. Education as Human Capital

The concept of human capital has been the subject of numerous theoretical developments and is measured in various ways.

2.1.1.1. The education dimension of human capital: lessons from theory

The educational dimension is two-fold: a quantitative and a qualitative dimension. In economic theory, there is a fine line between human capital and education. Broadly speaking, human capital takes into account education and health. Labour economists distinguish between early human capital (human capital acquired at home), human capital acquired through schooling and human capital acquired through learning by doing and learning by watching. For OECD (1998), the concept of human capital refers at the same time to knowledge, qualifications, skills and abilities that contribute to productivity, innovation and employability in various professional settings. While formal education refers to education acquired in a specific educational setting for this purpose, *the learning by doing and by watching*, by Arrow (1962) discusses effects generated by innovations in technological change. The *"Learning"* is a by-product of this experience, seen through the search for solutions to a problem in economic activity.

Shultz (1961) identifies four possible sources of human capital accumulation. The first relates to all health services and facilities, as well as all expenses that can affect the life expectancy of an individual. The second focuses on learning in the workplace, including all other types of learning developed by companies. The third is concerned with a formally educated extended family organized around elementary, primary and higher education, as well as adult training programs initiated by companies. The fourth source is migration. To monetary and material dimensions, Becker (1964) adds a psychical one that affects the resources of individuals.

Lucas (1988) defines human capital as a wealth of economically recoverable knowledge inherent to individuals' qualifications, health and hygiene. This definition, considered as more encompassing and operational, is the one most commonly used. The author distinguishes between voluntary human capital or schooling, which is knowledge accumulation on the one hand and on the other involuntary human capital or learning *by doing*,

which is linked to experience acquired by old brooms in the business.

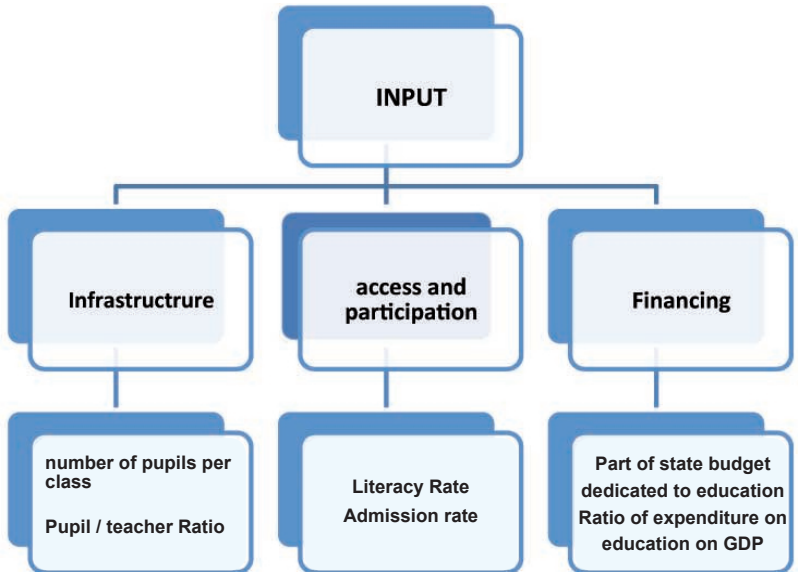
Thus, human capital can be voluntarily acquired by individuals in search of future earnings and betterment of their well-being, while driving them to invest. In this respect, the availability of savings is a prerequisite for an individual to obtain a proper investment level. This involves an important actor, the State, through investment in infrastructure, education, health and legislative measures making education a fundamental right for all (Doudjidingao, 2009). Obviously, the accumulation of human capital is both an individual (private) and a collective (public) choice. It therefore emerges that human capital is a specific and quantifiable factor, unlike education. It has a double dimension: *the quantitative dimension* which refers to the population and, as such, to the entire available workforce and, the *qualitative dimension* which refers to all individual intrinsic characteristics, likely to influence their productive force. The first dimension corresponds to the labour force usually used in economic analysis for an obvious impact on production. The second includes the human capital accumulated by individuals and gene-rally felt by the level of education as well as health. According to the theory of endogenous growth, human capital has a positive impact on economic growth and human development.

2.1.1.2. Measuring human capital in the education dimension

To measure the human capital dimension of education, we make use of both input indicators and output indicators. Concerning input, the following indicators are highlighted:

- *Participation in world education:* a system can be evaluated by calculating a number of performance indicators including the Gross Enrolment Ratios (GER) or Net Enrolment Ratio (NER);
- *Entry into the school system:* a policy for promoting primary education (such as Education for All and inclusive education) can be estimated by calculating the proportion of new admissions (in a geographical area or by gender) or the Gross Intake Rate (GIR) or Net Intake Rate (NIR) in primary education;
- *The financing of education:* it is generally a matter of government efforts in promoting education, investment in human capital, compared to the contribution of households to determine the weight in terms of education expenditure that they support and address issues of equity in financing public or private education.

Figure 2.1: Some education input indicators



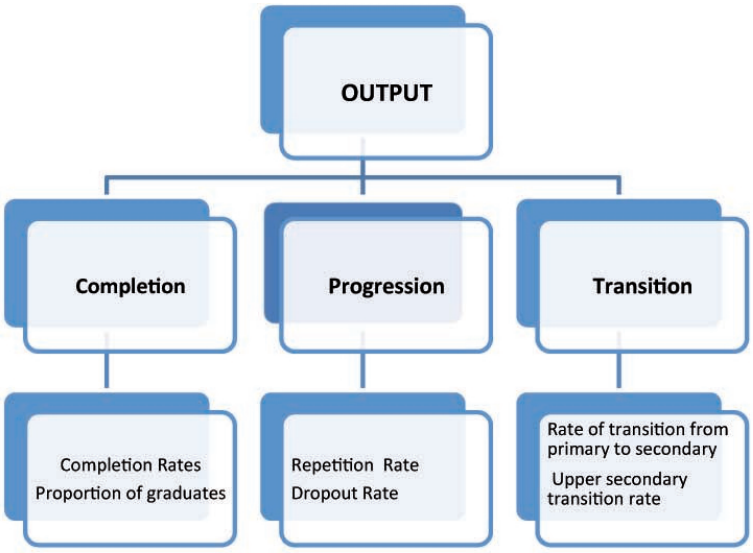
Source: Author.

Figure 2.1 explains that teachers are an important input in human capital investment. Also, the classification of the latter across qualification and sex lines both in the different levels of education and in the national territory as a whole is an important tool for planning educational policy. Beyond enrolment, student / teacher ratios, student / classroom is an indicator of education quality, as it describes conditions under which knowledge is transmitted, although this does not always seem to be the case in rural areas.

Regarding the family of output indicators of education, Figure 2.2 shows a number of indicators that can be assembled into three groups namely, indicators of completion, progression and transition:

- Indicators including the Gross Completion Rate (GCR) of a course of study, the Gross Graduation Rate (GGR) at the end of a cycle, to measure the performance of a system of education in their positive aspect;
- progress indicators include those related to repetition and those related to survival or abandonment to measure counter performances of an educational system;
- Regarding transition indicators, they measure the proportion of individuals who are able to move from one system to another.

Figure 2.2: Some education output indicators



Source: Authors.

For education as a dimension of human capital to fully play its role, it has to be accompanied by other factors, among which economic theory generally cites the health of the population as the first.

2.1.2. Health dimension of human capital: theoretical aspect and measurement

Health is a human capital factor that can be measured through a number of indicators.

2.1.2.1. Health capital theory

The health capital theory was originated by Grossman (1972). According to this author, the health capital consists of two components. The first is the duration and is measured in time (t), either by the likelihood of dying in t, the life expectancy at age t. The second relates to the quality and is measured through a relative index comprised between 0(for death) and 1 (for perfect health), called QALY (Quality Adjusted Life Years). Thus, each individual is born with a health capital (or potential) which depends on the individual health record and its depreciation rate as the individual gets older until death. The health capital of an individual depends on five factors: genetics, environment, individual behaviour, epidemics, health care system and living conditions.

This stock of health capital is obtained or maintained through investments made in terms of health care costs and with the value individuals attach to their health. Lots of behaviours can help individuals stay healthy such as prevention against diseases and a healthy lifestyle (weight control, food, etc.).

The return on investment in health is measured through improved productivity and well-being of individuals taken separately and through their effects on the entire population, or even the whole economy. Indeed, the state of health can improve the well-being of individuals either directly because being healthy provides satisfaction or indirectly, because health affects the number of work hours devoted to production, whether sold or consumed (thus the productivity of individuals). It also affects the well-being of households.

Multiple empirical studies focusing on the impact of health on economic growth show for the most part that, the "good health" of a population (measured through life expectancy or survival rate) has a positive and significant impact on economic growth.

2.1.2.2. Human capital measurements in health dimension

In literature, there are eight categories of health status indicators (Currie and Madrian, 1999). These are: (i) self-reported health (for which an individual is requested to assess his/her state of health on a scale ranging from poor to very good), (ii) indicators on the existence or not of health difficulties that limit the ability to work, (iii) ADL (Activities of Daily Living) that capture the existence or not of health problems that limit daily activities, (iv) indicators of the intensity of chronic condition, (v) indicators of utilization of medical services, (vi) mental medical health check-ups or degree of alcoholism, (vii) indicators of nutritional status (e.g. height, weight, or Body Mass Index - BMI) or (viii) expected future mortality.

This variety of health indicators are a pointer to the fact that our target is to assess "good health" and to retain only indicators that can help us achieve this goal. In addition, a health indicator is important as it takes into account the time factor, differences between geographical areas and between groups of individuals, and focuses on the most important health areas (essential).

For national and international comparisons, there are health input and output indicators. Regarding inputs, there are infrastructures, staff, coverage and health investment funding indicators (see Figure 2.3).

Infrastructure indicators include those related to the availability and accessibility of health care facilities to all social strata, regardless of their level on the health pyramid in a given country. Regional disparities in terms of availability of infrastructure is here taken into account by measuring the distances to reach the first health facility, the supply of essential services in those health facilities, availability and accessibility of drugs in health

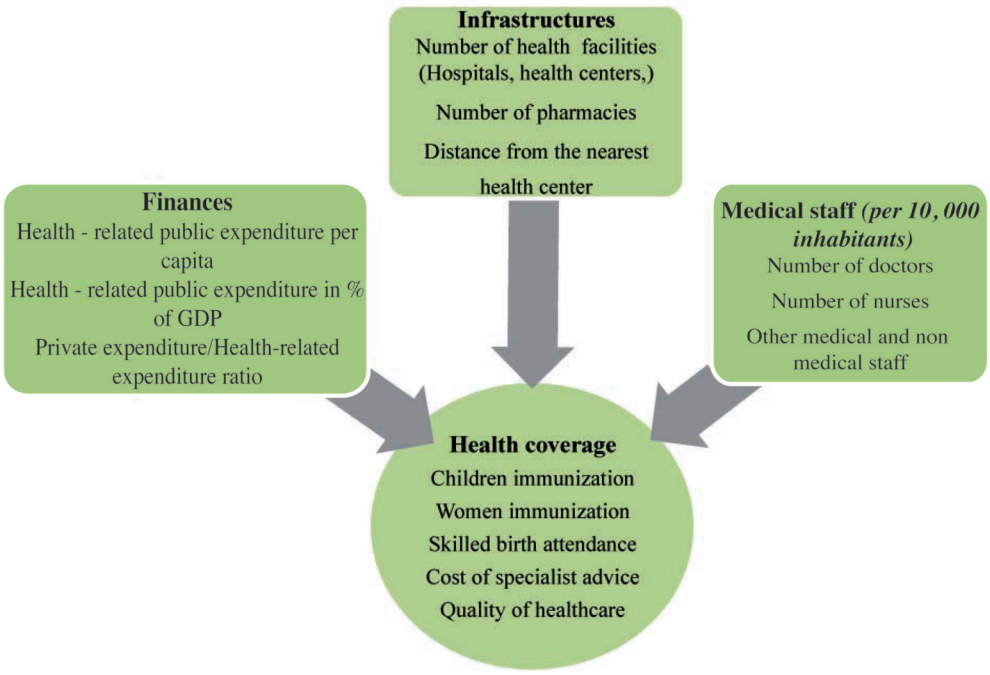
facilities and all things that assess the quality of planning in the context of a country's health policy.

Other health performance indicators are expressed as ratios of doctors, nurses, carer and other medical staff per 10 000 inhabitants. In general, these are indicators of quality health system and such indicators are compared to international standards as stated by WHO.

Coverage indicators measure the proportion of individuals covered by some specific programs developed within the framework of a country's health policy. This is the case of indicators for vaccination coverage generally destined to the protection of most vulnerable represented by women and children. In addition, there are indicators designed to measure the degree of consideration of issues of reproductive health issues or water-borne diseases.

Indicators of financing investments in health capital are intended to measure equity issues in health financing

Figure 2.3 : Some Health Input Indicators



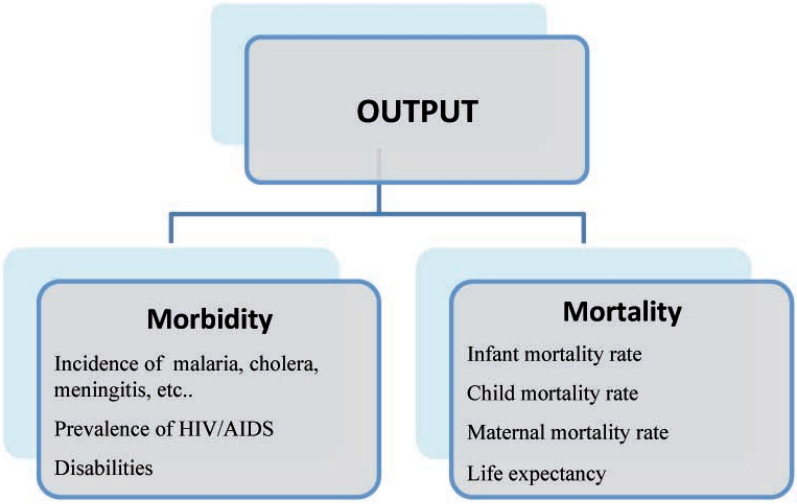
Source: Authors.

within a national system.

In terms of health output indicators (see Figure 2.4); the progress of a country's investment in human capital can be measured either through morbidity indicators, or mortality indicators.

Mortality indicators refer to the gross mortality rate and life expectancy cal-

Figure 2.4: Some Health Output Indicators



Source: Authors.

culated by age, gender and/or geographic areas. Morbidity indicators measure the incidence of certain diseases (Malaria, cholera, yellow fever, meningitis, etc.), the prevalence of a type of disease (HIV-AIDS), or percentage of disability (see Figure 2.4).

In addition to education and health, the concept of human capital includes other key dimensions that should be noted.

2.1.3. Other dimensions of human capital

Several other dimensions of human capital are now being considered and we talk more and more of human capital for migration and for all that relates to the "immaterial" in the individual and in society, especially culture.

2.1.3.1. Migration: an investment in human capital

Microeconomic analysis of migration considers that the decision to locate or relocate an individual usually involve high cost with long term benefits. This step is not different from an investment decision and it was foreseeable according to Sjaastad (1962) that migration specialists would end up choosing an inter-temporal approach based on the concept of human capital.

The main idea of this approach is to take into account all future incomes

made by individuals following a given localization choice and then compare this total revenue to costs directly related to geographical changes of individuals. With migration costs mainly concentrated in the period immediately following the total expenditure, migration is mostly legitimized by improving chances for the migrant to secure gains in the future. The importance of this approach is two-fold: First, it underscores the role of forecast in the decision to migrate. Secondly, it relates to the link between migration and other components of human capital, especially education. In fact, the structure of human capital is commensurate with migration costs and possible related benefits made by an individual. In return, migration influences the accumulation of other forms of human capital, complementarily or as a substitute. For example, migration-related professional career development enhances human capital through experience.

From a theoretical perspective, free thinkers analyze human migration from developing countries to developed ones as a normal phenomenon in the international market. Following this line of thinking, skilled workers go in search of jobs in the economic field where they will receive handsome salaries. It is in this context of globalized market that the migration of scientific or intellectual elites could be understood best. In actual fact, migration functions according to selective policies applied by host countries and the political climate in the country of departure. It is however worth pointing out long and medium term losses incurred by countries of origin.

In a short term, expatriation implies a sunk-cost investment (that cannot be recovered) for the country of departure. The effect of this expatriation is much more devastating for developing countries than for industrialized ones. In fact, developing countries are in dire need of high skill/trained intellectuals bearing in mind that a loss, no matter how tiny, may have a negative impact on human capital accumulation and its contribution to growth.

However, in a long-term optimistic perspective, some developing countries may benefit from a return on investment through a reverse flow of some of their elites having accumulated enough knowledge abroad. A positive side benefit compounded with a trend reversal is possible under certain conditions. Against the backdrop of a policy advocating voluntarism, migration can contribute to the development and strengthening of national capacities in the fields of research, higher education and health. This was the case in the course of the 1960s for the Dragons of Southeast

Asia who, however, remained strongly rooted in their culture.

2.1.3.2. The cultural dimension of human capital

In the course of developing Emile Durkheim theories on the "cultural capital" of an individual, Pierre Bourdieu came out with a concept similar to that of human capital, relating to a group of individuals, but favouring the potential transmission and enrichment of human capital over time. Thus, three dimensions of cultural capital are found. The "incorporated cultural capital" or "cultural habits" which is the result of differentiated socialization depending on social milieu (language, academic skills various ways to act and behave in society ...). It includes, for example, social comfort and ability to speak in public. This is a human capital the accumulation of which takes time and requires a personal investment.

The "objectified cultural capital" refers to cultural tools in the form of personal belongings (tables, library, piano, etc.). This capital is valueless unless we are trained on how to make good use of it. The "institutionalized cultural capital" for this line of thinking, a man undergoes cultural transformation after obtaining titles and diplomas sanctioning a socially recognized ability. In fact, a credential is evaluated on credentials market. Its value is relative and depends on its position on the scale of academic credentials as a whole. Factually, the value attached to a given credential is a valuable asset on the labour market or on the market production of cultural goods. In all three cases, there are elements close to the human capital that justify why culture is viewed as a dimension of human capital.

2.2. The stylized facts of human capital in Cameroon

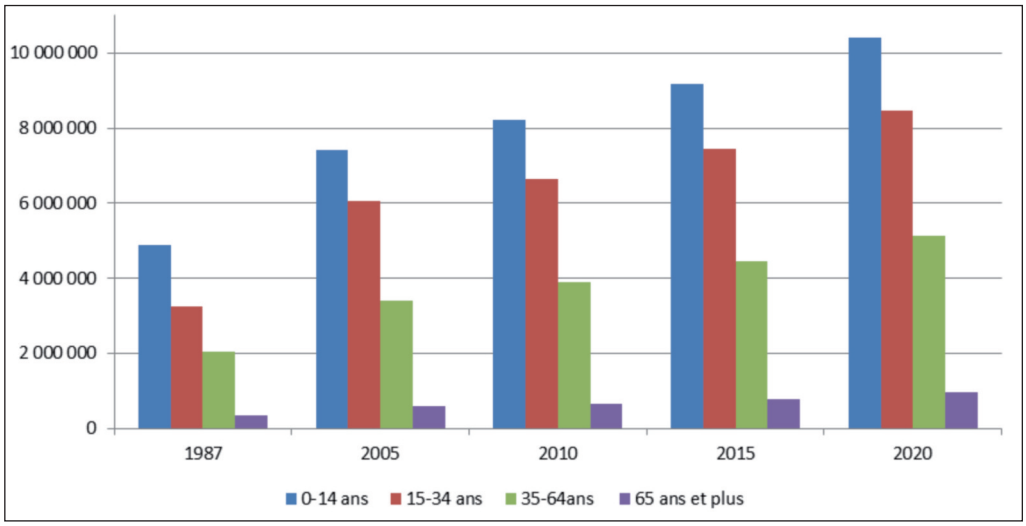
Human capital is assessed in Cameroon through the general demographic trends of population, the situation of education and health, migrations and labour market.

2.2.1. Demographic trends

Cameroon's population was estimated at more than 20 million inhabitants in 2012. Its growth rate is around 3%, very close to the average growth rate observed over the last two decades. However, there was a slight decrease in the growth rate of the population from 2.9% in the period 1976-1987 to 2.7% over the period 1987-2005. According to data from the third General Census of Population and Housing (RGPH), this rate will be around 2.5% between 2009 and 2035. Cameroon population is getting younger by the day and the age group 15-34 is 34.2%, nearly 6.5 million in 2010 (Figure 2.5).

Women represent approximately 50.6% of Cameroon's population.

Figure 2.5 : Trend of Cameroon's population by age group (1987-2020).



Source: BUCREP (Projections made on the basis of RGPH3 (2005)).

$IDH = (Duration\ of\ life\ index * Level\ of\ education\ index * Standard\ of\ living\ index)^{\frac{1}{3}}$

The most populous regions are the Far North and Centre, each having more than three million people. These regions are followed by the Littoral region with two and a half million inhabitants. The Southwest region is the least populated with nearly seven hundred thousand inhabitants. Moreover, according to the place of residence, we note that as time goes by, Cameroonian people tend to leave rural areas to concentrate in cities. The urbanization rate increased from 28% in 1976 to 38% in 1987 and stood at 49% in 2005. The rapid urbanization of the country mostly originates from rural exodus of young people (15-34) who are in search of better living conditions in urban centres such as the economic capital Douala and political capital Yaounde.

Table 1.3 : Distribution of the population of Cameroon by region and sex in 2011

Region	Male	Female	Total
Adamawa	527 909	536 898	1 064 807
Centre	1847199	1843457	3 690 656
East	404 689	407 155	811 844
Far North	1 782 581	1834656	3 617 237
Littoral	1503681	1493250	2 996 931
North	1073170	1093727	2 166 897
Nord-West	882 126	960 032	1 842 158
West	849 805	966 970	1 816 775
South	359 019	350 857	709 876
South-West	719 394	702 062	1 421 456
Cameroon	9 949 573	10 189 064	20 138 637

Source: BUCREP (2011).National Report on population.

2.2.2. State of education

The state of education is presented via some educational input indicators (share of public expenditure allocated to the education sector, literacy rates, school enrolment, etc.) on the one hand and output indicators of education (repetition rates, dropout rates, etc.) on the other hand.

2.2.2.1. Some education input indicators

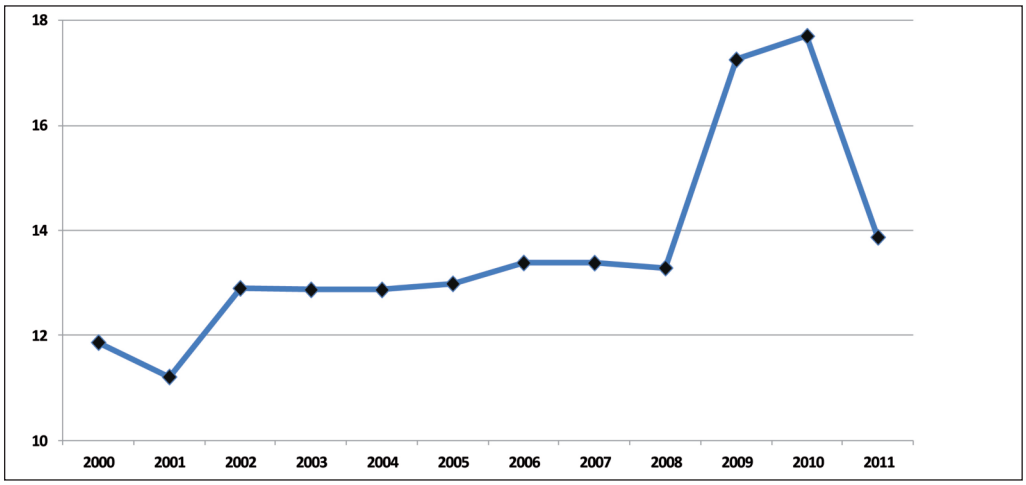
Public expenditure in the education sector

Finance Law data indicate that Government's efforts in favour of education has had a mixed trend. The budget share allocated to this sector increased from 11% in 2001 to13% in 2002 (Figure 2.6). It stabilized around this value before registering a significant leap in 2009 when it reached 17.3% to decline to 14% in 2011. The country thus remained below the recommendations of the Indicative Framework for the Fast Track Initiative for the Implementation of Education for all which urges States to grant 20% of their national budgets to the educational sector. The analysis of the structure of expenditure in the education sector shows a predominance of current expenditure featuring salaries of teachers, non-teaching staff salaries and expenditure on goods and services. Operating expenses account for about 88% against 12% of resources for investment (construction/ equipment of classrooms and schools.

Access to primary education

Access to universal primary education in Cameroon is gradually improving. In primary education, the net enrolment rate (NER) of children aged 6-11 years has evolved over time from 76 8% in 2001 to 79.8% in 2005. It then

Figure 2.6 : Evolution of public expenditure in the education sector as a percentage of the state budget



Source: 2000-2012 Finance Laws and Authors calculations.

declined slightly to 78.8% in 2010. The gender gap in access to primary education has significantly narrowed from 2.8 percentage points in 2005 to 1, 4 points in 2005, reflecting effects of actions carried out for the education of the girl child especially in priority education zones.

There are some spatial disparities in access to primary education. In 2010, the net enrolment rate was 86.2% for urban areas compared to 75.4% for rural areas. In 2005 it stood at 76% in rural and 83.1% in the urban. Thus, over the period 2005-2010, the rate remained almost stable in rural areas and declined by 3.1 percentage in urban areas. The three areas where the NER are highest are in the Littoral excluding Douala (94.9%) the West (92%) and Center (91.1%). In contrast, the regions of the north are those where NERs are weaker, the Far North (59.1%), North (59.4%), and Adamawa (72.9%).

Literacy

Literacy in Cameroon reflects the ability of persons aged 15 years or older to read and write in French or English. There was an overall decline of illiteracy in the country (see Table 2.2).

The analysis of literacy reflects changes in time and space. In time, the literacy rate in Cameroon was up by 7 points

Table 2.1 : Changes in enrolment (6-11 years) between 2005 and 2010 in Cameroon.

Years	2005	2010
Areas of Survey		
Douala	92.6	86.9
Yaounde	90.7	89.6
Adamawa	72.4	72.9
Centre	96.7	94.1
East	86.6	88.7
Far North	54.4	59.1
Littoral	91.5	94.9
North	66.3	59.4
Northwest	89.3	87.9
West	96.9	92.0
South	88.5	89.4
Southwest	93.6	91.9
Place of residence		
Urban	89.3	86.2
Rural	76.0	75.4
Gender		
Male	81.2	79.4
Female	78.4	78.0
Cameroon	**79.8**	**78.8**

Source: INS (EESI 1 (2005), EESI 2 (2010)).

from 1996 (61%) and 2001 (68%), and this rate increased by 3.2 percentage points to 71.2 % in 2010. In the Growth and Employment Strategy Paper (GESP), given earlier trends in this rate and its current level, the Cameroonian government intends to achieve the eradication of illiteracy by the year 2020. The spatial distribution of literacy show immense disparities among regions with the Far North, North, Adamawa and the East having the lowest literacy figures.

Table 2.2 : Progression in literacy rates in Cameroon between 2001 and 2010

Years	2001	2005	2010
Survey area			
Douala	94.0	93.2	96.5
Yaounde	94.4	94.6	94.4
Adamawa	39.6	48.2	51.4
Centre	82.6	83.3	81.8
East	64.3	59.6	65.3
Far North	24.4	27.8	26.1
Littoral	80.7	85.1	91.4
North	32.5	32.7	35.2
Northwest	74.5	69.4	75.8
West	76.1	78.3	82.0
South	88.2	88.0	94.0
Southwest	81.7	78.8	87.9
Gender			
Male	77.0	75.6	78.2
Female	59.8	58.5	64.7
Cameroon	**67.9**	**66.7**	**71.2**

Source: INS (ECAM 2 (2001), EESI 1 (2005), EESI 2 (2010)).

Evolution of management in higher education

In the period for implementing a strategy for the education sector in 2006, the Government has made significant efforts to improve the quality of education in universities by carrying out a series of recruitments of 1,000 teachers each in 2008 and 2011. The first wave of recruitment has increased the number of permanent teachers. It rose from 2,219 in 2006 to 3,249 in 2011 - an increase of 46%. With the second wave of recruitment, which was undertaken under the overall recruitment process of a total of 25,000 young people in the public administration, the threshold of 4,000 teachers was crossed by 2013. Despite these efforts, higher education has faced a deterioration of overall staff ratio; from one teacher for 33 students in 2002 to one teacher for 64 in 2011. Areas with the most pressing need in teachers are economics and management sciences, education and legal sciences (MINESUP Statistical Yearbook 2011).

Table 2.3 : Level of coaching for Primary and Secondary Schools in 2011

Region	Primary		Secondary	
	Pupil Master	Pupil/Classroom	Pupil/Teacher	Pupil/Classroom
Adamawa	66.6	64.6	50.0	28.8
Centre	41.1	38.2	64.8	52.5
East	65.2	53.9	81.7	41.3
Far North	89.2	76.7	138.3	79.9
Littoral	32.3	33.3	75.8	47.8
North	85.0	78.1	92.4	56.9
Northwest	45.6	39.6	54.1	56.8
West	53.3	45.8	74.7	46.3
South	32.0	27.8	58.4	43.6
Southwest	36.0	39.7	57.8	41.2
Cameroon	**51.1**	**47.2**	**69.5**	**49.2**

Source: Statistical Yearbook MINEDUB (2011), Statistical Yearbook MINESEC (2011) and authors' calculations

Evolution of management in higher education

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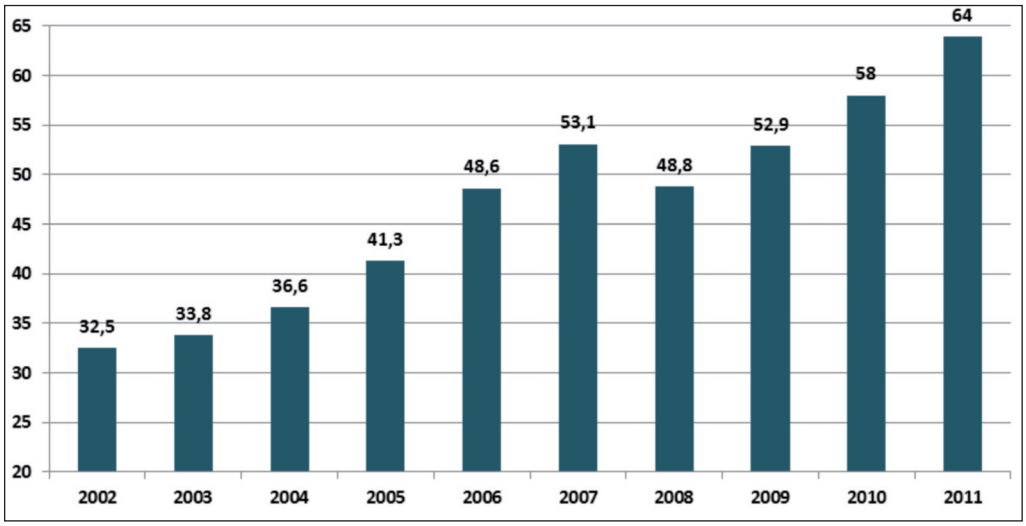
Figure 2.7 : Evolution of staff ratio in higher education.



Source: Statistical Yearbook MINESUP (2011) and authors' calculations.

2.2.2.2. Some education output indicators

Primary school completion and transition to secondary education

The goal of universal primary education is that all children complete a full primary cycle which corresponds to six years of study. The completion rate of this cycle of education is one of the key indicators for monitoring the goals of education for all. According to the data of the survey conducted by the INS EESI2 in 2010, the net rate of completion was 21.5% at national level. This rate is higher in urban areas (27.8%) than in rural areas (18.2%). According to the survey area, the net rate of completion varies from 2.9% (in the North) to 33.4% (in the Southwest). Analysis by gender shows that the performance of girls is better than that of boys' (28.5% against 15.8%).

The transition rate to secondary schools assesses the internal efficiency of the education system; it represents the proportion of pupils who finish primary school and access secondary school. According to data from the EESI2, this rate is 85, 3% reflecting that nearly 9 in 10 students who completed primary education enrolled in secondary school. The transition rate to secondary education is almost identical in both urban and rural areas. On the contrary, it is higher among boys (88.8%) than girls (81.3%). (See Table 2.4).

Table 2.4 : Primary school completion rate and transition rate to secondary school.

Socio-demographic characteristics	Net primary completion rate	Secondary transition
Survey area		
Douala	24.6	91.6
Yaounde	31.9	78.2
Adamawa	6.6	92.4
Centre	20.1	85.7
East	21.6	84
Far North	10.1	92.9
Littoral	26.9	74.3
North	2.9	72.2
Northwest	30.6	86.2
West	26	78.8
South	27.8	91.5
Southwest	33.4	98.2
Place of residence		
Urban	27.8	85.2
Rural	18.2	85.4
Gender		
Male	15.8	88.8
Female	28.4	81,3
Cameroon	**21.5**	**85.3**

Source: INS (EESI 2, 2010).

School dropouts: Repeating class and drop-out in primary school

The repetition rate in primary[11] school is at a national averageof 74%. This rate is lower in the South West (0.6%), in the Far North (1.7%) in Adamawa (2.3%) and North West (2.4%). Conversely, the highest rates are found in the Western region (16.3), in the Littoral (16.3%) and South (11%). The repetition rate is higher in urban areas (9.2%) than in rural areas (6.5%). By sex, the profile of repetition has no disparities (see Table2.5).

Repeating class with the added expenses tends to induce drop-out from studies and / or discourage parents. Reducing the frequency of repetition would undoubtedly be an important element to improve retention in primary education.

The overall dropout rate at primary level is 2. 2%. This rate is highest in the Far North region (5.4%) and lowest in the South West (0.2%). It is almost the same depending on the place of residence and sex. According to EESI2 survey, the main reason for non-attendance or dropout is the lack of financial resources (48.6%). Other reasons are the preference for an apprenticeship or work (12.4%), the occurrence of pregnancy or marriage (9.1%), school failure (6.7%), and the distance to school (5.5%),

[11] This is the proportion of pupils from a cohort enrolled in a given level of education in a school year but study at the same level of education in year t+1.

Table 2.5 : Dropouts: repetition and dropout rates in primary school.

Socio-demographic characteristics	Repetition rate %	Dropout rate %
Survey area		
Douala	10.8	1.4
Yaounde	9.5	2.2
Adamawa	2.3	5.4
Centre	9.7	2.0
East	6.3	3.7
Far North	1.7	2.4
Littoral	16.3	0.9
North	8.2	2.4
Northwest	2.4	2.8
West	16.3	2.0
South	11.0	1.1
Southwest	0.6	0.2
Area of residence		
Urban	9,2	2,3
Rural	6,5	2,2
Sex		
Male	7,3	2,1
Female	7,6	2,3
Cameroon	**7,5**	**2,2**

Source: INS (EESI 2, 2010).

2.2.3. The health situation

The health situation is assessed on the basis of input indicators (share of public health expenditure, health personnel ratio / population and vaccination coverage of children) and health output indicators (prevalence of HIV / AIDS, infant mortality rate, life expectancy at birth).

2.2.3.1. Some health input indicators

Public expenditure on health

Expenses that are considered here are those of the Ministry of Public Health, and do not include health expenditure made by other bodies such as the Ministries in charge of education, safety and national defence.

Figure 2.8 shows that since 2000, health expenditure have been on a steady increase. Their share in the state budget that was 2.6% now stands at nearly 6%. In 2009, in response to the update of the health sector strategy, the ministry of health witnessed an increase of its budget from 3,5% in 2008 to 4,9%.

The increase in the health budget had an impact on the number of health facilities up from 3039 in 2007 to 3776 in 2011. Today, the National Health System includes :

- 6 general hospitals (first category);
- 5 central hospitals (second category);

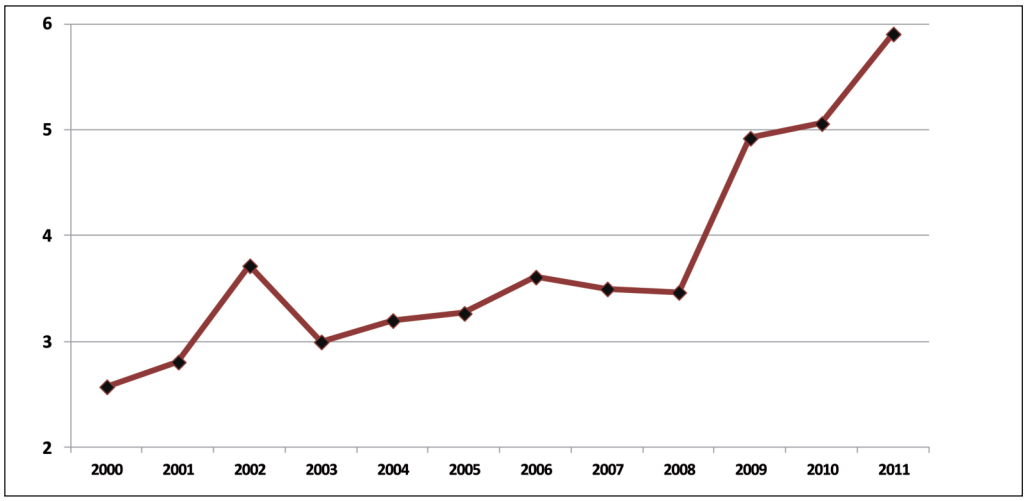
- 13 regional hospitals (third category);
- 81 district hospitals in 191 districts;
- 204 sub-divisional medical centers (CMA);
- 2405 Integrated Health Centers (CSI) ;
- 962 private health facilities.

This offer is unevenly distributed across the country with a concentration in urban areas.

Health personnel / population

Table 2.6 shows that, compared to WHO standards, the coverage of the population by medical personnel is gradually improving thanks to recruitment efforts by the Government with the support of its partners (HIPC, C2D, etc.). In 2011, the professional health personnel / population ratio increased from 0.63 per 1000 inhabitants in 2007 to 1.27 but is still far from the international standard which is 2.3. This is especially due to a marked shortage of doctors and health specialists, despite an increase in the supply of medical education with the opening of medical schools at the Universities of Buea, Dschang and the recent creation of several private medical schools (Bangangté, Ebolowa, Nanga Eboko, etc.).

Figure 2.8 : Evolution of public expenditure on health as% of the state budget.



Source: Finance Laws 2000-2012 and Authors calculations.

Table 2.6 : Ratio of health personnel / population

Staff Category	WHO standards	1998	2000	2007	2011
Doctors	1/ 1 000	1/9 164	1/ 10 083	1/ 13 468	1/10054
Health personnel	1/3 000	1/2 214	1/2 249	1/3 094	1/858
Dental surgeons	1/10 000	1/148 514	1/145 454	1/105 882	1/347218

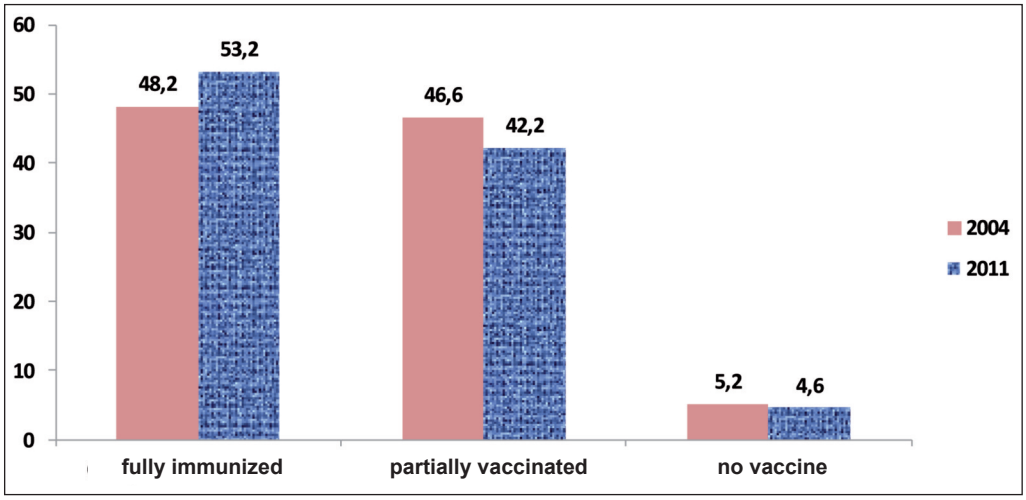
Source: MINSANTE (health sector strategy) and General Census of health personnel in 2011.

Childhood Immunization

Under the Expanded Program on Immunization (EPI) implemented by the Ministry of Health and in accordance with WHO recommendations, a child is considered fully immunized if they have received the BCG vaccine against tuberculosis, three doses of DPT against diphtheria, tetanus and pertussis, three doses of vaccine against polio and the vaccine against measles. According to the immunization schedule, these vaccinations must have been administered to the child during its first year.

Overall, the EDS4-MICS survey shows that the rate of full immunization coverage of children aged 12-23 months increased from 48% in 2004 to 53% in 2011 (see Figure 2.9). The survey also reveals that mother's education has a positive correlation on immunization rates of children. Indeed, the full immunization coverage of children aged 12-23months is 32% for uneducated mothers ; it goes to 54% for children whose mothers completed primary education, 66% among those whose mothers had secondary level education and 74% when the mother has a higher level of education.

Figure 2.9 : Trends in childhood immunization coverage (12-23 months) between 2004 and 2011.



Source: INS (DHS 3 (2004), EDS-MICS 4 (2011)).

*IDH = (Duration of life index *Level of education index *Standard of living index)* $^{\frac{1}{3}}$

2.2.3.2. Some health output indicators

Prevalence of HIV / AIDS

The results of the HIV-AIDS component of the fourth Demographic and Health Survey (DHS) combined with the Multiple Indicator Cluster Surveys (MICS) show that national prevalence has declined since 2004 (see Table 2.7) from 5.5% to 4.3% in 2011. Depending on the sex, it can be noted that HIV prevalence is nearly two times higher among women (5.6%) than men (2.9%).

Table 2.7 : Trends in prevalence of HIV-AIDS by region and level of education between 2004 and 2011

	2004			2011		
	Females	Males	Both	Females	Males	Both
Survey areas						
Douala	5.5	3.6	4.5	6.4	2.6	4.6
Yaounde	10.7	6	8.0	8.9	3.6	6.4
Adamawa	9.8	4.1	6.9	7.1	2.3	5.1
Centre	6.8	2.1	4.7	6.9	5.3	6.1
East	9.4	7.6	8.6	8.8	3.7	6.3
Far North	2.2	1.7	2.0	1.5	0.8	1.2
Littoral	6.4	4.7	5.6	5.1	2.7	3.9
North	1.7	1.7	1.7	3.2	1.5	2.4
Northwest	11.9	5.2	8.7	7.2	5.0	6.3
West	4.3	5.2	4.7	2.8	2.9	2.8
South	8.4	4.5	6.5	10.6	3.8	7.2
Southwest	11.0	5.1	8.5	7.9	3.3	5.7
Level of education						
None	3.4	2.7	3.2	2.8	1.7	2.5
Primary	7.2	4.2	5.9	6.6	3.1	5.0
Secondary and more	8.2	4.3	6.0	6.1	2.7	4.4
Cameroon	**6.8**	**4.1**	**5.5**	**5.6**	**2.9**	**4.3**

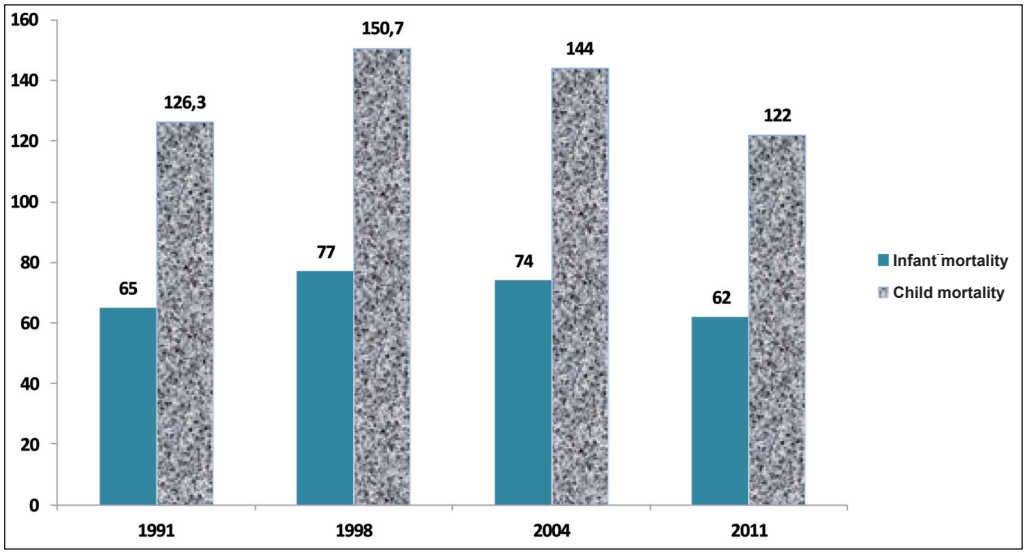
Source: INS (EDS 2004 and EDS 4-MICS 2011).

Infant mortality

Overall, the risk of child mortality which is the risk of death before the age of five years, is 122 deaths per 1000 live births (122 ‰). In other words, in Cameroon, about one in eight children die before reaching the age of five. The analysis of trends in mortality from retrospective measures indicates that child mortality increased between 1991 and 1998 and since then, it is in process of a gradual decline. Infant mortality, which is the risk of death before the age of one, has decreased from 77 ‰ in 1998 to 62 ‰ in 2011, and child mortality from 150.7 ‰ to 122 ‰ over the same period. However, at this pace, the targets set in the Health Sector Strategy for 2015, 25 ‰ for infant mortality and 50 ‰ for child mortality, seem impossible to achieve.

The main causes for infant mortality are malaria, diarrhoea, pneumonia and malnutrition. In 2010, malaria accounted for 20% of all causes of death among children under five (MOH, 2012).

Figure 2.10 : Trends in infant mortality between 1991 and 2011.



Source: INS (DHS 1 (1991), EDS 2 (1998), EDS 3 (2004), EDS-MICS 4 (2011))

*IDH = (Duration of life index *Level of education index *Standard of living index)* $^{\frac{1}{3}}$

Maternal mortality

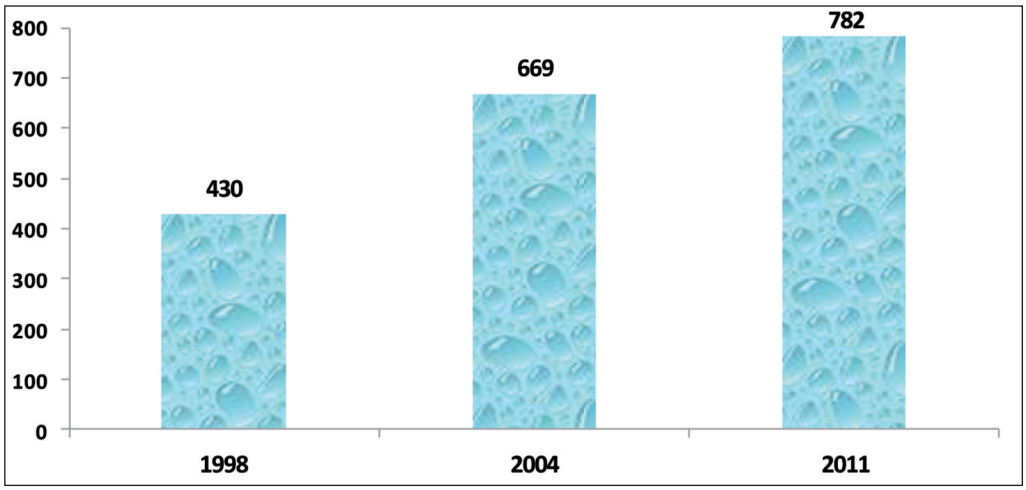
Cameroon has enrolled in the Campaign for Accelerated Reduction of Maternal Mortality in Africa (CARMMA), an initiative of the African Union. Its strategic principles include:

- The launch of a program to improve human resources in maternal and child health
- The promotion of a package of interventions with proven impact on the health of mothers and children on both clinical and community level
- Interventions on the health system
- Social mobilization / community advocacy for mother and child health
- Advocacy
- Partnership and coordination

Notwithstanding the above listed interventions, the DHS shows a continuing increase in maternal mortality. In fact, it went from 430 maternal deaths per 100,000 live births in 1998 to 669 in 2004 and stood at 782 in 2011. This is a drift away from the objectives set for 2015, which is 344 deaths per 100,000 live births.

The immediate causes of morbidity and mortality are bleeding during pregnancy and / or childbirth, infections, pregnancy-related hypertension, physical difficulty to access a health centre, low capacity of health facilities to provide family planning and reproductive health services, inadequate nursing staff in quantity and quality to name just a few.

Figure 2.11 : Trends in maternal mortality between 1998 and 2011.

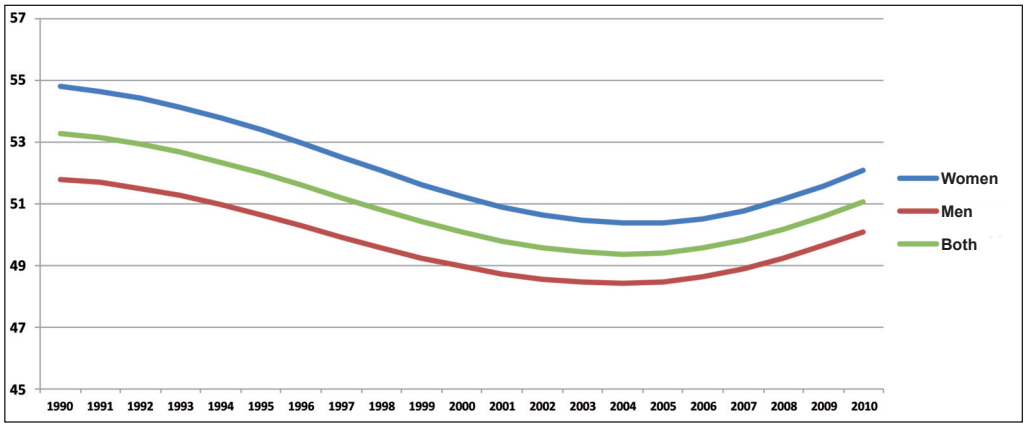


Source: INS (DHS 2 (1998), EDS 3 (2004), EDS-MICS 4 (2011))

Life expectancy at birth

It is the average number of years that a new born can expect to live if mortality conditions prevailing at the time of birth remained unchanged throughout his life. Data from the last three decades shows that it is at 51 years in 2010 against 53 in 1990 (see Chart 2.12). A gender-based analysis shows that in 2010, the life expectancy of a male new born all other things being equal is around 50 compare to 52 for a female new born. These values are much lower than those of developed countries. For example, in 2010 in France, a new born male's life expectancy is 78 and about 81 for female.

Figure 2.12 : Trends in life expectancy at birth in Cameroon.



Source: World Development Indicators 2012.

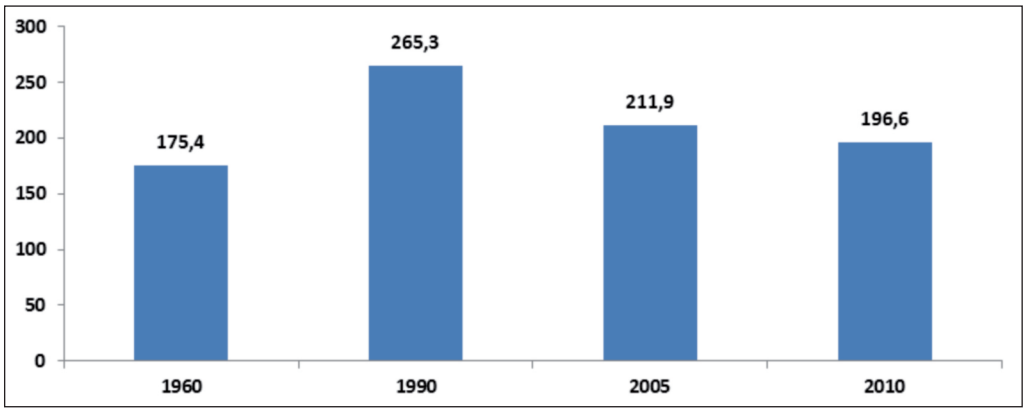
$IDH = (Duration\ of\ life\ index * Level\ of\ education\ index * Standard\ of\ live\ index)^{\frac{1}{3}}$

2.2.4. Migration

If poverty is the main factor limiting mobility outside African borders, qualified educated individuals dominate migration to developed countries among which women accounted for 48% in 2005. Cameroon has long been a haven for migrants. This is reflected by the increase in the number of immigrants present in the country between 1960 and 1990. But in the wake of the crisis in the 90s and the emergence of new countries (South Africa, Equatorial Guinea, etc.) as preferred destinations, the number of immigrants in the territory of Cameroon steadily decreased from 265, 300 in 1990 to 211,900 in 2005 and to 196,600 in 2010 (see Figure 2.13).

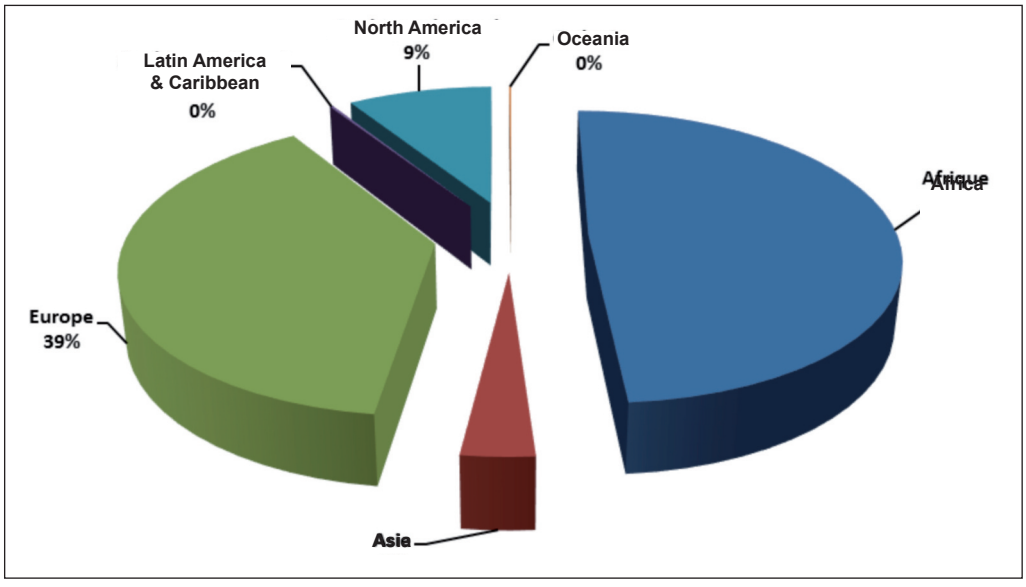
The principal destinations for Cameroonian emigrants are other African countries like South Africa, Equatorial Guinea, and European Countries. Only 3.2% emigrate to Asia and 8.9% towards North and Latin American countries.

Figure 2.13 : Number of immigrants in Cameroon (in thousands).



Source: HDR (2010).

Figure 2.14 : Area of residence for Cameroonian emigrants 2000-2002 (percentage of total stock of emigrants).

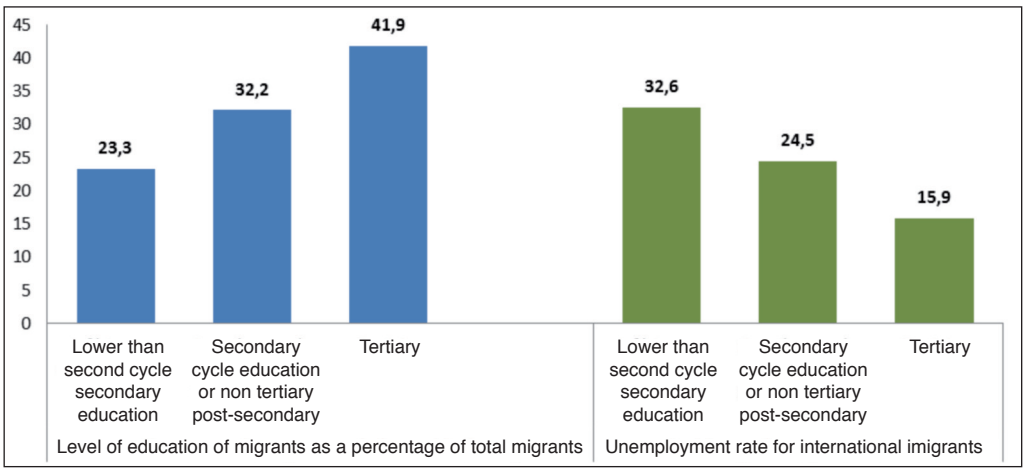


Source: HDR UNDP, 2010.

Migration is profitable since those who move are not only most likely to find a job, thereby making use of their human capital, but also a chance to have a better income. In fact, it has been generally observed that the unemployment rate of migrants is lowest when their level of education is higher (see Figure 2.15).

Moreover, the yield of the decision to migrate can be measured through incomes migrants send home. In Cameroon, statistics reveal that in 2005, 56% of remittances towards Cameroon were made by Cameroonian who migrated to Europe (see Figure 2.16)

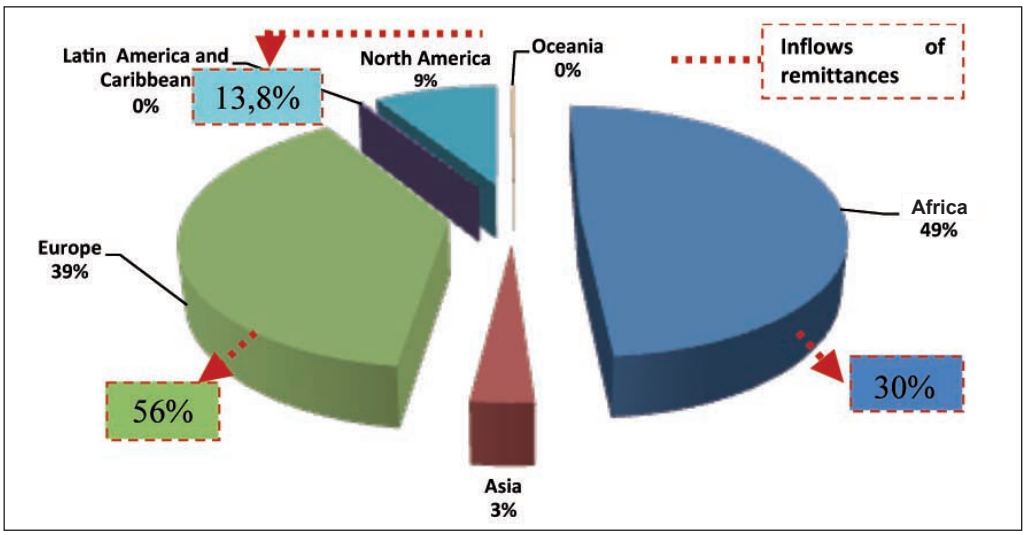
Figure 2.15 : Level of education and unemployment rate for Cameroonian migrants to international destination (as %).



Source: HDR 2010.

$$IDH = (Duration\ of\ life\ index * Level\ of\ education\ index * Standard\ of\ live\ index)^{\frac{1}{3}}$$

Figure 2.16 : Areas of residence of Cameroonian migrants 2000-2002 (% of stocks of emigrants) and remittances inflows (% of total inflows of items).



Source: HDR 2010.

2.2.5. Insight on the job market

2.2.5.1. Evolution of the activity rate

For the International Labour Organisation (ILO), the activity rate which is the ratio of the labour force (employed and unemployed) in the population aged 10 or more, has remained stable ; at around 70% since 2005. It suggests that in Cameroon, nearly seven out of 10 potentially active people participate in the labour market by either exercising a trade or being in search of a job.

Past surveys data shows that participation rate has increased significantly in Cameroon, with the advent of the economic crisis of 1987 and the devaluation of the CFA franc in 1994. These events increased the participation of women and children in the labour market. Because of the economic meltdown and devaluation, men lost their jobs causing their income to drop significantly. To cope with the situation, households developed survival strategies involving other members ; women first, then children in economic activities in order to meet their needs.

There are great regional disparities in the labour market. The West Region (83.6%), Littoral (83.2%) and Center (82%) are those that record the highest activity rates. On the other end, Adamawa (49%), South West (66.3%), Douala (62.4%) and Yaounde (57.3%) have the lowest activity rates. The activity rate is 74.1% for men; 9.9 points higher than that of women that stands at 64.2% (see Table 2.8).

Table 2.8 : Trends in activity rates between 2005 and 2010 per Region and Gender

	2005			2010		
	Males	Females	Both	Males	Females	Both
Survey areas						
Douala	69.7	52.4	61.2	70.7	54.4	62.4
Yaounde	63.2	47.7	55.5	64.0	51.0	57.3
Adamawa	81.3	56.9	68.8	63.1	35.1	49.0
Centre	70.5	68.0	69.2	83.2	80.8	82.0
East	78.2	61.8	69.4	79.2	61.1	70.2
Far North	87.2	81.6	84.3	74.7	64.7	69.7
Littoral	72	75.1	73.6	85.4	81.2	83.2
North	86.7	75.2	80.8	82.4	67.8	74.8
Northwest	69.6	75.0	72.5	68.9	68.3	68.6
West	67.1	74.5	71.1	84.5	83.0	83.6
South	77.1	70.3	73.8	78.2	69.1	73.8
Southwest	69.3	63.0	66.2	69.4	63.0	66.3
Place of residence						
Urban	66.1	51.6	58.9	67.2	55.9	61.8
Rural	80.2	77.4	78.8	79.0	73.7	76.4
Cameroon	**74.8**	**68.3**	**71.5**	**74.1**	**64.2**	**69.0**

Source: INS (EESI 1 (2005) and EESI 2 (2010)).

Box 2.1: Disability and access to employment in Cameroon

Disability is a limitation of opportunities for a person to fully participate in an activity in a given environment (see Cameroon Law of April 2010 on the protection and promotion of the Disabled). This definition of disability reconciles the current medical view of disability as a condition of physical or bodily impairment with the social view whereby disability is nothing but a situation created by a socially and physically unsuitable environment. In general, people with disability face greater difficulties in the labour market, with limited access to employment. This situation is a loss in terms of unrealized production, allowance payable and psychological well-being of the latter.

Data from the Third Cameroonian households survey (ECAM III) completed by the National Institute of Statistics (INS) in 2007, showed that in Cameroon 4.9% of people in the working age population were disabled. The incidence of disability is slightly higher in males (4.5%) than in females (3.65%). A more detailed examination reveals that the most widespread functional disabling factor in the male population is eye-sight (37.0%) and mobility (31.8%) followed by mental, hearing and communication limitations which account for 11.15%, 8.5% and 6.8%. These data also show that, overall, there is a significant difference between non-disabled and disabled when it comes to getting a job. This difference is 9% for disabled and non-disabled men and 5.2% for disabled and non-disabled women.

To solve this problem, the first thing is to reconstruct the fabrics of society, by sensitizing employers on the productivity of these individuals so as to dispel the sense of prejudice as a major stumbling block for their recruitment. The legislative framework should be strengthened by implementing a policy of positive discrimination in favour of disabled people.

2.2.5.2. Employment characteristics and activity rate

The national workforce is composed of 52.2% men and 47.8% women. In urban areas, 56.3% of workers are men and 43.7% women, while in rural areas the gender distribution is equal. In Douala and Yaounde, the proportion of female workers is around 43%. On the contrary, in regions of the Littoral, North West and West, the proportion of employed women is higher than men.

Cameroonian workers are relatively young; the average age is 33 years. This indicator is 33.3 years in urban areas and 32.9 in rural areas. It is lower in the North (29.2 years) and higher in the South (34.6 years).

Regarding the level of education, the average number of years of successful studies for a worker is 7.5 years. It is 9.2 years in urban areas and 6.3 years in rural areas. In the two major cities Douala and Yaounde, the level of education of workers is the highest in the country (9.4 years and 10.1 years, respectively) due to the great concentration of skilled jobs in these cities (see Table 2.9).

Table 2.9 : Characteristics of employed persons(10 years and over) per region and area of residence.

	Ratio of Females (%)	Ratio of males (%)	Average age years)	Number of years of successful studies	Total rate (as %)
Survey areas					
Douala	57.8	42.2	33.9	9.4	11.0
Yaounde	55.3	44.7	33.4	10.1	10.1
Adamawa	67.3	36.3	32.9	6.0	19.0
Centre	50.7	49.3	33.8	6.7	41.1
East	57.1	42.9	31.8	5.8	35.6
Far North	53.2	46.8	33.4	5.0	34.0
Littoral	49.4	50.6	33.5	7.5	39.8
North	52.5	47.5	29.2	4.8	22.7
Northwest	45.3	54.7	33.5	7.3	23.7
West	43.4	56.6	33.3	7.0	35.4
South	56.3	43.7	34.6	7.9	30.7
South-West	52.7	47.3	33.2	8.0	23.3
Place of residence					
Urban	56.3	43.7	33.1	9.2	14.3
Rural	50.1	49.9	32.9	6.3	32.8
Cameroon	**52.2**	**47.2**	**33.0**	**7.5**	**26.5**

Source: INS (EESI 2, 2010).

2.2.5.3. Employment structure

The labour market is dominated by the informal sector with 90.5% of jobs. It has two components: the agricultural sector (53%) and the non-agricultural sector (37.5%). The informal agricultural sector includes activities related to agriculture, animal husbandry, hunting, fishing and fish farming. The informal sector includes non-agricultural informal workers working in the areas of trade, construction and public works and services (catering, hairdressing, repair, maintenance, transport, etc.). The informal sector is important but is characterized by low wages and job insecurity. It is, therefore, urgently necessary to consider a gradual shift to the formal sector.

The formal sector only represents 9,5%, with 5,8% for the public sector and 3,7% for the formal private sector, although it ought to be the engine of economic growth.(see Table 2.10). It is therefore important to incentivize job creation in this sector.

Table 2.10 : Distribution of employed persons per sector and age group (%)(10 years or more)).

Institutional sector	10-14 years	15-34 years	35-64 years	65 years and more	Group
Public	0.0	4.0	10.3	2.1	5.8
Formal private	0.5	3.9	4.6	0.5	3.7
Non-agricultural informal	17.6	46.0	33.9	14.9	37.5
Informal agricultural	81.9	46.0	51.2	82.5	53.0
Group	**100,0**	**100,0**	**100,0**	**100,0**	**100,0**

Source: INS (EESI 2 (2010)).

The analysis of the structure of jobs created per year and institutional sector shows a decline of employment in the informal agricultural sector. In fact, before 1999, 76.4% of new jobs were created in this sector against only 22.9% in 2010. On the contrary, the division of employment in the non-agricultural sector (with the greatest concentration of commercial activities) has grown significantly from 18.3% before 1999 to 66.9% in 2010 (see Table 2.11). This significant increase could be explained by the replacement of primary sector jobs by tertiary ones.

Table 2.11 : Evolution in the creation of jobs

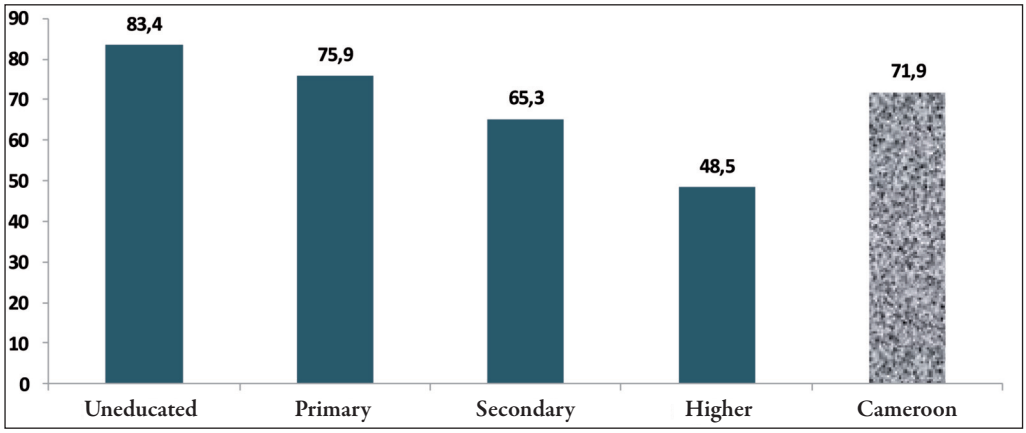
Institutional sector	Avant 1999	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Public sector	3.5	8.7	6.6	6.3	5.5	10.2	10.7	5.0	8.1	7.8	6.2	5.2	4.8
Formal private sector	1.8	1.4	2.6	2.4	2.5	5.5	3.1	3.9	3.8	5.0	4.5	5.4	5.5
Non-agricultural informal	18.3	23.3	27.0	30.5	27.8	27.9	31.3	37.8	34.9	44.0	49.8	56.2	66.9
Informal agricultural	76.4	66.5	63.9	60.7	64.2	56.4	54.9	53.4	53.2	43.2	39.5	33.2	22.9
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Source: INS (EESI 2, 2010).

2.2.5.4. Underemployment

Underemployment is one of the main features of the Cameroonian labour market and its reduction is one of the goals of the country's growth and employment strategy. The idea is to reduce the rate from 75.8% to less than 50%. EESI 2 data shows that the under-employment rate remains very high, affecting more than seven out of ten active persons (71.9%). Underemployment affects all active persons no matter their level of education. It is 48.5% for university degree holders while for the other categories it is higher, reaching 83% for active persons who have not been to school.

Figure 2.17 : Overall underemployment rate based on the level of education in 2010 (as %).



Source: INS (EESI 2, 2010).

$IDH = (Duration\ of\ life\ index\ ^{*}Level\ of\ education\ index\ ^{*}Standard\ of\ living\ index)^{\frac{1}{3}}$

2.3. The link between human capital and economic growth in Cameroon: recent developments

The accumulation of human capital entrances the productivity of workers in that it improves their ability to use available technologies. Its contribution to economic growth is tangible judging by technical breakthroughs. Human capital is indeed an essential resource in the area of research and development (R & D), allowing the emergence of new products and processes.

Going more deeply, Benhabib and Spiegel (1994) identify two main mechanisms through which human capital contributes to economic growth. First, the level of human capital directly affects the rate of local technological innovation. Second, the stock of human capital determines the pace at which foreign technologies are adopted. Through these mechanisms, they conclude that the gap between countries could be bridged if the poorest ones improved their stock of human capital at a level higher than that of the richest countries. In terms of empirical implications, the level of human capital stock rather than its growth rate plays an important role in determining the growth rate of per capita income. Benhabib and Spiegel (1994) also show that in the richest countries, the use of education as an innovation tool influences growth, while in the poorest countries it is the "catch-up" effect.

Other studies stress the importance of human capital as a research tool in the innovation and economic growth process. For instance, according to Barro (2001), the transition of secondary school enrolment from 50% to 100% increases the annual growth rate of income by about 1 percentage point. Results of this study show that human capital would trigger a sustained increase in production in Cameroon through technological development. Therefore, the accumulation of human capital would sustain long term economic growth in Cameroon, by boosting not only workforce productivity, but also through other transmission channels not taken into account by the market referred to as positive externalities.

In Cameroon, the impact of human capital on economic growth seems mitigated (see Appendix 1). The regression model tested on data from 1982 to 2010, with GDP logarithm per capita as a dependent variable, shows a positive sign of both health variables considered: life expectancy at birth and health expenditure per capita.

With regard to education, the gross enrolment rate has a positive effect on economic growth while expenditure per child aged 6-24 may have a negative effect. This last result could be indicative of the low economic

profitability of education investment in Cameroon, suggesting that resources invested by the government to train young Cameroonians could be economically more profitable in other sectors such as infrastructure or development, as the knowledge acquired by graduates is not used to benefit technological innovation that is essential to support strong and sustainable growth.

Cameroon's economy is mostly geared towards the production of raw materials (oil, mining, perennials etc.), activities with very high import and transport costs (cement, breweries, bakeries, etc..), and small industries with low economies of scale and activities sectors tips (repairs, trade, construction, etc.). These activities have limited options for skilled labour. On the contrary, the manufacturing sector requiring a great deal of qualified workers remains weak. This structuring of Cameroon's economy seems to justify the non-profitability of investments in the education sector.

These results, which are contrary to the theory of endogenous growth, could also be attributed to the eclectic nature of research data in use. In fact, data on macroeconomic aggregates are provided by the World Development Indicators (WDI) of the World Bank, while human development Indicators are provided by UNDP.

Three major lessons can be learned from previous analysis: (i) the concept of human capital is ambiguous, but generally contains two main components, namely education and health, (ii) the accumulation of human capital would support long-term economic growth by acting directly not only on the productivity of the workforce, but also through positive externalities, that is to say, benefits not taken into account by the market; (iii) there is an overall increase, although marginal, in human capital in Cameroon, but this small change does not allow human capital to fully play its role in growth.

The next chapter defines economic growth in the Cameroonian context.

HUMAN CAPITAL AT DIFFERENT STAGES OF ECONOMIC GROWTH IN CAMEROON

It is becoming common practice to characterize the history of economic growth in Cameroon by separating three main phases that correspond to three levels of human development and consequently of human capital. Over the period 1960-2012, economic growth appeared positive and higher than that of many African countries, but it is worth pointing out that this trend has been unsteady.

Phase 1 covers the period 1960-1986 and is marked by an average economic growth of 7%, higher than the population growth rate[12]. This growth was mostly sustained by subsistence agriculture and cash crops against the back drop of strong government supports such as the Green Revolution, etc. Additionally, growth feeds into the growing European demand in raw materials in the wake of the Second World War, compounded by oil exploration in the late 1970s.

Phase II covers the period 1987-1994 and is characterized by low if not negative growth, due to sudden downturn in the global economy, namely the 1973 oil shock and the economic slump in 1979 following a decision made by the President of the United States Richard Nixon in response to global inflation. This situation hastened the pace of deteriorating public finances, thus imposing structural adjustment policies initiated by the IMF and the World Bank in response to this crisis. Therefore, the devaluation in January 1994 posed as a condition to benefit external funding again[13].

This requirement was based on the assessment whereby the ECCAS zone economies, including Cameroon, were no longer competitive[14]. Although expected effects on the Zone economies have been debated, it is further accompanying measures taken, which partly contributed to the consolidation of public finances and favoured a return to positive growth rates observed since 1995 at a price of heavy sacrifices.

The objective of this chapter is to find out whether economic growth has been inclusive since the early 1960s. In other words, has growth been followed by redistribution mechanisms, including measures for the development of human capital? This chapter is tailored around three sections which subsequently revisit the three phases of economic growth.

[12] About 2.7%.

[13] The magnitude of this devaluation was the subject of intense debate among the population. It was 50% in foreign currency and 100% in domestic currency.

[14] For an overview of discussions on controversies related to the degree of overvaluation of the CFA franc, see Guillaumont, Guillaumont and Jeanneney (1995).

3.1. First phase (1960-1986): a strong and redistributed economic growth

Various economic policies implemented in Cameroon since independence had a tangible impact on economic growth and poverty in Cameroon.

3.1.1. An economic policy based on state interventionism

Cameroon has experienced a period of rapid and sustainable growth immediately after independence. Between 1967 and 1978, GDP growth is about 5.7%. Although the growth rate of the population (about 2.7%) has absorbed a good part of this growth, it was possible to observe an annual growth of 2% of household consumption. This period is characterized by the implementation of five-year plans (see Box 3.1).

The country's growth is related to macroeconomic stability, high commodity prices on the international market and government's direct intervention in agriculture: access to and distribution of agricultural inputs, infrastructure, creation of agencies to fund and market agricultural products such as the National Fund for Rural Development (FONADER), the National Product Marketing Board (NPMB), Development Mission for Food Products (MIDEVIV). The centralized decision making process at the time led to an increase in expenditure on agro-industrial plantations. Until 1970, the State created dozens of rural or agricultural development agencies.

The policy of state intervention in the agricultural sector has had a limited impact, since the creation of rural or development agencies had not led to an acceleration of growth in the agricultural sector. The multiplicity of agencies, instead of creating a synergy, was rather a hindrance to the rapid growth of the agricultural sector, due to overlap of roles and wastage of resources. So, the agricultural sector expanded at a slower pace than expected.

Box 3.1: The five-year plans in Cameroon

Cameroon fully executed its five-year plans between 1960 and 1986:

- The First Five-Year Plan, 1960-1965. The main goal was to double GDP per capita in a 20-year period.
- The Second Five-Year Plan, 1966-1971. The main goal was to improve the living standards of the populations of rural areas.
- The Third Five-Year Plan, 1971-1976. It was to increase agricultural productivity. More than half of investments were channeled into directly productive agricultural projects.
- The Fourth-Five-Year Plan, 1976-1981. It aimed at increasing the growth rate of GDP per capita to at least 5 percent based on in vestments in rural infrastructure, rural economy and energy.
- The Fifth-Five Year Plan 1981-1986. Its main goal was to give Cameroon a new face by 2000 through annual increments in real income per capita
- The Sixth Five Year Plan (stillborn due to the crisis of 1987). Its main goal was to strengthen the country's food self-sufficiency. An analysis of the objectives of the Five-Year Plans shows that agriculture has always been a priority sector.

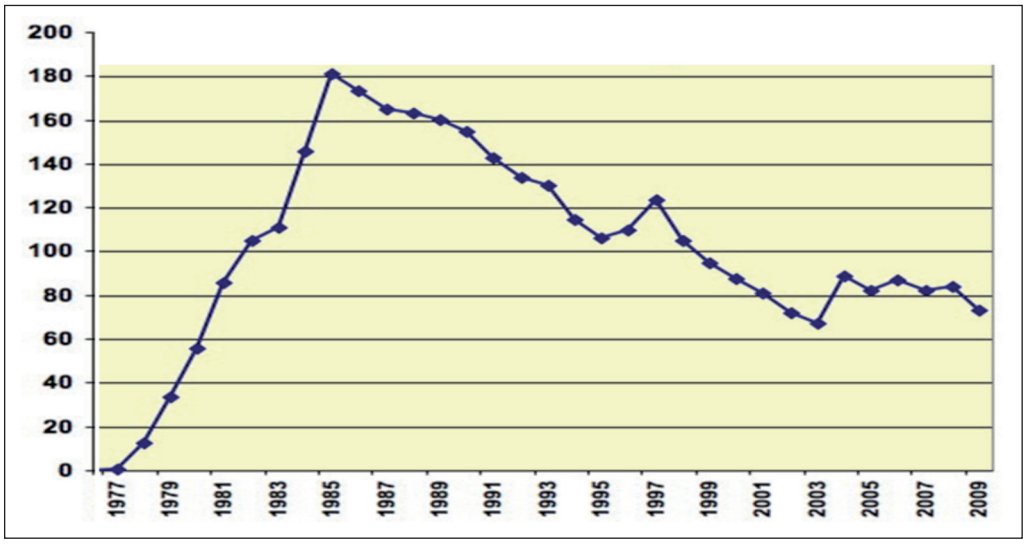
In the industrial sector following independence, the State has adopted the policy of import substitution. The fundamental tool of this policy was the implementation of tariff and non-tariff barriers (right to exportation and price control in the agricultural sector). These measures helped protect infant industries as a result.

3.1.2. The oil boom

Oil production began in Cameroon in 1977 when the Kolé oil plant in Rio Del Rey became fully functional. The country has generated oil revenues since 1978 (see Figure 3.1). Oil extraction represents about 44% of government revenues and 20% of GDP. Between 1977 and 1986, public expenditure in real terms during this period, coupled with a lack of transparency in the management of public funds. History recalls that the state was seen as a "cash cow" during this period. The country presented symptoms of Dutch disease in 1982 when oil accounted for 46% of total exports. As usual, traditional sectors were relegated to the background during this booming period, resulting in a sharp decrease in national productivity.

Broadly speaking, 1960-1986 can be described as a brisk economic period, a period during which growth was redistributed thanks to the creation of basic infrastructure, a more secure income for workers in the agricultural sector with NPMB, a wide range of services and the creation of public companies.

Figure 3.1 : Evolution of oil production in thousands of barrels per day



Source: Owona (2012).[15]

Cameroon's internal and trade balance largely exceeded expectations, but the advent of petroleum resources led to a change in government policy, namely by the tripling of

[15] Available at http://phile-monowona.wordpress.com, updated on 08 October 2012.

3.1.3. Constitution of human capital

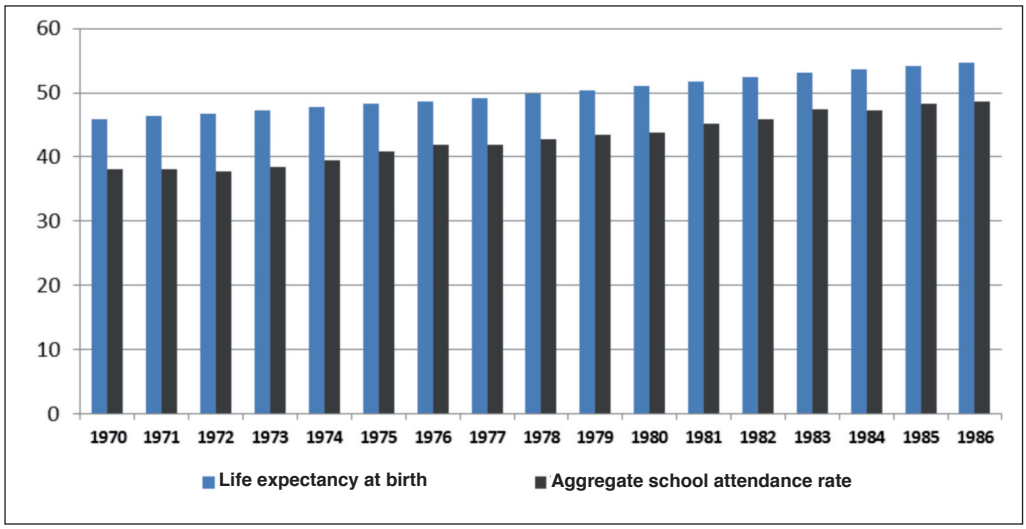
Regarding human capital, government actions are seen in the creation of universities and graduate schools (university of Dschang, Douala, Ngaoundere, Higher School of Engineering, Higher School of Public Works) and scholarship grants based on the country's development objectives. Consequently, human capital increased steadily during this period (see Figure 3.2). Between 1970 and 1986, life expectancy at birth increased from 46 to 54.7 years, while the combined gross enrolment ratio increased from 38.1% to 48.6%.

However, the country remained fragile and vulnerable to exogenous shocks. Public companies created during this period were inefficient and the currency was overvalued while the banking system greatly depended on oil revenues and government deposits.

3.2. Second phase (1987-1994): economic decline and degradation of human capital

This phase is marked by three events: crisis and major reforms, the degradation of human capital and the expansion of corruption.

Figure 3.2 : Trends in life expectancy at birth (years) and TBSC (%) (1970-1986).



Source: UNDP (HDI Hybrid Data), various years.

3.2.1. Crisis and major reforms

Until 1985, Cameroon posted the picture of a healthy economy due to steady improvements in agricultural production supported by favourable world prices and the steady income from oil resources in the country. From 1986, there has been a drastic and steady decline in export revenues resulting from the fall in oil prices and main cash crops (cocoa, coffee, cotton) on the world market. These combined shocks plunged Cameroon's economy in a long and deep crisis with an over-valuation of the CFA franc. From 1985 to 1992,

the terms of trade deteriorated at about 55%. The country's real GDP decreased by an average of 3.4% from 1986 to 1989. External debt increased from less than a third to three quarters of GDP between 1984/85 and 1992/93. Investment decreased from 27% to less than 11% of GDP during the same period.

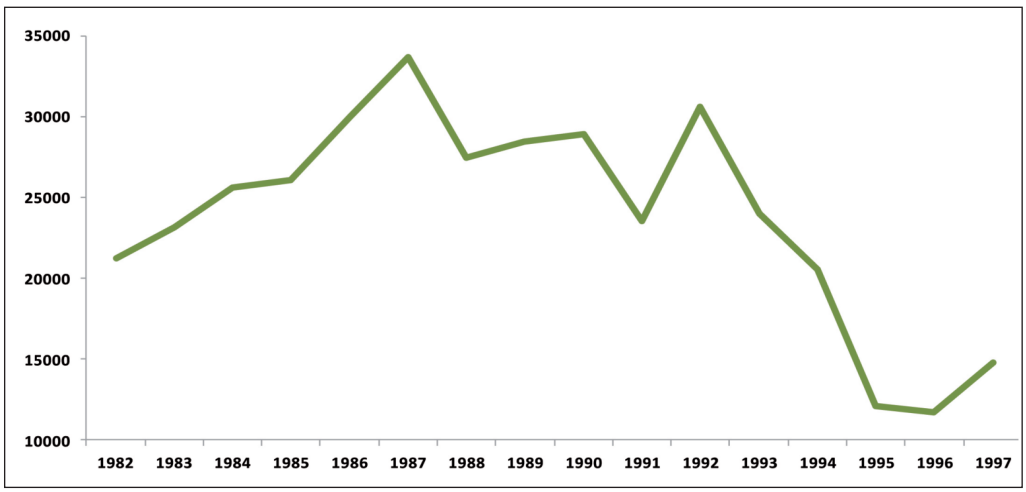
All initiatives undertaken by the Government to find internal solutions to this crisis proved ineffective. In 1988, Cameroon, as most African countries, requested assistance of the International Monetary Fund and the World Bank for the implementation of the Structural Adjustment Program (SAP). Overall, SAPs targeted: (i) restoration of major macroeconomic stability, (ii) improvement of national production and exports, (iii) attainment of a strong and sustainable level of economic growth likely to trigger sustained reduction of poverty and inequality.

3.2.2. Degradation of human capital

The implementation of SAP led to the liquidation, restructuring or privatization of many State enterprises and para-statals, the suspension of financial support to some development projects and a decline in private investment. On the social level, this situation led to the dismissal of some staff in the public and private sectors, a recruitment halt in the civil service and public wage cuts. The Finance Act 1991/92 had a reduction of 30% on salaries followed by a second reduction between 17% and 23% in 1993.

The impact of the implementation of SAP on the level of human development was severe. Indeed, the real per capita income fell by 40%, the proportion of people living below the poverty line increased from 40% in the 80s to 50.5% in 1996. In addition, there was a rise in unemployment and the emergence of the informal sector to serve as a refuge for young graduates (the informal sector accounted for 85.9% of employment in 1996 (INS, ECAM1)).

Figure 3.3 : Evolution of real education expenditure per child 6-24 years (CFA F).



Source: Finance Laws 1982-2001 and Authors calculations.

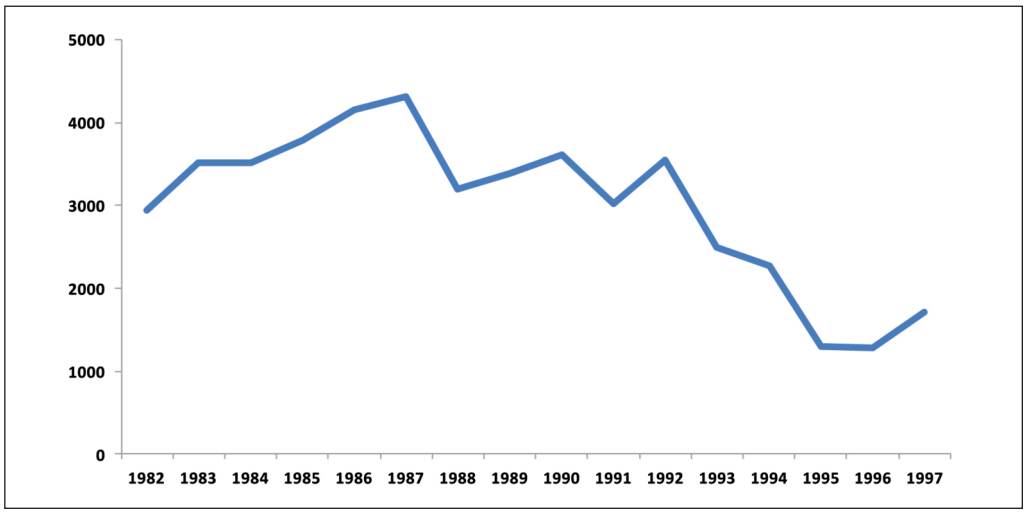
Regarding the education sector, there was a stagnation of the annual budget around 82 billion FCFA. Scholarships abroad are suspended and the actual expense of education per child aged 6-24 years moved from CFA F 30 000 in 1986 to only CFA F 20 500 in 1993. The scarcity of educational outlets and unfavourable labour market led to massive emigration of young Cameroonians in search of better living conditions and to drain (doctors, engineers, architects, etc.) towards developed countries (namely France, Germany, Italy).

per capita decreased by almost 40% from 4200 to 2500 FCFA (see Figure 3.4). The combined effect of all these factors changed the HDI of Cameroon from 0,490 in 1987 to 0.462 in 1994.

3.2.3. The spread of corruption

The economic crisis through its depressive effect on the salaries of civil servants, rising of unemployment and poverty, speeded up corruption in public services. On the economic front, corruption caused state revenues to dwindle, institutional in-

Figure 3.4 : Evolution of real health expenditure per capita.



Source: Laws Finances1982-2001 and Authors' calculations.

Wise health, lower health care costs caused degradation of service delivery. The number of hospital beds per 1,000 people which was 2.6 in 1988 were only 1.3 in 1992 and the number of doctors per 1,000, 000 inhabitants in 1000 decreased from 84 in 1989 to 73 in 1993. In addition, between 1986 and 1993, public health expenditure

transparency, poorly executed contracts and the flight of international investors and tourists. According to Gauthier and Gersovitz (1997), a survey conducted on 200 companies (141 in Douala and 57 in Yaounde) in Cameroon in 1993 showed that almost all of them had in exchange for bribes received access to a wide range of discounts and tax exemptions with

the approval of authorities. In addition, more than half (51%) of these companies had confessed offering a "special gift" to their interlocutor from the taxation department.

On the social level, corruption led to a decline in the quality of social services. In the health sector, we will witness the birth of parallel health networks, higher consulting fees, sale of illegal drugs, free expansion of the sale of drugs on the streets, the increased practice of self-medication, etc. In the education sector, there was a surge in tuition fees, mint grades at official examinations, the proliferation of fake diplomas, etc. All these factors contributed to the deterioration of the health and education system.

At the level of the civil service, corruption led to the implementation of recruitment policies unsuited to the human resources need both in the public and private sector, the increase in the number of fictitious agents, rising nepotism, favouritism and tribalism. Consequently, there was an overall decline in the performance of public officials and the scope of corruption in Cameroon seriously tarnished the image of the country abroad.

3.3. Third phase (1995-2012): Recovery and poverty reduction with an improvement in human capital

This phase was marked by three moments, namely the pre-PRSP announcing recovery, the period of implementation (mixed) of PRSP, and finally the era of GESP. Economic growth in Cameroon can be characterized best in light of these various initiatives.

Box 3.2: Corruption undermines growth and human development

Numerous studies show the pernicious effect of corruption on economic growth. Here are some examples:

- lower revenue that undermines the rule of law as a public good (Johnson and al, 1997);
- misallocation of public expenditure with increased operating costs at the expense of investment (Tanzi and Davooli, 1997);
- Development of fictitious enterprises in a parallel and underground economy (Johnson and al, 1988);
- State capture by some privileged companies who "buy" the law (Hellman and al.2000).

Gupta and al. (1998) have shown that corruption affects human development in the sense that it increases inequality and poverty by a less effective designation of program objectives, unequal access to education, lower social expenditure and increased risk undertaken by the poor. Kaufmann et al (1999) also showed that corruption increases infant mortality and reduces life expectancy and literacy rate.

3.3.1. Recovery: The SAPs and preparation of the PRSP (1995-2002)

The execution of the first four adjustment programs, and devaluation in 1994, set Cameroon back on the path to growth. This growth averaged 4.5% between 1995 and 1999 and was supported by the agricultural sector.

Priori to entering the Highly Indebled Poor Countries (HIPC) initiative, Cameroon benefited from the Poverty Reduction and Growth Facility (PRGF). The PRGF is a cash desk

Box 3.3: Terms of the PRGF

The PRGF eligibility depends primarily on IMF assessment of the per capita income of the country based on the current admissibility criterion of the concessional lending window of the World Bank (gross national income per capita of U.S. $ 1.025 in 2005).

Loans under the PRGF carry an annual interest rate of 0.5% repayable over ten years by semi-annual payments, the first taking place five and a half years after the disbursement of the loan.

Eligible countries can borrow up to 140% of their quota in the IMF under a three-year agreement. This limit may, however, be increased to a maximum of 185% in exceptional circumstances. In each case, the amount depends on the balance of payment difficulties facing the country, the strength of its adjustment program, the outstanding debt to the IMF and its use predates the credit institution. The average level of access is normally 90% of the share for the initial three-year agreement and respectively 65%, 55%, 45%, 35% and 25% of the share when the facility is used a second, third, fourth, fifth or sixth time. Member countries that need little - or no resources at all to cope with balance of payments problems immediately can use a "low level access" (normally 10% of the quota part) under the PRGF. Members eligible for the PRGF, whose income per capita exceeds 75% threshold of eligibility for concessional loans from the World Bank or the countries that borrow on market terms, may combine PRGF arrangements with loans granted lending under the EFF non-concessional IMF.s

In August 2007, 78 low-income countries in total (including Cameroon) were eligible for the PRGF.

Source: IMF.

through which the IMF grants loans at low interest rates to low-income countries. PRGF-supported programs are based on global strategies for poverty alleviation that are country-driven. Established in September 1999, the overriding principle of the PRGF is to encourage public participation and operate internationally in as many countries as possible. Second, the PRGF-supported programs should have a special interest in poverty reduction and growth as part of their national priorities.

Cameroon has conducted six reviews for the PRGF (July 2005-June 2008) in line with IMF recommendations. However, between 2003 and 2008, the average GDP growth in real terms was less than 3.5% against an initial forecast of more than 5%. In terms of governance, the Government has undertaken major reforms, although there are still obstacles in improving transparency, the fight against corruption provides an environment conducive to business and accountability (ADB, ADF, 2009).

During the implementation of the PRGF, the average growth rate was around 3.5% lower than projected (GESP, 2009). However, this period was marked by the implementation of major reforms as a prerequisite for admission into the HIPC initiative. On a structural level, privatizations were conducted in several sectors of the economy, namely electricity, cash crops (including tea). The improvement of social infrastructure and production was also observed.

Devaluation induced advantages were quite significant during this period. Inflation, estimated at about 35% after devaluation fell to 4.3% in 1996. In 1997, Cameroon received significant support from the IMF within the framework of the medium term economic and financial program

established by Cameroonian authorities to cover the period from 1 July 1997 to 30 June 2000. This program was executed in a satisfactory manner with the support of the international community. Still, external debt remained a burden for public finances despite the rescheduling of debts with the Paris Club. This situation prompted councils of the World Bank and the International Monetary Fund (IMF) to admit Cameroon into the Highly Indebted Poor Countries Initiative (HIPC) in May 2000.

Table 3.1 : Trends in the incidence of poverty, by areas of residence and sex.

Place of residence	1996	2001
Urban	41.4	22.1
Rural	59.6	49.9
Gender of household head		
Male	54,2	40,6
Female	45,8	38,7
Cameroon	**53,3**	**40,2**

Source: INS (ECAM 1, 1996; ECAM 2, 2001).

During this periods punctuated by the successful implementation of adjustment programs supported by international institutions, growth was redistributed with an impact on poverty. The fruits of this growth benefited both urban and rural populations. In addition, this growth improved the lives of all socioeconomic groups.

However, analysis conducted by Nembot etal (2009) suggests that income increase for the poor compared to the average income shows that growth had been only slightly pro-poor in urban areas and anti-poor in rural areas and at the national level. Based on this study we cannot say that growth has been inclusive over the period 1996-2001. Moreover, the GINI index of inequality shows that in 2001, the income distribution was more equal than in 1996. The value of this index increased from 0.406 in 1996 to 0.408 in 2001 (INS, ECAM1, ECAM2). This recovery is made under strong pressure due to increased social problems in the areas of health and education. However, efforts are visible through the establishment of schools (secondary colleges, high schools, higher education institutions), although this does not necessarily guarantee the improvement of human capital.

Economic growth remained weak and insufficient during the implementation of the PRGF. The main cause to this is purported to be low investment ratios relating to GDP. Although the PRGF has helped strengthen macroeconomic stability and relief measures have strengthened the debt

sustainability, growth remained too low to significantly and qualitatively reduce poverty. HIPC initiative resources should be mobilized for this purpose.

3.3.2. Mitigated implementation of the PRSP: 2003-2008

Results of the implementation of the Poverty Reduction Strategy in Cameroon between 2003 and 2008 are below expectations and very mixed with an economy driven by the service sector, the increase in poverty incidence in rural areas, improvement of women' status as well as access to basic amenities due to the decrease in non-monetary and multidimensional poverty and a slow increase in human capital

equitable economic growth on the one hand and to gradually reduce the level of poverty on the other hand. The PRSP includes an array of detailed actions and an estimate of the costs of programs that require optimal mobilization of domestic and external resources

The main objective of the PRSP was to bring about a 4-5% to 7-8% growth in order to significantly reduce poverty and achieve the MDGs. The Growth and Poverty Reduction Strategy the government had put in place focused on seven strategic points, namely: (i) promote a stable macroeconomic framework, (ii) strengthen growth with a diversified economy, (iii) revamp the private sector as an engine of growth and as a

Table 3.2 : Analysis of pro-growth poverty between 1996 and 2001.

	Urban area	Rural area	Cameroon
Average income	26.54	16.56	21.15
Poor persons income	45.48	7.7	16.74
Growth increase	**18.94**	**-8.86**	**-4.41**

3.3.2.1 Unachieved Economic Growth Prospects

In 2003, Cameroon completed the Poverty Reduction Strategy (PRSP), which completes the SPPR initially prepared within the framework of the HIPC Initiative. The PRSP determines characteristics of poverty in Cameroon, with regional disparities, as well as major strategic approaches to promote strong, sustainable and

partner in the provision of social services, (iv) develop basic infrastructure, natural resources and protect the environment, (v) speed up regional integration within the ECCAS (vi) strengthen human resources in the social sector and integrate disadvantaged groups into the economy, (vii) improve institutional framework for administrative ma-nagement and governance.

The Implementation of the PRSP led to mixed results. In fact, the growth of Cameroon was relatively low compared with expectations (see Chart 3.5). Before finalization of the PRSP in 2003, the average growth fluctuated between 4% and 4.5% per year. After finalization of the PRSP, growth was expected to increase to 6% for the period 2003-2007 and 7-8% in the medium term ; This was a necessary but not sufficient condition to achieve the MDGs as actual growth registered below expectations, ranging between 2% to 3.5% per year; an average of 3.16% between 2004 and 2007. On average, Cameroon lost 2.6 points of annual growth during these four years if we stick to the projections of the growth rate needed to achieve the MDGs as outlined in the PRSP.

In terms of the population, efforts during the implementation of the PRSP have improved access to basic social services. However, there are still many factors that prevent significant reduction in poverty, among others: (i) the isolation of populations in terms of electricity, (ii) access to safe drinking water; (iii) access to agricultural inputs, arable land and pastures (iv) insufficient public investment in rural areas; (v) the shortage of teachers at levels of education and their unbalanced deployment across the territory; (vi) access to medicines and technical facilities in hospitals; (vii) the centralized procurement, and (viii) growing and generalized insecurity.

Box 3.4: Cameroon reaps the benefits for reaching the completion point of the HIPC

After reaching the completion point of the Highly Indebted Poor Countries Initiative on April 28, 2006 and after meeting the requirements of the member countries of the Paris Club, June 17, 2006, several countries have cancelled bilateral debt vis-à-vis Cameroon as illustrated in the table below.

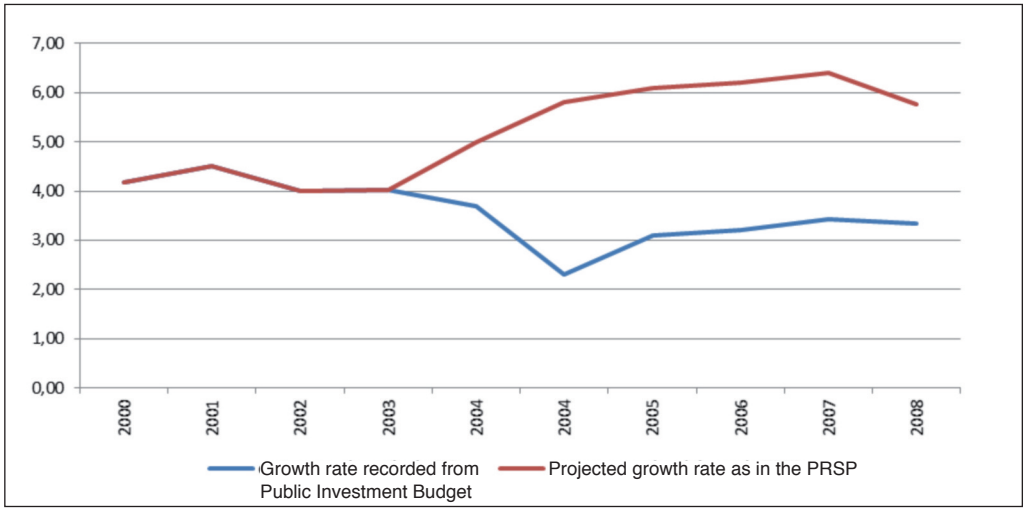
Date	Countries	Amount
June 22, 2006	France	352 billion FCFA
October 26, 2006	Japan	CFAF 50 billion
October 27, 2006	Canada	102 billion FCFA
November 1, 2006	German Federal Republic	559 billion FCFA
November 2, 2006	Austria	344 466 638.76 Euros
November 28, 2006	Belgium	156 billion FCFA
November 30, 2006	Italy	88 billion FCFA
December 15, 2006	Spain	486 213.43 Euros
January 17, 2007	United States of America	16 billion FCFA
January 23, 2007	Kingdom of the Netherlands	6 billion FCFA
May 7, 2007	France	204 billion FCFA

The multilateral debt relief was also substantial.

Institutions	Cancelation in millions dollars US	Cancellation% of GDP
BAD	229	1.4
AID	859	5.2
IMF	253	1.5
TOTAL	**1341**	**8.1**

Source: Websites of the Presidency of the Republic and IMF.

Figure 3.5 : Growth rate of observed and expected growth rate in the PRSP.



Source: INS, PRSPs.

3.3.2.2 Economy propelled by the tertiary sector

At the macroeconomic level and specifically referring to sectorial contribution to growth, only the tertiary sector played a major part compared to the period before PRSP. Other sectors had but a marginal contribution, highlighting the fact that growth has not been inclusive (see Table 3.3).

The poor input of the primary sector is better seen in low quality and insufficient rural infrastructure, funding related production constraints and the isolation of production areas from consumption centers. Meanwhile, the secondary sector might be experiencing fuel shortages with wells drying up, unproductive business environment, overused energy supply and the low competitiveness of agro-industries. The tertiary sector would grow relentlessly thanks to booming telephone and transport sectors.

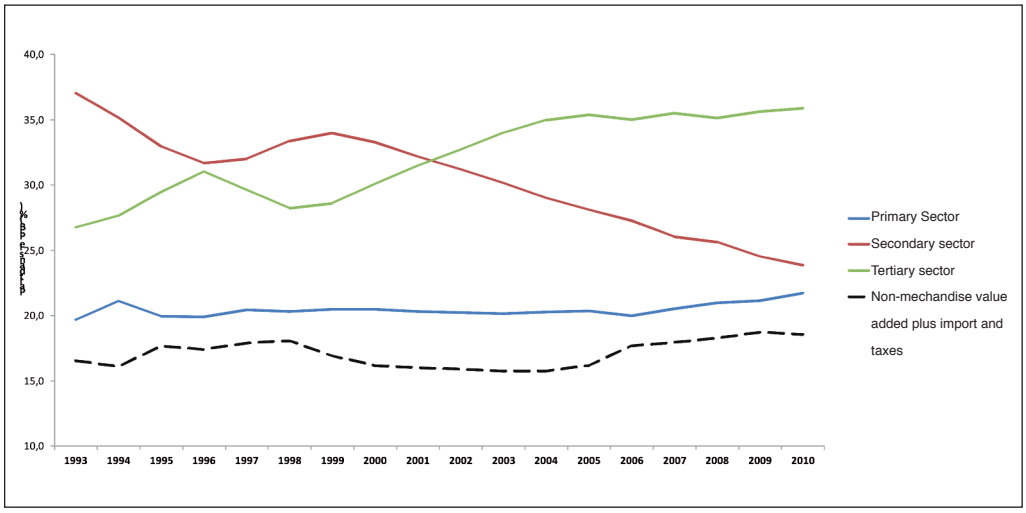
This trend of events caused a drop in GDP growth, over the period 2001-2007. As it stands, GDP structure has substantially evolved since 1993. The secondary sector was the top wealth generator until 2001 with a 30% and 35% share. Following this episode, the tertiary sector took over while the secondary sector continues to crumble. In 2008, the trade dominated tertiary sector accounted for nearly 35% of GDP while the secondary sector share was 23%. For the primary sector, it has kept an almost steady share around 20% since 1993.

Table 3.3 : Contribution of economic sectors to growth.

	1996-2001	2001-2007
Primary sector	1,00	0,69
Secondary sector	1,29	0,16
Tertiary sector	1,70	2,14
GDP	4,51	3,61

Source : MINEPAT.

Figure 3.6 : Trends in GDP structure between 1993 and 2010.



Source: INS, National Accounts (1993-2010).

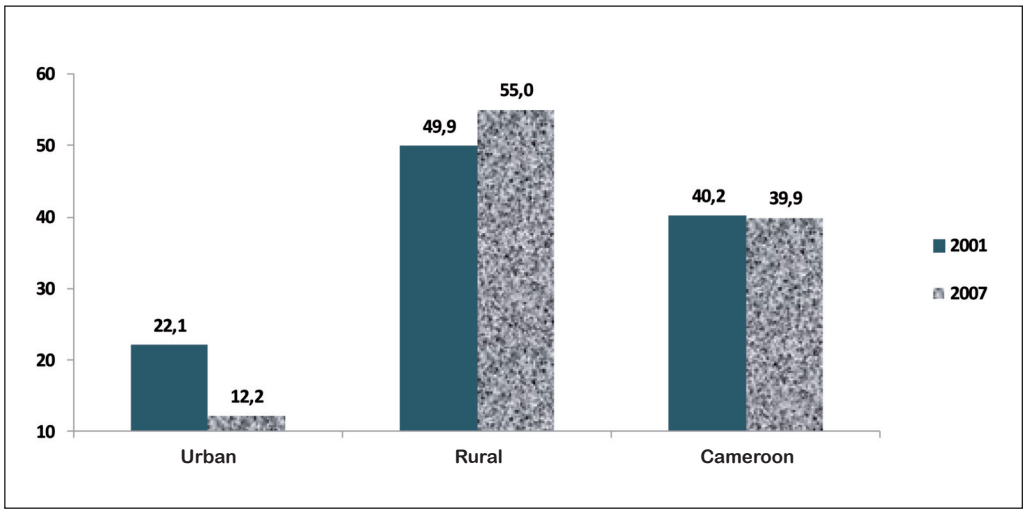
3.3.2.3 Increase of Poverty in rural area

As far as socio-economic groups are concerned, growth did not reach farmers whose poverty rate increased between 2001 and 2007. Given that this socio-economic group accounts for nearly 30% of Cameroon total population, we come to the conclusion that between 2001 and 2007, a significant part of Cameroon population was excluded from growth. That is why tangible studies carried out at the national level point out that growth has not been very pro-poor during this period.

With regard to place of residence, poverty fell sharply by nearly 10 points especially in Douala and Yaounde, contrary to rural areas where it increased by 5 points. (See Figure 3.7). In fact, we see a ruralisation of poverty, with an increase in 4 of the 10 regions (North, Far North, and East[16]).

[16] Statistics of INS on "trends, profiles and determinants of poverty in Cameroon in 2007 "

Figure 3.7 : Evolution of poverty between 2001 and 2007 by place of residence.



Source: INS (ECAM 2, 2001; ECAM 3, 2007).

3.3.2.4 Improvement of women status

Concerning trends in poverty rate according to the gender of the household head, ECAM surveys reveal that growth has not benefited households headed by men and where poverty rate increased between 2001 and 2007. In those households, poverty rate dropped by one point from around 40.6% in 2001 to 41.6% in 2007.

Unlike households headed by men the poverty rate significantly reduced in those headed by women. Over the same period, this rate increased from 38.7% in 2001 to 33.4% in 2007, thus a decrease of 5.3 points.

A reason behind this substantial drop in poverty in households managed by women is that they are more than ever before involved in development. In fact, the women's participation index (IPF)[17], which emphasizes the role of women in economic, professional and political activities, has increased significantly. It went from 0.382 in 2001 to 0.434 in 2005 and reached 0.461 in 2007 (see Figure 3.8). However, this indicator which expresses total parity between men and women in terms of income and political responsibility remains well below 1. Cameroon needs to implement the agreement on the Elimination of All Forms of Discrimination against Women (CEDAW), adopted in 1994

Table 3.4 : Trends in poverty by gender of household head between 2001 and 2007

Gender of household head	2001	2007
Male	40,6	41,6
Female	38,7	33,4
All	**40,2**	**39,9**

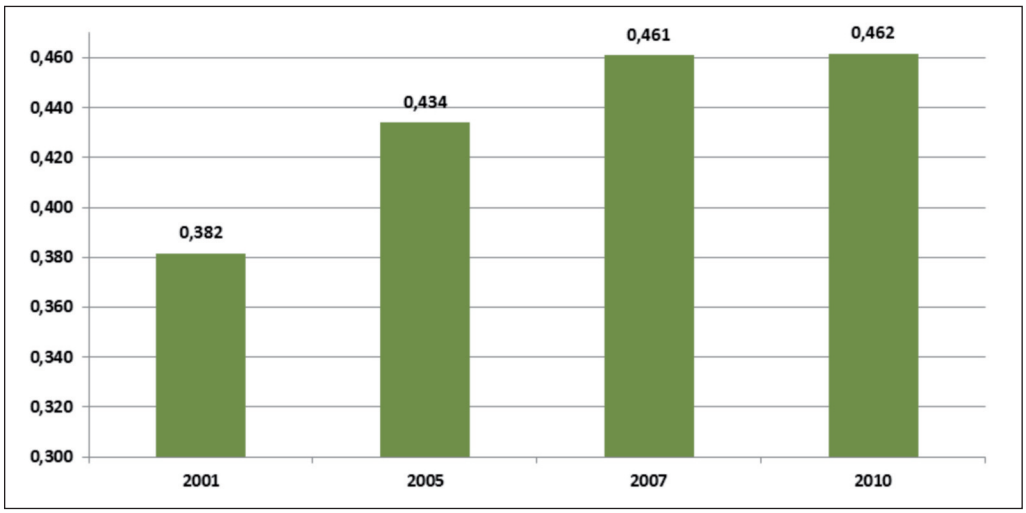
Source: ECAM II (2001), ECAMIII (2007).

[17] See Appendix 3 for methodological details.

in view of improving women's involvement in all development sphere.

Beyond the improvement in women's status, efforts to ensure that economic growth is more inclusive should stretch towards youth integration as cross-cutting component in the decision making process of Planning- Programming-Budgeting-Monitoring/ Evaluation (PPBS), and by strengthening their ability to participate in economic activity. Equally, their voices need to be meaningfully captured in the socio-political front.

Figure 3.8 : Trends in women participation index (2001-2010).



Source: INS (ECAM 2 (2001), EESI 1 (2005), ECAM 3 (2007), EESI 2 (2010)) and Authors' calculations.

3.3.2.5 Improving access to basic amenities: lowering non-monetary multidimensional poverty.

From a multidimensional non-monetary perspective, a spatial analysis of poverty reveals that, the incidence of multidimensional poverty fell sharply between 2001 and 2007 from 53% to 44.7%. This decrease was observed in almost all regions nationwide except the East. The analysis takes into account three dimensions of well-being: education (the average level of education of all household members and literacy rate from 6-14 years), health (prevalence of malaria, diarrhea and respiratory diseases) and living conditions (access to electricity, access to drinking water, type of toilets, quality housing equipment and possession of durable goods).

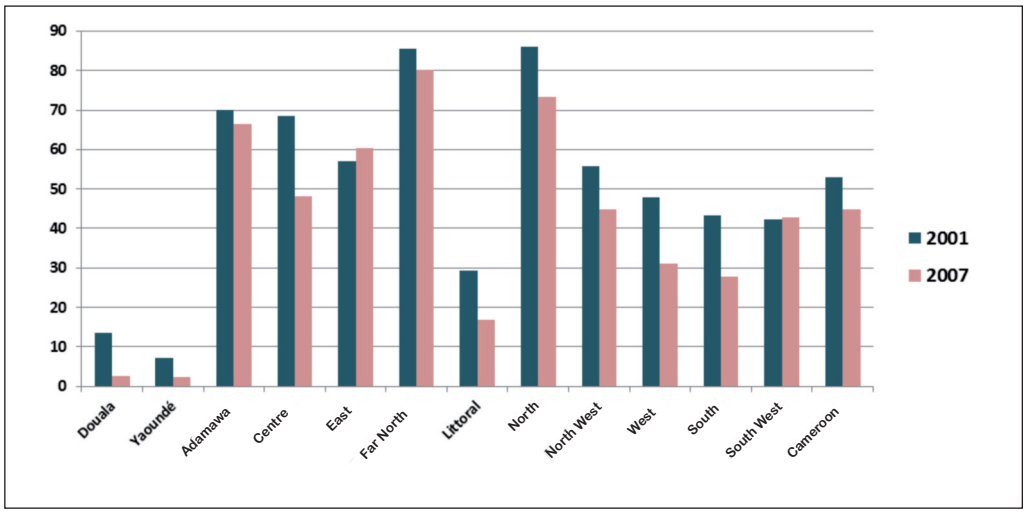
This progress is due to improved living conditions materialized by households having better access to drinking water (42% in 2001 against 49% in 2007), electricity (46.8% against 48.2%) and a substantial increase in the number of people possessing mobile phones (7.6% in 2001 to nearly 45% in 2007). Housing conditions (wall, roof, and floor) also improved

including education level, with the literacy rate increasing from 68% to 71%.

Such promising figures should be taken cautiously if we take quality service into account. Cases in point are: frequent electricity load shedding and water shortages in major cities.

poverty, ECAM 3 identified household size, level of education, socioeconomic group and access to productive assets. Thus, the need for job creation, disenclavement, acces to education and information, the stability of food prices, access to medical care and to safe drinking water and credit .

Figure 3.9 : Trends in the incidence of multidimensional poverty between 2001 and 2007



Source: ECAM2 (2001), ECAM3 (2007), Authors' calculations.

$IDH = (Duration\ of\ life\ index * Level\ of\ education\ index * Standard\ of\ living\ index)^{\frac{1}{3}}$

In addition, mobile telephone subscribers are dissatisfied in many respects compounded by poor academic performance. In light of these findings, it emerges that improving access to basic services has been done at the expense of quality. However, to sustainably reduce multidimensional poverty, planned actions should aim at increasing not only supply but also include quality services provided to populations.

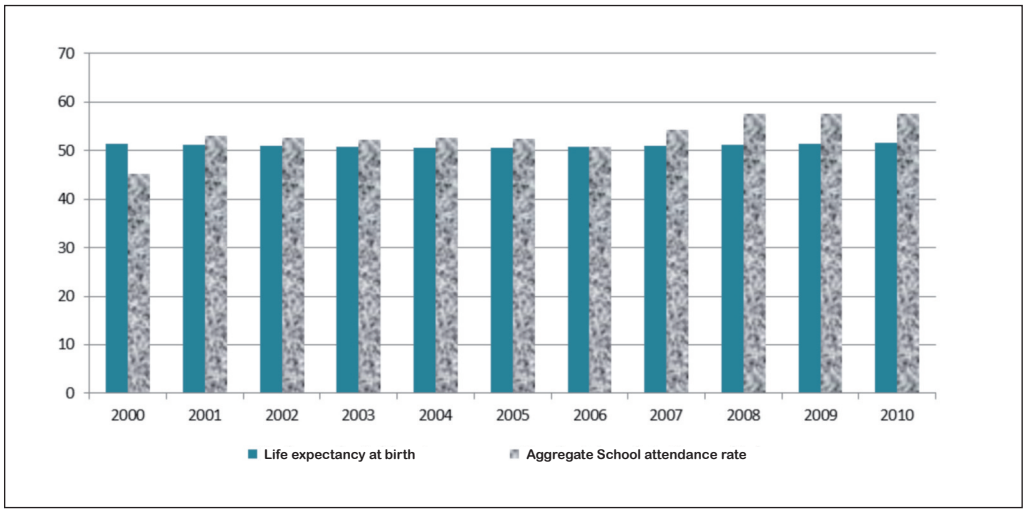
Regarding the determinants of

3.3.2.6. Increase in human capital.

Talking about human development proper, it wasn't until 2007 that the effects of government policy in Cameroon, which was to invest in human capital, became visible. Consequently, we observed a slight increase in life expectancy at birth and gross enrolment rate.

Despite PRSP implementation, the population's living conditions remain a major concern showing that the long-awaited structural change is yet

Figure 3.10 : Trends in life expectancy at birth (years) and TBSC (%) (2000-2010).



Source: UNDP (HDI Hybrid Data).

$IDH = (Duration\ of\ life\ index * Level\ of\ education\ index * Standard\ of\ living\ index)^{\frac{1}{3}}$

to take place, especially in terms of productive base, competitiveness and the mastery of costs associated with production. It goes without saying that recurrent structural problems were a strong incentive for drafting the Growth and Employment Strategy Paper (GESP) with a special interest in wealth creation.

3.3.3. GESP era since 2010

Aware of difficulties inherent to the implementation of the PRSP, the government drafted a Growth and Employment Strategy Paper (GESP) in 2009. The GESP is the first phase (for 10 years) for implementing the 2035 Vision which Cameroon embarked on a year earlier. The vision of Cameroon is as follows: "Make Cameroon an emerging and democratic country, united in its diversity". This vision encompasses four general objectives: (i) reduce poverty to a socially acceptable level, (ii) become a middle-income country, (iii) reach the stage of newly industrialized country and (iv) strengthen national unity and pave the way to democracy.

The GESP focuses on three strategies: the growth strategy, employment strategy, governance and strategic management of the state.

The growth strategy focuses on infrastructure development, modernization of production equipment, human development, regional integration and trade development and financing of the economy.

Box 3.5: GESP growth strategy

Through growth strategy, the Government aims at developing infrastructure, modernizing production apparatus, promoting regional integration, diversifying trade and funding the economy.

1 - Development of infrastructure

The Government intends to invest heavily in infrastructure at the time set for implementing the strategy for a more competitive economy. These investments include: (i) energy, (ii) construction and public works, (iii) transport, (iv) information and communication technologies, (v) posts and postal financial services (vi) infrastructure for urban development and housing, (vii) water and sanitation; (viii) estate management.

2- Modernizing production facilities

(I) the rural sector, (ii) mining, (iii) craft and the social economy, (iv) industry and services.

3 - Human Development

Aims at providing Cameroon with a solid human capital, capable of sustaining economic growth in domains such as: health, education and vocational training, take into account gender, improve social welfare and national solidarity.

4 - Regional integration and trade diversification

The Government aims to strengthen sub-regional and regional integration and research of market outlets in Europe, America or Asia. Harnessing regional integration, North-South cooperation and trade with emerging countries are the main features of this sub-strategy.

5 - Financing the economy

The idea is to promote an competitive tax system both for savings and access to loans, reinvest excess liquidities in banks to the benefit of medium and long term investment credits, encourage broad base financial services, enhance the quality of services provided by microfinance institutions, strengthen the mobilization of domestic savings, support the Convergence Program and the crisis of credit / liquidity respectively in the debt strategy.

Source : DSCE (2009)

The employment strategy aims at providing a wide range of job opportunities, tune jobs according to market expectations and work for a more efficient labour market. Finally, governance, rule of law and strategic management of the state are the key guiding principles as far as governance and strategic management is concerned.

Since 2008, Cameroon is paying the price of the global financial and economic downturn that has brought the price of its main export goods to a record low. As a result, there is a deterioration in the trade balance, the sluggishness of the international business environment, putting the country's budget under strains. Faced with food crisis and energy deficit, Cameroon experienced a slowdown in its growth rate in 2009 and 2010. The country recorded 2.1% and 2.4% growth rates respectively in 2009 and 2010, as against 3.7% in 2008. In 2011, this rate was estimated at 4.0%, due to global recovery and the thrust of public and private investment and final consumption. The estimate for 2012 is 4.4%, which is supported by a recovery in the oil business. The forecast for 2013 is 4.6%, which is still lower than the 7% required for achieving the MDGs.

At the end of this chapter, it emerges that the pattern of Cameroon's economic growth is punctuated by three main phases, each having specific policies. In the first phase, probably the most productive, growth has been triggered by the discovery of oil and the boom that ensued. The second phase was marked by the crisis and

structural adjustment. For Tuna Mama, this phase epitomizes *"the lost decade"* of the Cameroonian economy. A phase of the economic decline, degradation in human capital and evaluative behavioural practices for survival purposes (expansion of corruption). This phenomenon directly leads to the total dismantling of all internal and external economic balances.

The third phase is recovery recorded in the PRSP under the HIPC Initiative and the GESP which is the first decadal phase (2010-2020) of the Vision 2035. These strategy papers, especially the GESP, are trackers in Cameroon's path towards development for the country to be emerge by 2035 latest. However, to achieve this goal, Cameroon needs a large endowment in human capital as an engine for growth and development of an industrialized economy. Chapter 4 simulates trends of human capital based on the national development strategy adopted by Cameroon.

Box 3.6: GESP Employment Strategy

The GESP highlights the issue of employment by: (i) providing a wide range of decent jobs, (ii) tailor job offer around market expectations and (iii) work for a more efficient market.

1 – A wide range of job opportunities

Here we are referring to requirements as follows: *(i)* paid jobs (through the development of SMEs) *(ii)* targeted self-employments *(iii)* migration from the informal to the formal sector, *(iv)* create a business friendly environment and *(v)* implement a strategy for promoting labour-intensive approaches.

2 – A more adequate job offer

This can be achieved as follows: *(i)* the improvement and standardization of training, *(ii)* alternative education and training courses taking into account promising sectors, *(iii)* reducing disparities in access, and *(iv)* training development.

3 - A more efficient labour market

The Government seeks to initiate transparency in the labour market and to ensure the largest possible professional integration of job seekers in the labour market.

Source: GESP (2009).

CHAPTER 4 :

OUTLOOK FOR ECONOMIC GROWTH AND HUMAN DEVELOPMENT

The previous chapters highlighted a number of stylized facts about the relationship between economic growth and human development in Cameroon. This chapter has two main objectives: (i) simulate human development centered growth that the country could reach in 2020 on the basis of commitments set forth in the national development strategy and (ii) propose alternative scenarios that would increase the impact of economic growth on human development and boost the progress of Cameroon to emergence in 2035.

The outlooks for Cameroon's economy come 2020 are outlined with a focus on the evolution and prospects of public expenditure on education and health. An econometric model to simulate the impact of economic growth on human development is presented including the presentation of the baseline in relation to the trajectory of some indicators in 2020. Alternative scenarios have been used to simulate the impact of an increase in expenditure in favour of sectors such as education, health on human development indicators.

4.1. Prospects of the Cameroonian economy in 2020

4.1.1. Global Perspectives

After attaining the completion point of the HIPC initiative in April 2006, the Government of Cameroon in 2009 developed a new framework for action in the prospect of "*becoming an emerging, democratic and united country in its diversity come* "2035." The first phase of this Vision, which is broken down in the Growth and Employment Strategy Paper(GESP), sets growth targets for 2020. It has four strategic objectives: *(i)* take the rate of economic growth to an annual average rate of 5.5% over the period 2010-2020, *(ii)* reduce underemployment from 75.8% to 50% with the creation of thousands of decent jobs, *(iii)* reduce poverty rate from 39.9% to 28.7%, and *(iv)* achieve all the Millennium Development Goals.

The GESP is based on major infrastructure projects, to help shape Cameroon's economic landscape and lay the foundations for sustained growth. In this perspective, there have been tremendous milestones when it comes to preparing and implementing

several projects in various sectors as follows:

- port and airport infrastructure (oil yard in Limbe, renovation of the Douala airport, construction of the deep-sea port in Kribi and Limbe);
- road and rail infrastructure (renovation of east and west entrances to Douala, Bamenda-Enugu Road, Route Sangmelima - Djoum - Mintom at the border with Congo, second bridge over the Wouri, Yaounde-Douala-Bafoussam highway, Yaounde Nsimalen highway);
- water infrastructure and energy supply (hydroelectric dam at LomPangar, Memve'ele Hydroelectric dam, Mekin dam, Central gas station in Kribi, Central dam in Birni, Lagdo dam, a program to provide running water to large cities);
- mining (iron mining in Mbalam, mining of diamond in Mobilon, mining of cobalt and nickel in Lomié, mining of bauxite in Minimartap);
- industry and services (plants for producing fertilizer, cement factory in Mintom, cement factory in Limbe, ALUCAM extension, extension of SONARA, industrial and economic technopole in Edea, natural gas liquefaction unit in Kribi, construction of a new smelter in Kribi, creation of an Agricultural Development Bank);
- Agriculture (construction of agropoles, improvement of the production of rice and maize through agricultural mechanization);
- urban construction (10 000 social housing in large cities, Sawa Beach Project);
- training and development of human capital (construction of three vocational training centers of excellence in Douala, Kribi and Sangmélima).

The implementation of major projects, coupled with the strategy of governance and strategic management of the state, augur a better future for the Cameroonian economy. According to the GESP, GDP growth is expected to remain around 6.1% over the period 2013-2015 and is expected to fall slightly to 5.9% (2016-2020). In the same vein, we should see an increase in the per capita income of 3.1% and 2.9% respectively over the periods 2013-2015 and 2016-2020. This should result in an improvement in the living conditions of populations by reducing poverty to 28.7%.

Nevertheless, despite the upward trend of the investment rate, it shall be only 22% in 2020, well below the 25% needed for economic take-off. In this regard, the government needs to undertake an overall strategic and proactive approach to meet the requirements for emergence (China, Brazil, and South Korea).

Table 4.1 : Some macroeconomic indicators and projections

	2010	2011	2012	2013-2015	2016-2020
Real GDP Growth	3.3	4.2	4.7	6.1	5.9
Oil GDP	-12.1	-7.3	16.2	2.8	0.3
Non-oil GDP	3.7	4.7	4.3	6.2	6.2
Growth in real GDP per capita	0.2	1.9	2.4	3.1	2.9
Real GDP growth in non-oil per inhabitants	0.9	1.5	2.2	3.2	3.2
The ratio of non-oil revenue on GDP	12.6	12.5	12.5	12.4	12.8
Investment rate	18.6	19.0	19.3	19.7	22.0
Growth rate of public investment	2.4	2.4	2.4	2.4	2.2
Non-oil primary balance(%of GDP)	-4.6	-4.8	-4.9	-5.0	-3.7

Source: GESP, p.113 and National Accounts (INS, 2011).

4.1.2. Sectorial prospects

During the next eight years, growth will still be driven by the tertiary sector which is going to experience an annual average increase of 6.5%, mainly driven by trade, catering and hospitality. The tertiary sector will experience such growth thanks to a growing tourism industry; steady development of tourist sites (the Ngaoundere cliff; Ekom Nkam falls, Kola gorges, etc.).

The secondary sector is experiencing a remarkable surge since the beginning of the GESP implementation. This sector is expected to continue on the same trend with an average increase of 5.5% per year. From 2013, this sector will mostly be driven by the electricity, gas and water sub-sector with a growth rate that will increase from 4% in 2012 to over 15% by 2015 through the implementation of major projects, which for the most part are in the infrastructure domain. However, this sector is very capital intensive and creates very few jobs.

The outlook for the primary sector indicate that it will evolve with an average annual growth of 5%, driven by industrial agriculture and export due to many implemented reforms to eliminate bottlenecks crippling the agricultural sector as a whole. The new orientation of the Cameroonian government in this area is to launch second generation agriculture. Objectives are as follows: *(i)* establish a national unit for producing fertilizers, *(ii)* rehabilitate seed farms, *(iii)* prepare land reform, *(iv)*strengthen the capacity of value chain actors carrying growth, and *(v)* strengthen the financing of agricultural activities by opening the agricultural bank and the bank for SMEs / SMIs.

Reforms for the agropastoral sector are particularly important as this sector concern more than half of the workers (53%) and is the most affected by poverty, with rate of 59.9% of individuals whose family head operates in this sector (INS, 2007). In addition, 86% of farmers still use traditional machetes and hoes as primary tools of business.

Table 4.2 : Sectorial trends in PIB up to 2020.

	2008	2009	2010	2011	2012	2013-2015	2016-2020
Primary Sector	5.3	3.0	4.2	4.8	5.1	5.2	4.9
Farming of food products	6.6	4.7	4.8	5.1	5.4	5.8	5.2
Industrial and export agriculture	1.8	2.6	3.6	4.5	4.6	4.6	4.6
Livestock, hunting	2,7	3,8	4,1	4,1	4,4	4,5	5,4
Fishing	2,7	2,5	2,5	2,5	3,0	3,0	3,0
Forestry and logging	3,8	-10,0	0,0	5,0	4,5	2,8	2,0
Secondary sector	0,6	0,6	1,0	5,6	5,5	5,3	5,8
Extractive industries	-1,8	-9,8	-10,0	12,5	9,4	3,3	1,0
Including: Hydrocarbons	-1,8	-10,2	-10,4	13,0	9,8	2,8	0,3
Agro-food	2,1	2,9	2,5	2,8	3,2	4,0	5,0
Other Manufacturing Industries	2.8	2.4	3.8	4.1	4.7	5.8	6.8
Electricity, gas and water	5.6	2.0	3.0	3.5	4.0	14.5	16.7
Building sand Public Works(BTP)	-8.2	11.3	6.5	7.5	7.6	7.8	8.0
Tertiary sector	2.6	3.1	3.8	4.4	5.4	6.9	6.5
Trade. restaurants and hotels	0.8	2.9	3.7	3.8	5.2	7.2	7.3
Transport. Storage. communications	8.6	3.3	4.9	5.7	6.4	6.5	6.4
Banks and Financial institutions	7.2	5.9	4.7	4.0	5.3	7.6	6.8
Other market services	-1.7	3.1	3.8	5.8	6.8	8.3	6.8
FISIM (serv. indirect. Measured inintermediate.)	6.3	5.6	4.6	6.0	6.9	8.3	6.8
Non-market APU services	4.2	2.8	2.4	3.2	3.6	5.2	3.9
Other non-market services	4.3	4.2	4.7	5.2	4.6	4.8	4.8
GD Pat factor cost	2.6	2.4	3.1	4.8	5.3	6.1	5.9
GDP	2.9	2.4	3.1	4.2	4.7	6.1	5.9

Source: GESP, p.114 INS and National Accounts 2011.

4.2. Developments and Prospects of public expenditure in human capital

A certain degree of commitment of the Cameroonian government can be observed in matters related to expenditure in human capital, with some advances recorded since 2010 in the sectors of education and health and outlook for 2020.

4.2.1. Public expenditure on education

Public expenditure on education considered here are those of basic, secondary and higher education. They do not take into account expenses related to specific vocational trainings and scientific research. The analysis of these expenses reveals that they have increased significantly between 2000 and 2011, from 141.7 billion to 356,5 billion. The highest increases were observed in 2000, 2007 and 2009, when the budget sector increased by 22%, 47% and 31%.

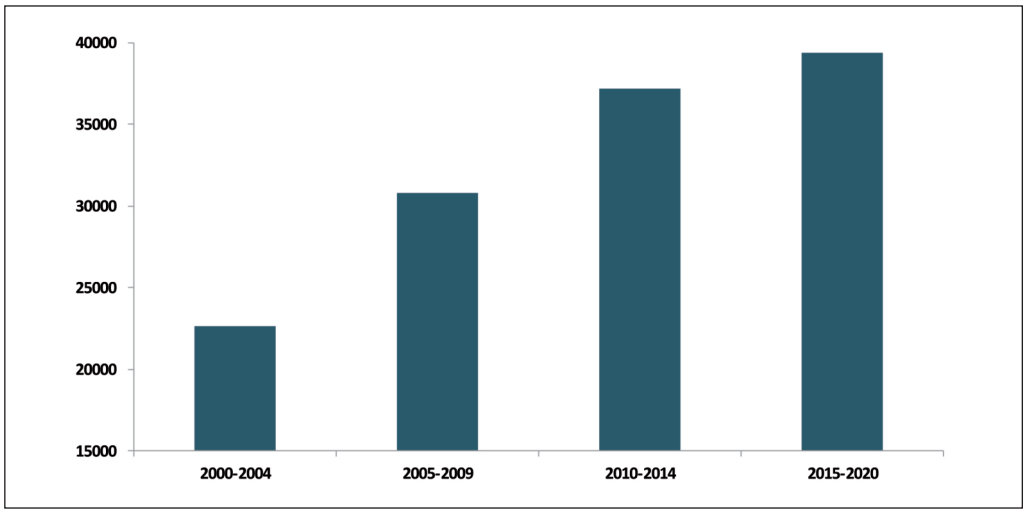
However, a more adequate way of examining public expenditure on education is to relate them to the people these resources are supposed to serve. The population considered here are people aged 6-24 years, the age group shortlisted while calculating the overall enrolment. The average cost of education per person aged

6-24 years can be interpreted as an indicator measuring the government's ability to provide educational services to youth. Evolution wise, this indicator rose from CFA F 23,400 FCFA on average over the period 2000-2004 to 35,300 FCFA over the period 2005-2009; an increase of over 50%.

However, this increase in expenditure on education does not necessarily lead to a good quality of service. According to the second survey on the tracking of public expenditure conducted by the INS in 2010, households receiving public education services are generally very dissatisfied. Only 15% of them were satisfied, while 37% have a mixed opinion and 48% are dissatisfied with the service delivery.

In terms of outlook, the steady increase in education expenditure is expected to go on. Between 2010 and 2014, they will move from 375 to 470 billion CFA, bringing the average expenditure by individuals aged 6-24 years to 48 500 FCFA in nominal terms, that is 37 200 FCFA at constant prices of 2000. During the period 2015-2020, the increase in state revenues, combined with consequences of demographic transition, will help increase the average expenditure per child to over 39 400 FCFA in real terms.

Figure 4.1 : Developments and Prospects of average expenditure on education by individuals aged 6-24 years (at constant prices of 2000).



Source: Finance Laws 2000-2012, CBMT central GESP, Authors calculations

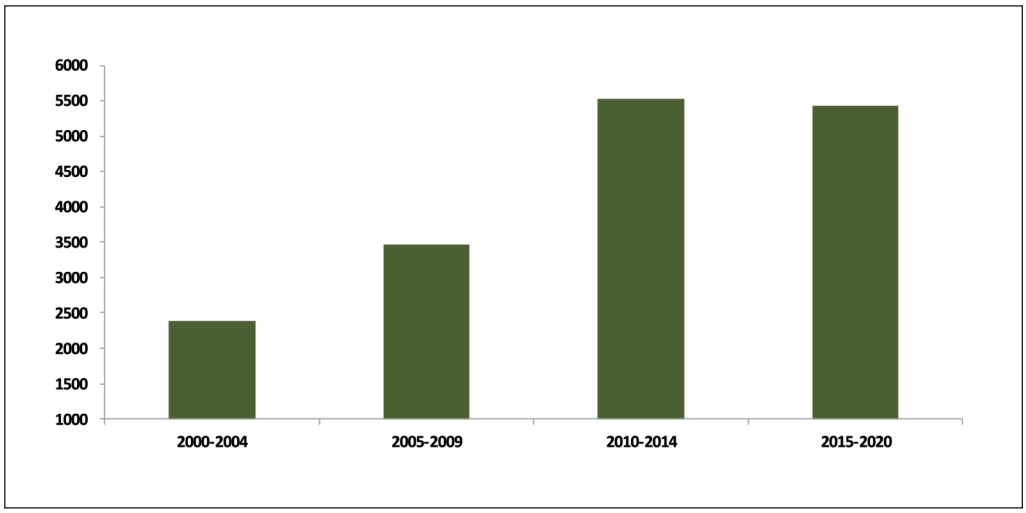
The share of education expenditure in the budget is expected to stabilize around 15%, a rate well below the 20% set by the indicative framework of the Fast Track Initiative for universal completion of primary education. To achieve this level in 2020, the budget for education should experience an average annual increase of 9.1% from 2014, which is much higher than the currently projected growth rate of 4.2%.

4.2.2. Public expenditure on health

Since 2000, the budget allocated by the State to the health sector has been on an overall upward trend. In fact, according to budget data obtained from the finance laws, the budget of the Ministry in charge of public health in terms of performance increased from 30.7 billion CFA francs in 2000 to 107 billion CFA in 2010, bringing the public health expenditure per capita from 2000 to 4500 FCFA at the constant prices of 2000. Over the same period, the share of the budget devoted to health increased from 2.6% to 5.1%, thanks to the implementation of the strategy of poverty reduction attributing great importance to social sectors. However, Cameroon still has a long way to go to fully meet recommendations of the World Health Organization (WHO), which calls on governments to allocate 15% of their budget to health in order to achieve universal health care and build strong human capital. This objective is one of the major commitments of the Abuja Declaration in favour of accelerated action towards universal access to services in the fight against HIV / AIDS, Tuberculosis and Malaria (OAU, 2000).

Looking foward, data on budgetary framework point out that the increase in budget allocated to the health sector should continue with higher increases during the period 2010-2014, which is the first phase of implementation of the GESP. During this phase, the public health expenditure per capita will be about 5500 FCFA and in the phase 2015-2019, it will decline to 5400 FCFA francs at constant prices of 2000. In addition, between 2010 and 2020, the share of the budget devoted to health remained around 5%, a digression from GESP recommendations which forsee this climb to 9% by 2020.

Figure 4.2 : Health expenditure per capita over the period 2000-2020 (constant prices of 2000).



Source: Finance Laws 2000-2012, CBMT central GESP, Authors calculations.

Box 4.1: The simulation model

The equations are of the form:

$$\begin{cases} IDH_t = a + \alpha_0 IDH_{t-1} + \alpha_1 (PIBT_t - PIBT_{t-1}) + \alpha_2 DEPSAN_t + \alpha_3 DEPSAN_{t-1} + \alpha_4 DEPEDU_t + \alpha_5 DEPEDU_{t-1} \\ TBS_t = b + \beta_0 TBS_{t-1} + \beta_1 (PIBT_t - PIBT_{t-1}) + \beta_4 DEPEDU_t + \beta_5 DEPEDU_{t-1} \\ ESPER = c + \delta_0 ESPER_{t-1} + \delta_1 (PIBT_t - PIBT_{t-1}) + \delta_2 DEPSANT + \delta_3 DEPSANT_{t-1} \end{cases}$$

The variables in the model are:

HDI is the Human Development Index calculated by the new formula of UNDP. It is a geometric average of the indicator of living standards, the education indicator and the health indicator;

PIBT is the logarithm of real GDP per capita, the introduction of this variable as a first difference is used to model the growth rate of real GDP per capita, which is equal to the rate of GDP growth minus the rate of population growth.

TBS is the combined gross enrolment rate. It is obtained by dividing the total population actually enrolled for all levels in the population of the age group 6-24 years. It covers all (secondary and tertiary) levels of education.

4.3. The simulation model of the impact of economic growth on human development

To assess the impact of economic growth on human development, we thought it worthwhile to use autoregressive vector type models. The main advantage of these models is that they allow the intervention of the explanatory variables with a time lag, which may or can in this case capture the idea that income and social expenditure may affect human development indicators with a lag. Indeed, the improvement of these indicators is part of a cumulative process of medium and long term, although it was difficult to fix a priori the time required to observe the effects of expenditure and GDP on social indicators (Keho, 2008).

Human development indicators that have been selected are as follows: the Human Development Index, the combined gross enrolment rate and life expectancy at birth. The idea is to simulate their evolution based on growth and public expenditure patterns on health and education expenditure as defined in the GESP.

The data utilized[18] span the period 1982-2010, i.e. 29 years. The human development indicators were obtained

[18] The use of multiple data sources is due to difficulties in getting all the variables and time series from the same source.

from the UNDP. Information on GDP are from World Development Indicators 2011, the World Bank, and those relating to the population from the Central Bureau of Census and Population Studies (BUCREP). Data on public expenditure on education has been reconstructed from finances laws; it is not the initial allocations of departments concerned, but expenses that were actually executed in accordance with laws and regulations.

In the estimation of the model equations, ordinary least squares (OLS) have not proved convergent because of autocorrelations that have been observed between residues. Therefore, regressions were finally realized by the method of Generalized Quasi-Least Squares (QGLS), based on the Prais-Watson[19] process which solves the problem inherent in the autocorrelation of the residuals and obtain parameters converge.

The links between the human development indicators and macroeconomic aggregates were used to assess the impact of development strategy in Cameroon, as defined in the GESP on the medium-and long-term trend in the HDI, the combined overall enrolment and life expectancy at birth.

4.4. Impact of economic growth on human development indicators: the baseline scenario

Assumptions of the baseline scenario are based on the GESP and data budgetary framework, namely the central Medium Term Budget Framework (MTBF) whose current version makes budget predictions of various ministerial departments until 2015. It is worth pointing out that the forecasts of central CBMT are thinner than GESP as they are fitted with more current information.

4.4.1. Trajectory of the HDI in 2020

Simulations of the evolution of the human development index calculated using the new methodology[20] used by the UNDP since 2010, show that

ESPER is life expectancy at birth; the number of years that a new born infant would live healthy in the current conditions.

DEPSANT represents the logarithm of public expenditure per capita. Public health expenditure refers to the budget of the Ministry in charge of health. However, they do not cover all health care costs. Indeed, part of the budget for the sector of national security and defence is allocated to health care also share of the budget of the education sector is allocated to university and health centers. The DEPSANT variable is deflated using the GDP deflator.

DEPEDU represents the logarithm of real education expenditure per school-age individual. Education expenses include state budgets of the Ministry of Basic Education, Ministry of Secondary and Higher Education. The age considered is that of 6-24 years. Like the variable DEPSANT, DEPEDU was deflated using the GDP deflator.

Box 4.2: Relationship between human development indicators and macroeconomic aggregates

The following equations establish the relationship between human development indicators and macroeconomic aggregates (see Annex 6 for details).

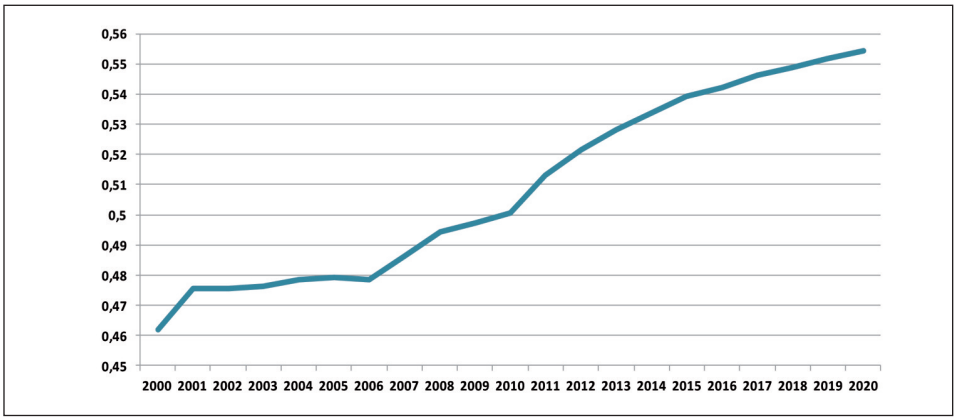
$$\begin{cases} IDH_t = 0{,}00147 + 0{,}8005 * IDH_{t-1} + 0{,}069 * (PIBT_t - PIBT_{t-1}) + 0{,}0089 * DEPSAN_t + 0{,}0033 * DEPEDU_{t-1} \\ TBS_t = -0{,}1921 + 0{,}5618 * TBS_{t-1} + 0{,}0237 * (PIBT_t - PIBT_{t-1}) + 0{,}0278 * DEPEDU_t + 0{,}019 * DEPEDU_{t-1} \\ ESPER = 0{,}3051 + 0{,}9143 * ESPER_{t-1} + 0{,}120 * (PIBT_t - PIBT_{t-1}) + 0{,}0027 * DEPSANT + 0{,}0026 * DEPSANT_{t-1} \end{cases}$$

[19] In the particular case where the disturbances follow an AR (1) process Prais-Watson provides a consistent estimator. This procedure consists of four steps: (i) estimate OLS base, (ii) calculation of the estimated residuals, (iii) estimated autocorrelation parameter ρ and calculation of transformations of the initial variables, (iv) OLS estimation of the model with the transformed variables.

[20] See details on this new methodology in Annex 3.

from the value of 0.501 in 2010, the HDI will continually grow and by 2020, there will be around 0.554 i.e. an increase of 0.054 points per year. By comparison, over the period 2003-2008, the period of implementation of the PRSP, the average increase of the HDI was 0.03 points. Perspectives on progress in the HDI indicate that the evolution of this indicator will be faster between 2010 and 2014, where it shall increase by an average rate of 0.007 points annually against 0.003 points between 2015 and 2020.

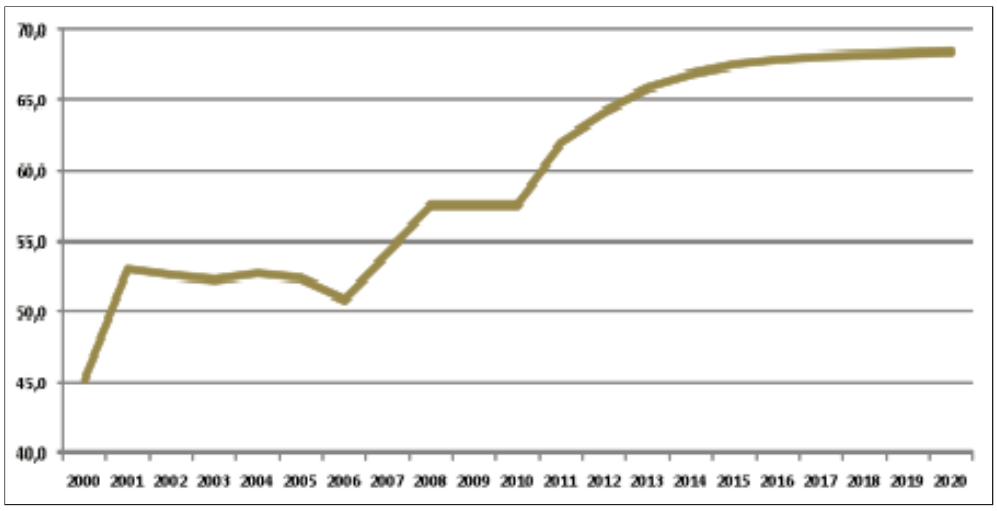
Figure 4.3 : Simulation of the HDI trends.



4.4.2.Evolution of combined gross enrolment rate

Projections indicate that the combined Gross Enrolment Rate (GER) evolved significantly from 57.5% in 2010 to 68.4% in 2020 after moving to 67.5% in 2015. But the GER does not strike the right cord between the educational system and the structure of the economy. The evolution of this indicator does not assess the degree of suitability between the education provided and the needs of the labour market dominated by the informal sector which, according to World Bank prospects (2012), will still concentrate up to 86% of jobs in 2020.

Figure 4.4 : Simulation of the evolution of the combined TBS



Source : Autors, data from PNUD, WDI and DSCE

4.4.3. Trend in life expectancy at birth

Life expectancy at birth reflects the levels of health, nutrition and sanitation of populations. Simulations show that this indicator should change significantly between 2010 and 2020 from 51.7 years to 56.3 years for a gain of 4.6 years of life over the period. This gain would be greater over the period 2010-2014 with an annual average of 0.456 years, than over the period 2015-2020 where the gain would decrease to 0.324 years per year.

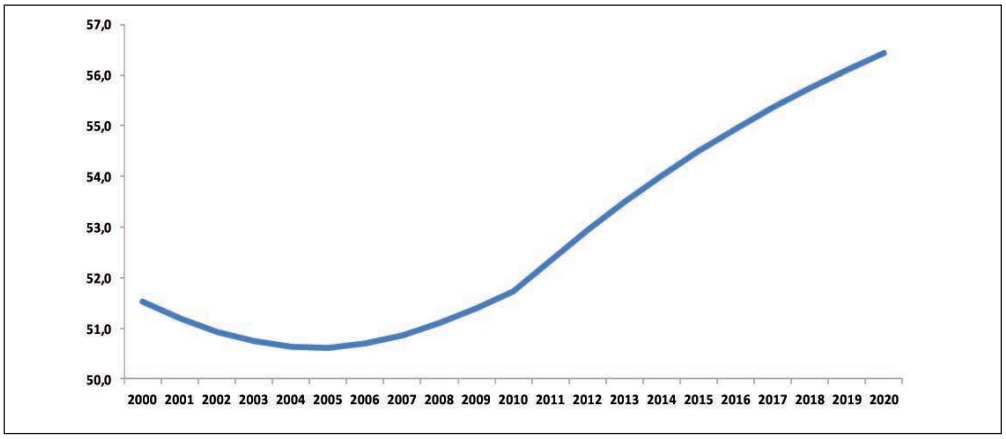
The increase in life expectancy is no doubt the result of the gradual decline in child mortality and maternal mortality, combined with a decrease in the prevalence of major diseases such as HIV / AIDS, malaria and tuberculosis. In addition, debt relief of Cameroon following the attainment of the completion point of the HIPC initiative has enabled the health sector to benefit from many additional resources: C2D, HIPC and MDRI. Thus, we observe that since 2007, life expectancy in Cameroon is on a steady upward trend.

4.5. Alternative scenarios

Alternative scenarios aim at assessing the potential impact of actions likely to be taken by the State for the improvement of human capital. The first scenario aims at increasing public expenditure on education from 15% to 20%. The second scenario simulates the increase in education expenditure from 5% to 15%. Both scenarios take into account the Declaration of the Heads of State and Government in Abuja in 2000. The third scenario is to simultaneously apply Scenario 1 and Scenario 2 and observe the change in the initial trajectory of the HDI.

However, these simulations are just intended to give an idea where these economic measures would be implemented, because mobilizing more financial resources for a sector (education and health) requires a restructuring of the state budget with a reduction in the budget for other

Figure 4.5 : Simulation of the evolution of life expectancy at birth.



Source: Authors based on data from UNDP, WDI and GESP

sectors (governance, infrastructure, industry and services, etc.). Therefore, simulated measures should be analyzed in a global context at the time of decision making.

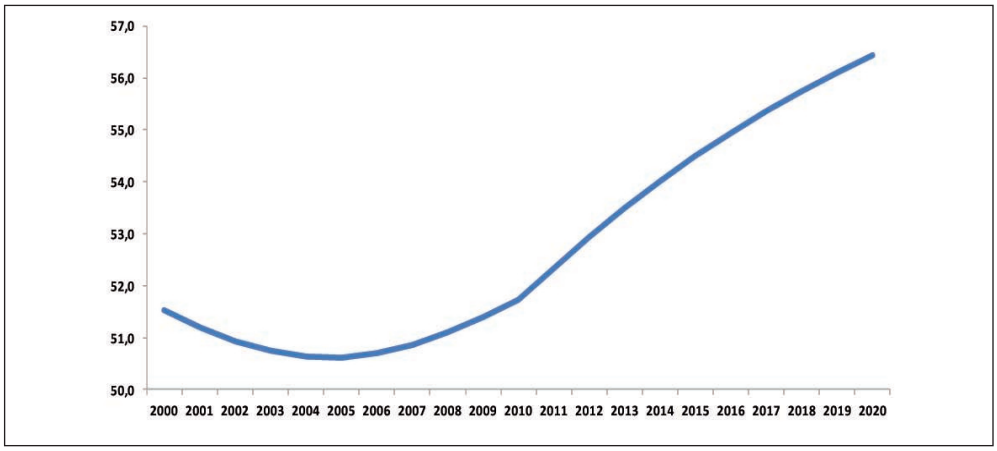
4.5.1. Alternative scenario 1: raise expenditure on education to 20% of the budget for 2020

In this scenario, we set out to find out what would be the path of the combined gross enrolment rate and the human development index by simulating an increase in public health expenditure of 9.1% on average in 2014 so that by 2020 they represent 20% of the state budget. Economic growth assumptions remain unchanged.

If this scenario is implemented, then it will allow the combined gross enrolment to cross the symbolic threshold of 70% from 2018 to reach 71.2% in 2020, enabling Cameroon to have a TBS similar to Malaysia today which is 70%. However, to build human capital capable of carrying the country to emergence, the education system must do more to address the quality of education, including the promotion of technical education, the expansion and diversification of the supply of vocational training, creation of job incubators and the professionalization of higher education. The challenge of emergence cannot accommodate a deficit in technical skills both in the field of industrial engineering and in applied research.

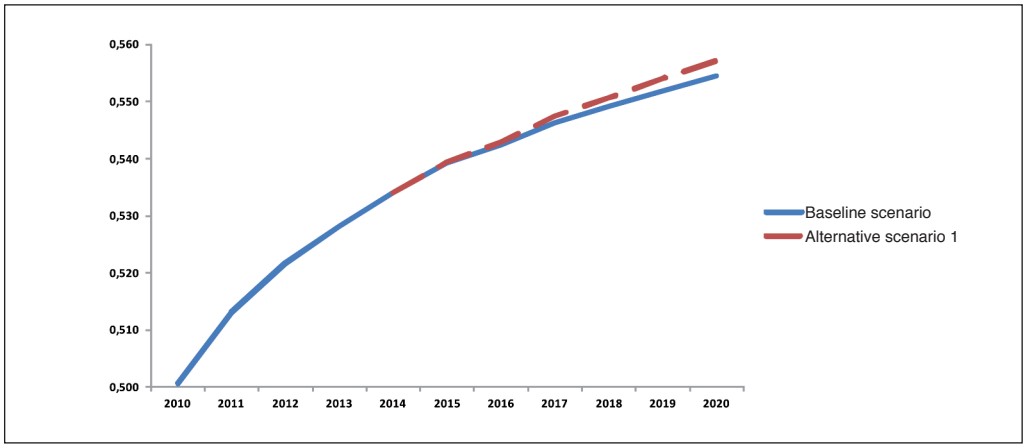
The graph below shows the impact of the increase in education expenditure under Scenario 1 on the trajectory of the human development index. We note that this indicator will gradually increase and by 2020, it will amount to 0.557 or 0.003 points higher than the baseline scenario. This slight difference compared to the baseline scenario can be explained by the low sensitivity of the HDI compared to medium term expenditure on education; the ramifications of such an action will be better perceived on the long run.

Figure 4.6 : Evolution of TBS combined with the alternative scenario 1.



Source: Authors based on data from UNDP, WDI and GESP

Figure 4.7 : Evolution of the HDI with the alternative scenario 1.



Source: Authors based on data from UNDP, WDI and GESP

*IDH = (Duration of life index *Level of education index *Standard of living index)* $^{\frac{1}{3}}$

4.5.2. Alternative scenario 2: getting public health expenditure to 15% of the budget for 2020

Historical data from budget execution and current perspectives show that public health expenditure will remain between 5.5% and 6% of the state budget. Thus, this scenario simulates a gradual increase in the share of the health budget from 2014 so as to pass from 15% to 20% by 2020, in accordance with the Abuja Declaration. This implies an increase in education expenditure to an annual average rate of 21% from 2014, i.e. three times more than the currently envisaged rate of 6.5%.

With this scenario, life expectancy should be 57.4 years in 2020. Assuming that this trend is maintained, in 2035, the average life expectancy in Cameroon will be around 65 years, a value much lower than the current level of emerging countries (Morocco, 72 years, Tunisia, 74.5 years; Malaysia 75 years). This is indicative of the low sensitivity of health indicators (infant mortality, maternal mortality, etc.) in relation to means invested. The root of problems is the discrepancy between activities that are included in the budget and the actual needs of the grassroots. Indeed, according to the survey on monitoring public expenditure on health and education conducted by the INS in 2010, the proportion of health facility managers who participated in the preparation of their budget remains relatively low. The views of managers of health facilities on this participation are less and less favourable in peripheral structures than in central facilities. One out three regional delegates indicated that they were not involved in the preparation of their budget. On health facilities, managers of sub-divisional medical centres (CMA) and integrated health centres (CSI) are the least involved in the preparation of their budget (26%

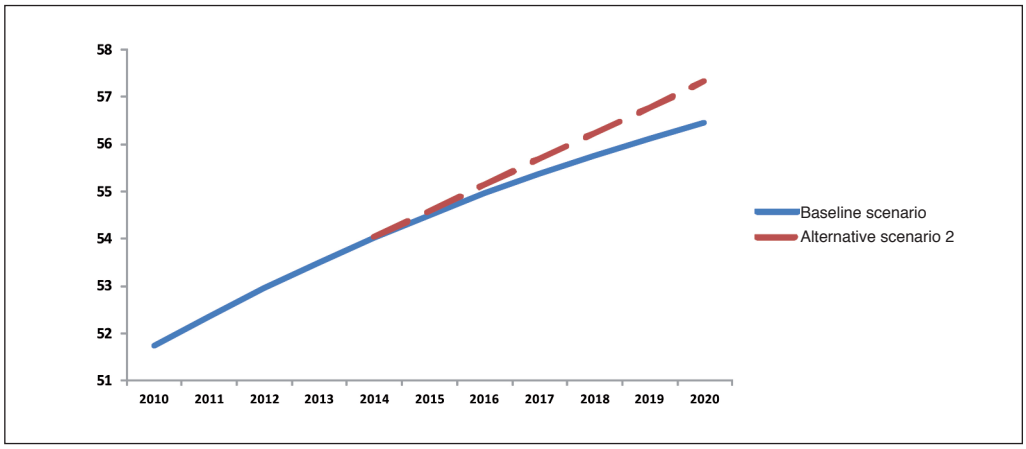
and 31% respectively).

The same survey reveals that there is a certain opacity on grants that are allocated by the Ministry of Public Health to private health institutions. The allocation of these grants is governed by criteria which are not known to all managers / founders of health facilities. Only 42% of them indicated they are familiar with the criteria. In addition, grants received, which should in principle help support staff costs, namely salaries and bonuses, are rather used by the recipients for equipment acquisition and service operation.

In addition, the SWAp (Sector Wide Approach (SWAp)) a resource optimization tool identified for implementing the Health Sector Strategy within the framework of the Paris Declaration, is yet to fully play its role of coordinating government's actions and those of Technical and Financial Partners (TFP) in the field of health. Thus, some health districts have several projects while others do not have the basic amenities.

Invest heavily in health, will allow the HDI to move just a little faster compared to the baseline. In 2020, there will be a gap of 0.021 points between the reference value and the resulting alternative scenario 2, which is 0.575. However, this increase will be greater if we proceed, first, to reform the health system in order to increase the efficiency of public expenditure on health.

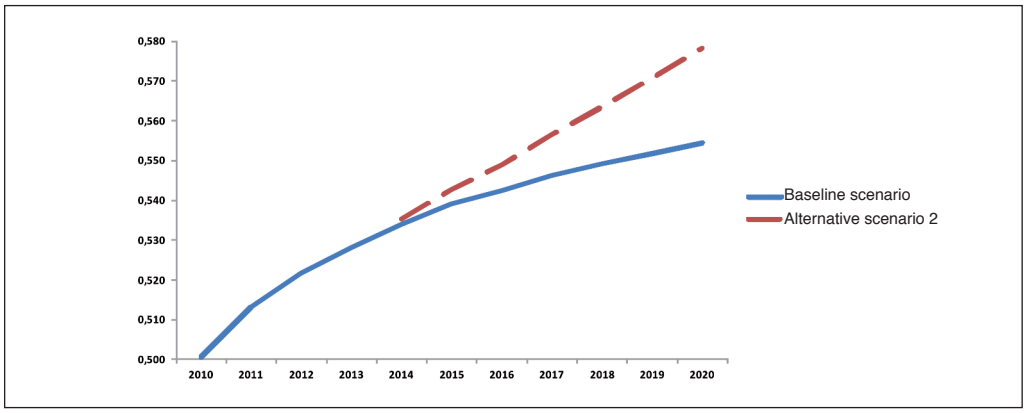
Figure 4.8 : Trends in life expectancy at birth with the alternative scenario 2.



Source: Authors based on data from UNDP, WDI and GESP

$IDH = (Duration\ of\ life\ index * Level\ of\ education\ index * Standard\ of\ living\ index)^{\frac{1}{3}}$

Figure 4.9 : Evolution of the HDI with the alternative scenario 2.



Source: Authors based on data from UNDP, WDI and GESP

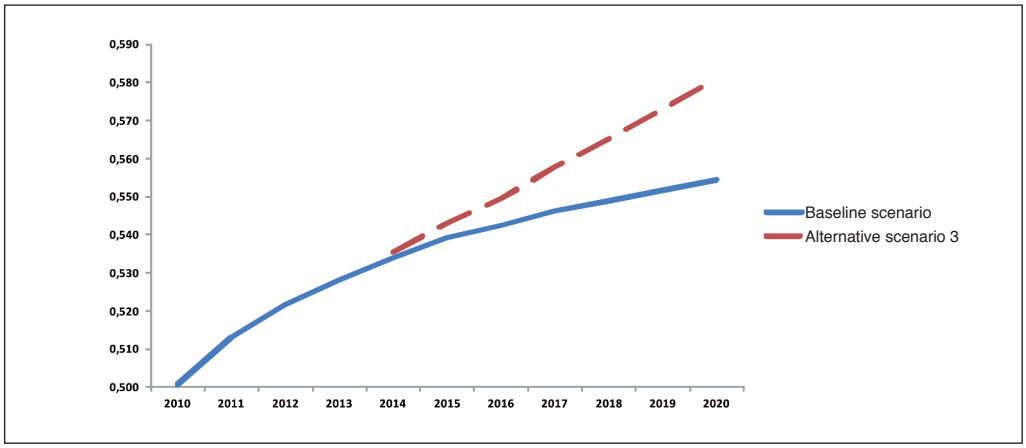
*IDH = (Duration of life index *Level of education index *Standard of living index)* $\frac{1}{3}$

4.5.3. Alternative Scenario 3: Increase simultaneously public expenditure on health and education in order to reach 35% of the budget for 2020

This simulation is used to analyze the potential impact of an increase in joint public expenditure on education and health in the path of the Human Development Index (HDI). It is a matter of gradually increasing the budgets of these two sectors so that by 2020 the education budget represents 20% of GDP and the health budget 15%. In total, these two sectors then concentrate 35% of the budget as opposed to 20% today.

Results show that HDI trajectory is comparable to scenario 2, which is to act only on health expenditure. The difference is that the evolution of the indicator would be faster with a 0.008 annual average gained point. If this trend continues, then in 2035 the HDI would be around 0.7 making Cameroon a country with high human development.

Figure 4.10 : Evolution of the HDI with the alternative scenario 3.



Source: Authors based on data from UNDP, WDI and GESP

*IDH = (Duration of life index *Level of education index *Standard of living index)* $\frac{1}{3}$

The objective of this chapter was to provide opportunities for economic growth and human development in Cameroon. To achieve this, we first presented global and sector perspectives, secondly, prospects of public expenditure in human capital and thirdly, the impact of economic growth on human development. At the end of the day, it emerges that:

- on global and sectorial plans, Cameroon's economy is on a good medium and long term track, thanks to major investment projects coupled with the increase in the rate of real growth and the continued decline in the non-oil primary surplus;
- the government's effort in terms of public expenditure on human capital (education and health) tends to continue since the release of external constrains with the attainment of the completion point of the HIPC initiative in 2006;
- Simulations of baseline scenarios from GESP show that economic prospects will lead to an improvement in human development indicators seen through indicators such as life expectancy at birth, the gross enrolment rate and the HDI, but progress remains very low in view of the emergence in 2035;
- Alternative scenarios based on the Abuja Declaration indicate that significant investments towards areas of education and health in the present state of things can not significantly affect the trajectories of human development indices due to a number of major constraints such as: low efficiency of public expenditure, the obsolescence of the health system and the discrepancy between the educational system and development requirements.

It is now very opportune for Cameroon to undertake a number of reforms to have a human capital capable of leading the country to emergence in 2035.

CHAPTER 5 :

RECOMMENDATIONS

It is important at the socio-economic level, that policy makers in Cameroon, the government, decentralized local authorities, leaders of the private sector and civil society, should make it a duty to bridge the existing gap between economic growth and human development as a catalyst for inclusive growth. Important steps must be taken: firstly to promote wealth creation in a participatory manner involving all layers of the population and secondly to increase the impact of human capital on economic growth and the feedback effects of the latter on human development.

The issue at stake is a profound volatility of the economy in an increasingly integrated and ever changing world. The aim is not only to improve production in terms of quantity and quality, with a better distribution, but most importantly to strengthen the base for a more resilient economy against externalities and consequences of climate change. Everything should be done to promote a sustainable development approach, taking into account all dimensions of human capital.

5.1. Creating an inclusive growth

The important actions to be taken in order to ensure strong, sustainable and inclusive economic growth in Cameroon with the participation of all the stakeholders should aim at achieving the following goals: improving the business climate; maintaining an on-going dialogue with civil society and the private sector; developing mechanisms for job creation; implementing mechanisms to migrate the informal to the formal sector, diversifying the sources of growth by intensifying sub-regional cooperation and ensuring social protection.

5.1.1. Improving business climate

The inflow of foreign investors highly depends on the business climate in a country and the role of public or private investment, national or foreign, in increasing the volume of production is crucial. In Africa in general and Cameroon in particular, the weak macroeconomic performance is due to the opacity of the business climate. Cameroon's ranking in the "Doing Business" has improved in recent years, but the country still remains poorly ranked (161st out of 183 countries in 2012)[21]. This ranking discourages investors who, for those who have an aversion for high risk, relocate their activities or change their investment decision.

Improved business climate should clearly seek an effective consideration of the private sector as growth driver,

[21] Ranked 171th in the "Doing Business" 2010 edition, Cameroon won 6 seats in 2011. The 2012 edition ranks the country 161th amongst 183 countries.

at directing efforts towards a better exploitation of existing physical and human potential in the rural sector where the overwhelming majority of the downtrodden live. Facilitation of access to the means of economic participation by disadvantaged social groups (women and youth) is an urgent need in relation to the transformation of agriculture, the original source of economic gain and industrial processing base which can guarantee decent jobs.

It is up to the Cameroonian authorities to improve the quality of governance, that is to say, to improve the perception of their actions by private actors, technical and financial partners, the civil society and people in general. To achieve this target, democratic accountability must be improved. In fact, the adoption and use of biometrics in voter registration process is a good sign. The second dimension in the quest to improve a good business climate in Cameroon is the continuation of the fight against corruption and misappropriation of public funds. For this purpose, it is necessary to provide support to institutions such as the National Anticorruption Committee (NACC), the National Agency for Financial Investigation (NAFI) and the various ministerial cells for the fight against corruption, to make their actions more effective on the ground, both in terms of prevention and repression. In addition, it is necessary to implement more flexible administrative mechanisms as «e-governance», to fight against administrative bottleneck especially when it comes to creating a company, signing or implementing agreements or cooperation agreements.

5.1.2. Maintain an on-going dialogue with the civil society and the private sector

The situation of the private sector in Cameroon is clearer since the publication in 2010 of the results of the General Census on Business (EGR) 2009. However, some measures taken by the government are being implemented and others in development. These measures are recorded in line with the GESP in the roadmap of *"Cameroon Business Forum (CBF)"* for public / private dialogue to improve the business climate in Cameroon as recommended by the World Bank Group following the joint request of the Government and the private sector in Cameroon.

It is necessary to identify obstacles to the development of the private sector, as it the case with CBF and thereafter implement legal and regulatory reforms to boost the country's competitiveness. Given Cameroon's delay in the *"Doing Business"*, this step should go beyond simple requirement coupled with media coverage, for effective implementation of emergency mea-

sures and assess their impact on business climate. The immediate challenge is: *(i)* accelerate the implementation of necessary reforms to improve the business climate in Cameroon to improve the "Doing Business" ranking in the country, *(ii)* provide incentives to attract the interest for the private sector thereby contributing to direct foreign investment, *(iii)* make available all information and indicators likely to guide investors' choice.

5.1.3. Develop mechanisms for job creation

In its development strategy, the Government of Cameroon gives prominence to job creation. For the government's plan to create thousands of decent jobs, effective initiatives should be taken in the sense of a real implementation. Therefore, it is important to integrate the "High Intensity Labour Force" (HILF) approach in public infrastructure and experiment it in the private sector given the fact that closely integrating investment, employment and trai-ning, this labour-intensive approach would create jobs for low-skilled workers and make currency on the acquisition of equipment, spare parts and imported fuel. At the same time, it should gradually replace foreign expertise by local expertise.

In addition, the government should reinforce operational capabilities of the Cameroon Subcontracting and Partnership Exchange (SPX) whose main mission is to help member companies find new customers and possibly develop their profitability through an analysis of their performance and processes. This strengthening entails a clear definition of the legal framework underlying subcontracting in Cameroon, to enable local businesses to participate fully in the implementation of major projects. Expanding the sphere of action of SPX which, for the moment, is limited to sectors of mechanical engineering, electrical engineering, civil engineering, surface treatment, plastics and rubber is also necessary.

5.1.4. Migrate the informal sector to the formal

The informal sector with 90% of the workforce is characterized by job insecurity. It has become over time the refuge of young graduates and other vulnerable segments of the population. It is the main source of income for the poor. The informal sector has an efficiency score of 0.40 (BEM Justin NGUETSE Pierre and al, 2012), which reflects the general inefficiency. An improvement in this area could have significant benefits in terms of reducing poverty, through a potential decrease in poverty rate of about 19%.

To implement a strategy to improve the living conditions of the poor it is necessary to set up mechanisms to

increase their productivity and organize them for a progressive migration to the formal sector. To do this, it is important to adopt concrete measures to transform the rural sector. Decent rural jobs should be created from investments in the modernization of agriculture and the establishment of structures for processing resulting products and to establish a stronger local food industry. Getting out of the informal sector requires a tangible and pragmatic strategic approach based on the agriculture sector as a real engine of growth useful in solving problems of under-employment and youth unemployment.

Effective management systems should be adopted in this aproach, especially starting the establishment and maintenance of a streamlined accounting, together with improved monitoring activities through strengthening the statistical system. Orientation and training through the professionalization of education could be guided toward a more inclusive human development of vulnerable sections of the population. This would more effectively respond to the needs to implement a policy of pro-poor economic growth, able to accelerate the eradication of poverty.

5.1.5. Diversifying the sources of growth by increasing sub-regional cooperation

Economic growth is a complex phenomenon whose sources are many and varied. The role of international and sub regional cooperation, especially as a source of economic growth, is crucial. Cameroon, in its strategic position within the Economic and Monetary Community (CEMAC), however, has not always taken every opportunity derived for converting factors of economic growth. It is necessary that the Government of Cameroon adopt a strategy for the country to benefit from the sub-regional economic integration leading to the Regional Economic Programme (REP). This program has the ambition to enable the emergence of the CEMAC zone by 2025. It is based on integration projects that facilitate the mobility of people and goods in the area, part of sub-regional integration on which Cameroon might advantageously take the lead regarding the facilitation of the implementation.

It is, therefore, important for Cameroon to seize this opportunity to build on its comparative advantages, particularly with regard to subsistence agriculture, non-timber forest products, livestock and embryonic industrialization. Cameroon should, in fact, put its development vision in a clear relationship with the vision of sub-regional integration in a proactive spirit without hesitation to take the leadership to accelerate progress.

5.2. Strengthening the links between economic growth and human capital

Urgent action must be taken in

Cameroon in order to strengthen the links between economic growth and human capital. The goal is to go in the direction of increasing the impact of growth on human development on the one hand, and increasing the of human capital in economic growth on the other hard.

5.2.1. Increasing the efficiency of public expenditure

The effectiveness of public expenditure reflects the need for it to reach its target optimally ; that is to say, as desired by the policymaker for the well-being of populations in ways previously defined in a participatory manner. This is not so much the amount of a budget that is important for an economy, but the way scarce resources are allocated to cover needs (usually many). In this context, the increase should not be an end, but a means to streamline and make them more productive. It is therefore important to advocate the quality of expenditure, not only in terms of the assignment but more in terms of allocation and use. Many hopes are placed in the "Program Budget" with launch from 2013. This new method of budgeting in relation to development programming should better assess the effectiveness of public expenditure both upstream and downstream.

At the upstream, public authorities should be able to clearly identify social priorities, including those related to the development and maintenance of human resources, that fit well with the expectations, real needs and rights of the people, in order to respond to them appropriately. Education and health are the main determinants of human capital which in turn has a real impact on the inclusiveness of quqlity of economic growth. Economic growth itself engineers human and general development provided that conditions for redistributing the fruits of growth are optimized.

At the downstream level, effective and comprehensive mechanisms for monitoring and evaluation of public expenditure must be established in order to ensure that public expenditure or their effects have actually reached the beneficiaries / target. The existence of such a mechanism is in general, and in the case of Cameroon, the weakest link in the chain Planning-Programming-Budgeting –mo-nitoring /evaluation (PPBS) cycle. It must therefore be well thought out, as part of the implementation of the program budget in order to effectively fight against challenges such as under-utilization of the budget and the embezzlement of public funds that undermine the Cameroonian system in place. Such a mechanism would, in their implementation, redirect programs to ensure their alignment with the needs, expectations and priorities of the people at the base.

5.2.2. Adapting the education system to the requirements of development

To enable Cameroon to have a youth capable of carrying strong, sustainable and equitable growth, the education sector strategy being updated should include guidelines to address the major challenges of the moment. It is therefore important to adapt education and training to the socioeconomic environment through: *(i)* the gradual integration of national languages in the curriculum, in order to expand the cultural field and the scope of social impact *(ii)* diversification of supply and relevance of technical education to meet the needs of skilled jobs for intermediary employment, *(iii)* the creation of training centers in order to be sufficiently accurate and efficient in the use of available human resources, *(iv)* the adaptation of training offered in the different agro-ecological zones in order to make the most of national potential, particularly in the agricultural sector and the professionalization of higher education to end the current inadequacies in the system, *(v)* the involvement of professional organizations in the definition of the content and training programs, (vi) the development of teaching methods taking into account the predominant role of the informal sector in the Cameroonian economy.

It therefore appears crucial to build bridges between vocational training and the formal education system. In order to make vocational training more attractive, it should standardize and establish an equivalence between diplomas to allow the validation of professional experience as a prerequisite for a possible integration of formal vocational training system.

All Cameroonians should also have equal access to education and quality training through: *(i)* the stimulation of the demand for education for children living in remote areas and those who remain in cultural or traditional inertia, *(ii)* strengthening the technical platform of technical schools *(iii)* the development of training map for school youth. The profile of teachers and trainers should additionally be brought in line with the new challenges of education related to new technologies. It is urgent to reform teacher training and educational centers, while providing training and retraining of teachers and trainers in the fields of science and technology for the growth sectors of the economy.

Partnership and educational governance must be improved by: (i) the establishment of standards of training content for the creation of schools and universities, (ii) the adoption of a legal framework establishing contractual relationships between public and private, education and training activities, (iii) involvement of regional and local authorities in education coverage and

(iv) developing partnerships with the diaspora to fill teaching gaps in domains crucial for development.

Human capital has been key to the emergence of countries like China, Malaysia and South Korea, where proactive policies have been implemented to create a human capital that matches the dimension and need analysis of its economic and industrial development. On the contrary, in Cameroon, the lack of a clear strategy for developing human resources, to identify for all sectors, the profile of skills the country needs to sustain its economic development, is one the most serious deficiencies in the GESP implementation. This strategy is part of a pressing need and should be adopted as soon as possible. It will give a good orientation to revamping the educational system, regarding the profile of the human resource required to support inclusive growth and human development.

The access to education of persons with disabilities must be provided by: (i) the establishment of interactive structures and inclusive education and training institutions by type of disability, (ii) training and retraining staff specialized in coaching people with disabilities, (iii) besides the existing social system, an effective state subsidy for didactic material should be implemented for those with disabilities requiring special educational needs (iv) compliance with accessibility standards for persons with disabilities and persons with reduced mobility in the construction or renovation of public infrastructure in general and education in particular.

5.2.3. Increasing the effectiveness of public health system

To increase the efficiency of the public health system in Cameroon and thus contribute to the formation of a healthy human capital, a number of challenges must be addressed urgently in the health sector. In terms of , which so far appears to be a major determinant of the Cameroonian strategy, somehow limiting the autonomy of the country, a revision of the texts of the unit responsible for the coordination of the health sector is necessary to enable it to fulfil its role of coordinating the actions of the government and development partners. This should take into account the setting up of district health development plans, decentralization of financial of donor resources management and harmonization of donor procedures.

The acquisition of tripple autonomy (technical, economic and institutional) should be provided in the servicing of health districts in the wake of an update of the sector strategy for public health in order to provide access to quality health services to all in

accordance with universal standards. This should be done in a way that takes into account school health, academics and professional, mentor clinics supervising training in health facilities of defence forces and develop traditional medicine. The establishment of institutions of medical rehabilitation and functional rehabilitation of the disabled person should be part of this package as well as compliance with standards of accessibility for people with reduced mobility, at the time of construction or renovation of health facilities. Implementation of pilot projects aimed at effective access to quality public health services could facilitate this strategic transformation.

All the above cannot be achieved without improving the working conditions of staff in health facilities. One possible approach is through the implementation of Purchasing Agencies Performance (AAP) in all health districts and construction of staff houses for medical personnal working in remote areas. The reform of the governance of the health system is needed at all levels, so that management measures, management and control of resources, including aspects of partnerships and information / communication, contribute more effectively to the achievement of objectives of the Health Sector Strategy through modern performance incentive approaches.

5.2.4. Developing a social protection strategy for inclusive growth

Social protection strategy can empower the most vulnerable groups and fight against inequalities in order to make growth truly inclusive. It can play a central role in strengthening social cohesion and, more generally, to strengthen the contract between the state and its citi-zens. The legitimacy of the state is supported by its ability to fulfil its part of the social contract. Social protection could contribute to the sustainability of growth, social stability and political accountability.

Cameroon does not yet have a real social protection strategy. The Social Sector Development Strategy(SSDS), which was developed in 2004 did not sufficiently take into account aspects such as social protection safety nets whose effectiveness in reducing poverty and social exclusion has been demonstrated in Latin America (Mexico, Brazil). In addition, the SDSS has not really been implemented due to the lack of ownership by the people, a low level of coordination and lack of dedicated resources. It should therefore be updated with better consideration of welfare issues, in the context of inclusive growth.

In addition, special emphasis should be laid on civil protection, as it is likely

that natural disasters due to climate change, such as floods that occured in the North and Far North in 2012, can become more frequent, increasing the vulnerability of households. An update of the SDSS should take into account all aspects of social protection and good ownership issues by stakeholders, more effective coordination and the provision of more appropriate means.

5.3 sociological factors to be taken into account in the implementation of the recommendations

5.3.1. The language barrier

The administrative hegemony of English and French whose mastery requires a certain level of education may limit the capabilities of a good part of the workforce. This language barrier indeed reduces participation in the economic life of people not practicing one or both official languages, which excludes them from circles of debates on issues affecting them. This shows the need for an education system based on multilingualism with the introduction of national languages, to enable all segments of the population to participate in debates on development.

5.3.2. Family logic versus the logic of economic efficiency

Business management in Cameroon is regularly biased by ethnic, tribal or family ties, even if this goes against efficiency and performance. The logic of family relationships maintains inefficiency and inertia in the labour market and in the management of the state. This problem is observed both in the private sector and the public sector prevents optimal use of human resources and is contrary to the results-oriented management. Family bias or any other form of favouritism similar to it can be an obstacle to effective management of national resources. It feeds corruption and negatively affects human capital.

5.3.3. The lack of associative spirit

Among the requirements to create activities that generate and benefit from economies of scale are entrepreneurship and the spirit of association. But the limited ability of Cameroon to share their savings to start small businesses leads to a flowering of individual or family businesses with low profitability. This is probably one of the reasons why the Cameroonian economy remains heavily dominated by the informal sector.

5.3.4. The brain drain

It seriously undermines the development ambitions of Cameroon since it deprives the country of parts of its human capital to which the government has devoted significant re-

sources. This brain drain usually affects academics, and most often graduates of higher education level. According to Abdelslam Marfouk (2010), it is estimated that 20% of African immigrants in Europe are graduates of higher education. In the United States, there are more than two out of three.

CONCLUSION

Four years after the previous Human Development Report titled "Cameroon: the challenge of achieving the Millennium Development Goals," The National Human Development Report 2013 on "inclusive growth and human development: the role of human capital ", summarizes the current concerns in the world of Human Development. Considered through the prism of an analysis of the correlation between inclusive growth and human development through human capital, the concern is to examine the level of human capital that can trigger a strong, sustainable economic growth and inclusive for all sections of the population.

Growth is a broad and ambiguous notion while the Human Development Index (HDI) is a multidimensional indicator, but the link between the two is not automatic and depends on several factors including the two main ones, being the right redistribution of benefits of growth and increased supply and quality of health and education. Accumulation of human capital could help sustain economic growth in the long term by acting directly on the productivity of labour, but also through positive externalities, that is to say, the beneficial consequences that are not taken into account by the market.

This report highlights that Cameroon has undergone since independence, three cyclical phases: a euphoric stage (1960-1986), a period of decline (1987-1994) and a recovery phase (since 1995), with varying impacts on the evolution of human capital indicators. To achieve the status of an emerging country, Cameroon needs a significant accumulation of human capital, growth and the driving forces for the deve-lopment of a modern economy. Investment changes in the components of human capital, will not allow it to fuly exploit its growth potential nor reach its goal of becoming an emerging country.

On global and sectorial plans, recently the Cameroonian economy seems to be recovering from an economic downturn due to major projects that the country intends to implement, resulting in an increase in the rate of real growth and the continued decline in non-oil primary balance.

In addition, the government's efforts in allocating public resources on human capital (education and health) tend to continue since the release of external pressure, due to the attainment of the HIPC completion point in 2006. Therefore, trends in human development indicators reflect a qualitative leap that could move Cameroon status from a low to medium HDI country, if a radical shift towards better governance of resources and their full integration into the economic system is achieved.

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Appendix 1: Relationship between growth and human capital

Table A1.1 : Results of the estimation of the relationship between growth and human capital.

Dependent Variable: Log of GDP per capita	
Variable	**Coefficients**
Logarithm of the combined gross enrolment	0.0699***
Log of life expectancy at birth	0.7893***
Logarithm of expenditure on education per child 6-24 years	-0.0152**
Logarithm of per capita health expenditure	0.0866**
Ratio of FDI to GDP	0.0030*
Ratio of exports to GDP	0.0011***
Marking indicating the period(1994-2010)	-0.0284
Constant	9.1319***
Statistical Model	
Adjusted R2 (in %)	95.5
Durbin-Watson	1.903
Note: *, ** and *** ⇒ significant at 1%, 5% and 10%.	

Source: Authors based on data of UNDP, WDI and BUCREP

Appendix 2: Methodology for calculating distributions of Gross Domestic Product

This section presents the calculation of GDP per capita in purchasing power parity (PPP). Then it describes the methodology that was used to make the repetition of GDP between men and women.

Calculation of Gross Domestic Product (GDP) per capita in Purchasing Power Parity (PPP)

Table A2.1 : GDP and GDP Purchasing Power Parity at constant prices of 2005. Year constant price GDP PPP 2005

Years	GDP PPP constant Price 2005	Population	GDP per capita
	(in millions USD)		(in USD)
2000	29055,7	15678269	1853,2
2001	30367,3	16039737	1893,3
2002	31584,7	16408085	1924,9
2003	32857,9	16783366	1957,8
2004	34074,3	17165267	1985,1
2005	34856,8	17463836	1995,9
2006	35980,0	17836078	2017,3
2007	37239,3	18216255	2044,3
2008	38319,2	18604535	2059,7
2009	39085,6	19001091	2057,0
2010	40336,3	19406100	2078,5
2011	41344,7	19819742	2086,0

Source: World Development Indicators 2012.

Distribution of GDP (PPP) between Men and Women

Drawing inspiration from the NHDR (2008) of the Democratic Republic of Congo, one assumes that the distribution of national income between men and women depends on two factors:

- Women's access to jobs (the more women access employment, the more income increases. Thus, the percentage of women in the total number of employed and the share proportion of women in the total population are good indicators;
- Pay levels of women compared to men (more women are well paid, plus their share of income increases). The ratio of female to male average salary is a good indicator.

In addition, it is assumed that the female share of labour income is equal to the female wage share of non-agricultural sector (UNDP).

The symbols used are as follows:

ω_m : The average salary of male working population engaged in active non-agricultural sector

ω_f : The average salary of the active female population in the non-agricultural sector

L : The total number of the employed population

L_m : The number of employed men

L_f : The number of employed women

p_m : The percentage of men in the labour force.

p_f : The percentage of women in the labour force

s_m : The share of male labour income

s_f : The share of female labour income

N : The total population

N_m : The total male population in the country

N_f : The total female population in the country

Y : The country GDP (PPP)

Y_m : GDP generated by men

Y_f : GDP generated by women (PPP)

y : GDP per capita (PPP)

y_m : GDP per capita estimated for men (PPP)

y_f : GDP per capita estimated for Women (PPP)

Calculation of the share of income generated by women and income created by men

All of the wealth created by women: $Y_f = \omega_f * L_f$

All of the wealth created by men: $Y_h = \omega_h * L_h$

The total GDP created by the population is: $Y = Y_f + Y_h = \omega_f * L_f + \omega_h * L_h$

Women's share in GDP is:

$$s_f = \frac{Y_f}{Y} = \frac{\omega_f * L_f}{\omega_f * L_f + \omega_h * L_h} = \frac{p_f \left(\frac{\omega_f}{\omega_h}\right)}{p_f \left(\frac{\omega_f}{\omega_h}\right) + p_h}$$

Cameroon has several surveys that enable is to have these indicators, particularly those relating to employment (EESI 1 and 2 EESI).

Table A2.2: Share of income created by Men and Women

Indicators	2001	2005	2007	2010
Ratio of the average income of the principal employment of women on men ω_f / ω_h	0,90	0,90	0,90	0,90
Percentage of women in the labour force (p_f in %)	49,4	45,7	49,5	49,5
Share of women GDP (s_f in %)	46,8	43,1	46,8	46,8

Source: INS (EESIEESI 1 and 2) and authors' calculations

Calculating the per capita income of women and men (PPP)

With the same assumptions previously adopted and given the above formula of the female share of labour income, per capita income women can be obtained as follows:

- The total GDP is created by women: $Y_f = s_f * Y$

- The total GDP is created by men: $Y_m = s_m * Y$

- GDP per head of the population is: $Y_m = s_m * Y$

- The share of women in the total population: Nf /N

Income (GDP) per capita of women is calculated as follows:

$$y_f = \frac{Y_f}{N_f} = \frac{s_f * \left(\frac{Y}{N}\right)}{\left(\frac{N_f}{N}\right)} = \frac{s_f}{\left(\frac{N_f}{N}\right)} * y$$

Similarly, the per capita income of men is: $y_m = \frac{s_m}{\left(\frac{N_m}{N}\right)} * y$

Appendix 3: Technical note2 the calculation of the Human Development Index (HDI)

The HDI was launced by UNDP. It has three dimensions:

- life, measured per life expectancy at birth;
- educational attainment, as measured by an indicator combining two-thirds of the adult literacy rate and one-third the combined gross enrolment ratio (at all levels: primary, secondary and tertiary), and finally,
- the standard of living, measured by GDP per capita (in PPP: Purchasing Power Parity).

The performance of each dimension is expressed as a value between 0 and 1 and by applying the following formula:

Nkama, A., (2011) «Protection Sociale et Croissance Pro-pauvre au Came National sur la Vulnérabilité de l'Enfant et la Protection Sociale au Came

Since 2010, the HDI is calculated as the geometric mean of the three dimension indices above dimensions. This change corresponds to one of the harshest criticisms against the form of the linear combination, which made possible a perfect substitution between all dimensions (Krugman and al, 2011)

$$IDH = (\text{indice durée de vie} * \text{indice niveau d'instruction} * \text{indice niveau de vie})^{\frac{1}{3}}$$

The calculation of the HDI is an index that varies between 0 and 1 that can distinguish four groups of countries:

- Countries with high human development with an HDI above 0.80
- Countries with high human development with an HDI greater than 0.7 and less than 0.799
- developing countries means that the HDI is higher than 0.507 and less than 0.699 ;
- The third group includes countries with low HDI is less than 0.5 human development;

Table A3.1 : Reference values for the calculation of the HDI.

Indicator	Maximum value	Minimum value
Life expectancy at birth (years)	85	25
Adult literacy rate (in %)	100	0
Combined gross enrolment ratio(in %)	100	0
GDP per capita (PPP, USD)	40 000	100

Source: World Report on Human Development (2011).

Treatment of income indicator

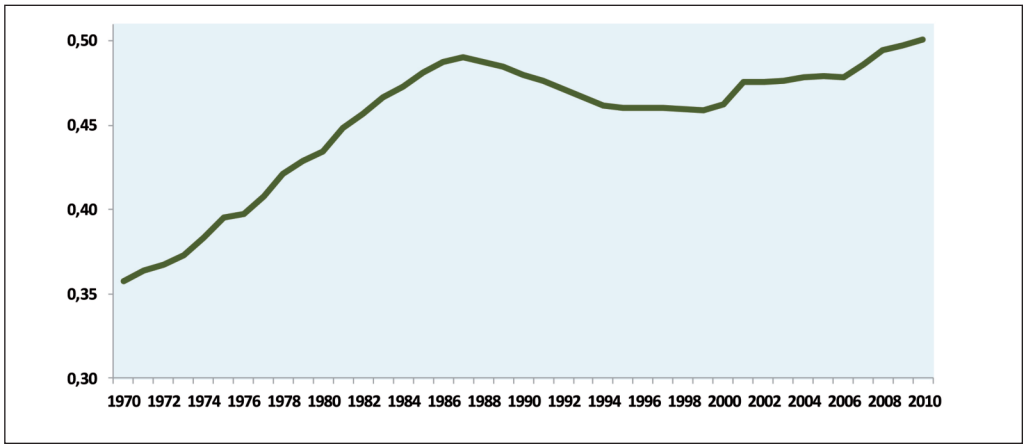
This indicator requires additional processing. Indeed, the index of standard of living reflects all aspects of human development that are not represented by longevity, health and education. GDP per capita is a proxy for a decent standard of living. The treatment of this indicator is based on the principle that "an unlimited income is not necessary to achieve an acceptable level of human development." It is under this principle that GDP per head is fixed by its logarithm (Ln) before calculating the index of standard of living.

Determination of gross combined enrolment

This rate was calculated by dividing the total population actually enrolled for all levels in the population of the relevant age group (6-24years old). The affected population was obtained by a combination of populations of different age of the entire school population in accordance with the instructions in the HDR 2007/2008 bands. These age groups are:

- for primary children aged 6 to 11 years;;
- for high school, aged 12 to 18 people;
- for the top, the population aged 19 to 24 years.

Figure A3.1 : Evolution of Cameroon HDI between 1970 and 2010.



Source: UNDP (HDI Hybrid Data).

$$PERE = \left[\left(\text{part la population féminine} \right) * \left(\text{indice dimensionnel pour Femme} \right)^{1-\varepsilon} + \left(\text{part de la population masculine} \right) * \left(\text{indice dimensionnel pour Homme} \right)^{1-\varepsilon} \right]^{1-\varepsilon}$$

Appendix 4: Technical Note for calculating the index of participation (GEM)

Unlike the HDI and GDI that measure progress in human capacity, Women Participation Index (GEM) focuses on opportunities for women. It tries to measure the advancements in equal opportunities for men and women in the control of the economic and political destiny of the country. A low IPF means that there are large disparities between men and women in the participation in the life of the country and the community. And in most cases, the excluded group is women with that of men.

The GEM captures gender inequality in three key areas: (i) political participation and decision making power, (ii) economic participation and decision making power, and (iii) power over economic resources. For each of these three dimensions, an equally distributed equivalent percentage (PERE) is calculated as population-weighted average, according to the following formula:

ε reflects aversion to gender inequality. In general, we take ε = 2, this value is used to give a moderate penalty on gender inequalities.

The FATHER of political participation and that of economic participation, are normalized by dividing by 0.50, the maximum value is 1, which corresponds to perfect equality between men and women in the dimension considered. The arithmetic mean of normalized FATHER of three dimensions is the GEM.

$$IPF = \frac{1}{3}\left(\frac{PERE_1 + PERE_2}{0,5} + PERE_3 \right)$$

The participation index (GEM) varies between 0 and 1. A value of zero indicates a complete lack of participation in the political, economic, while a value of 1 indicates a globally equal participation between men and women.

In this report, the indicators that were used to calculate the IPF are presented in the table below.

Table A4.1 : Areas used for the calculation of the index of women's participation

Area	Indicator
Political participation and decision-making	power distribution of parliamentary seats by sex
Economic participation	gender distribution of persons occupying managerial positions or employers Gender distribution of persons in technical management positions (employee or qualified worker on own account workers)
power over economic resources	estimated income of men and women (PPP U.S. $)

Source: HDR 2010.

Appendix 5: Technical Note Calculation of Multidimensional Poverty Index

The Multidimensional Poverty Index (MPI) was created on the occasion of the World Report on Human Development 2010. It replaces the Human Poverty Index (HPI), calculated since 1997. IPM provides a closer look at the hardships faced by households. It will reflect the multiple deprivations suffered by each individual in terms of education, health and living conditions. It is based on microdata from household surveys and, unlike the human development index adjusted for inequality; all indicators required for the development of measurement must always come from the same survey. Further details are provided in Alkire and Santos (2010). IPM can be calculated by region, socio-economic groups, as well as size, making it an appropriate tool for decision makers. This simple and relevant evidence for policy development comes with a more general approach that complement monetary methods.

Far the most widespread poverty currently is income poverty threshold defined by a national or international standard. Analysis conducted by UNDP in 2010 show that IPM expresses concurrent aspects, but distinct from income poverty. It is designed as a complement to understand poverty in its multidimensional aspect.

Methodology

Three dimensions of well-being (education, health and living conditions) are considered For each of them, a certain number of indicators are defined and a score based on the number of deprivations suffered are assigned to each household. The maximum score is 100. The different dimensions of well-being are equally important and all indicators of a dimension are weighted equally. In other words, the maximum score for each dimension is 33.3%. The dimensions of education and health each have two indicators, so each indicator has a weight of 1/6 or 16.7%. The condition of live dimension for its part is based on six indicators, so each component is equal to 1/18 or 5.6%.

Table A5.1 : Indicators of deprivation.

Dimensions	deprivation indicators	Cumulated indicators (pi)	Total cumulated dimension
Education	No household member has completed five years of schooling	1/6	33.33%
	At least one school-age child (6-14 years) not attending school sixth	1/6	
Health	At least one person has been a victim of malaria or diarrhoea or respiratory disease sixth 33.33%	1/6	33.33%
	Far from a health center (over 5 km)	1/6	
Living conditions	No access electricity	1/18	33.34%
	No access to safe drinking water	1/18	
	No decent toilet	1/18	
	Floor of the house I made up of earth	1/18	
	Uses fuel "traditional" for cooking (wood, coal, sawdust, wood chips, etc..	1/18	
	Do not have a car and has at most one of the following properties: motorcycle, bicycle, refrigerator / freezer, radio, telephone or television	1/18	
	Total	100%	100%

Source: Authors.

For a household the deprivation score is given by:

$$SC_i = 100 * \left(\frac{1}{K} \sum_{k=1}^{K} w_k I_i^k \right)$$

$$\begin{cases} I_i^k \text{ désigne une variable binaire de privation} \\ K \text{ est le nombre d'indicateurs primaires, ici K=12} \\ w_k \text{ est le poids de chaque indicateur primaire } I^k \end{cases}$$

With deprivation scores of households are determined people with multidimensional poverty. A household (and everyone who is a part) is "multidimensional" poor if its score (SC) is equal to or greater than the threshold c, which is 33.3. A household-level deprivation is between 20% and 33.3% is vulnerable to multidimensional poverty or risk ending up in this situation. Households with the level of deprivation are greater than or equal to 50% are living in severe multidimensional poverty.

The value of the IPM is the product of two measures, the multidimensional poverty rate and severity (or magnitude) of poverty.

The poverty rate,PM_0, represents the proportion of the population living in multidimensional poverty.

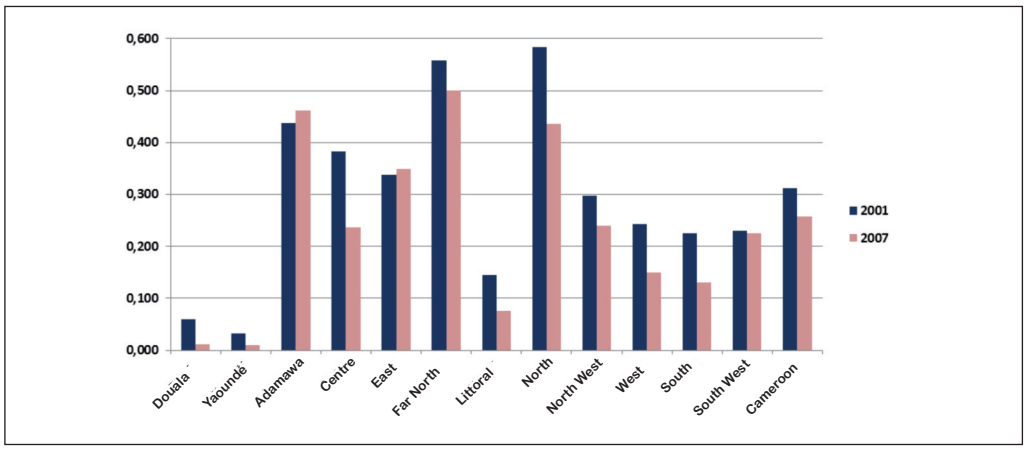
$PM0 = \frac{Q}{N}$, where Q is the number of people living in multidimensional poverty and, N the total population.

The severity of poverty,PM_1, reflects the proportion of weighted components in which, on average, poor people suffer from deprivation indicators. It is calculated by dividing the sum of the levels of deprivation by their total number.

$$PM_1 = \frac{\sum_{i=1}^{Q} SC_i}{Q}$$

We then have: $IPM = PM_0 * PM_1$.

Figure A5.1 : Evolution of IPM between 2001 and 2007 by region.



Source: Authors, from ECAM 2 (2001) and ECAM 3 (2007).

Appendix 6: Results of growth impact evaluation model on human development indicators

Table A6.1 : Results of estimated HDI equation.

Variables	Coefficients
IDH (-1)	0,8005***
D(PIBT)	0,0690696***
DEPSANT	0,0089218***
DEPEDU (-1)	0,003279***
Constant	0,0014657*
Statistical Model	
Adjusted R^2 (in %)	93,4
Durbin Watson	1,930
Note: *, ** and *** ⇒ significant at 1%, 5%and 10%.	

Source: Authors based on data from UNDP, WDI and BUCREP.

Table A6.2 : Results of estimated life expectancy equation.

Variables	Coefficients
TBS (-1)	0,56177***
D(PIBT)	0,0237155
DEPDU (-1)	0,027792*
DEPEDU	0,018989*
Constant	-0,19206***
Statistical Model	
Adjusted R^2 (in %)	95.5
Durbin-Watson	1.786
Not: *, ** and *** ⇒ significant at 1%, 5% and 10%.	

Source: Authors from UNDP, WDI and BUCREP data.

Table A6.3 : Results of estimated life expectancy equation.

Variables	Coefficients
ESPER (-1)	0,9141***
D(PIBT)	0,0120*
DEPSANT (-1)	0,0026**
DEPSANT	0,0027**
Constant	0,3051**
Statistical Model	
Adjusted R^2 (in %)	99.3
Durbin-Watson	0.396
Note: *, ** et *** ⇒ significant at 1%, 5% and 10%.	

Source: Authors based on data from UNDP, WDI and BUCREP.

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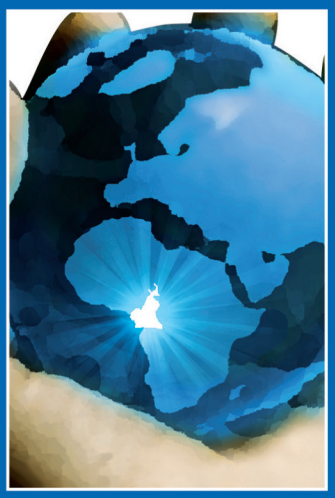

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