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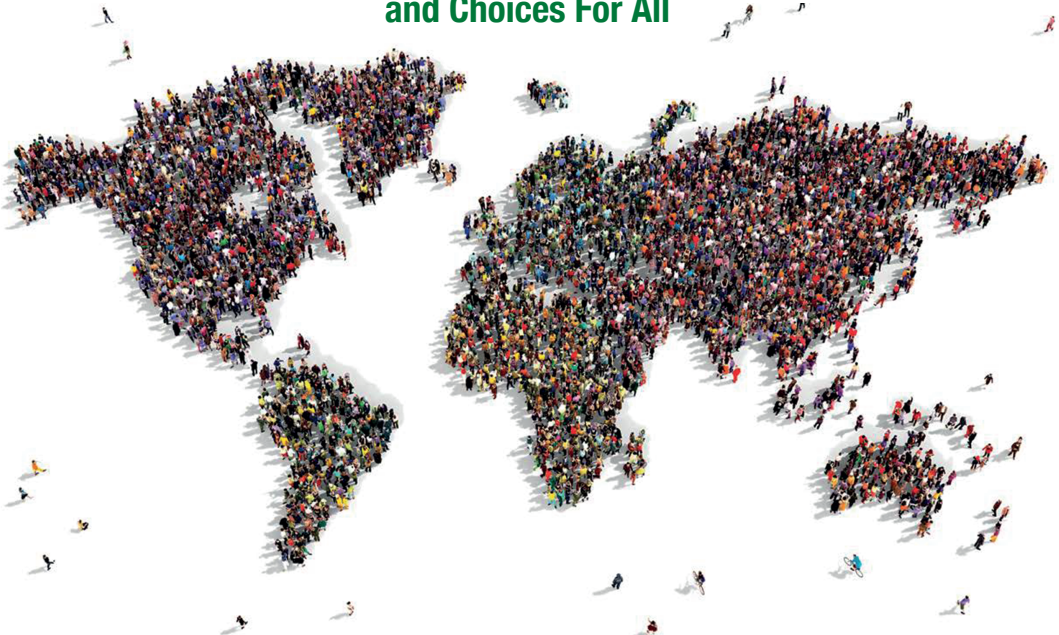
REPUBLIQUE DU CAMEROUN  
Paix – Travail – Patrie  
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INSTITUT NATIONAL DE  
LA STATISTIQUE

# WORLD POPULATION DAY

11 July 2022

THEME :

**Theme: A World of 8 billion: Towards a Resilient Future  
for All- Harnessing Opportunities and Ensuring Rights  
and Choices For All**



*Demographic Growth and Resilience in Cameroon:  
The Case of Education, Health and Decent Work*

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## FOREWORD

The National Institute of Statistics (NIS) is pleased to present to you, on the occasion of the 2022 World Population Day (2022 WPD), this brochure related to the theme of the day, so as to enable to assess the effects of demographic variables on education and health systems. The aim of this document is to raise awareness among policymakers about the urgent need to use population data to guide public policy and development planning. As a matter of fact, faced with the rapid population growth, the availability and use of quality data enable to anticipate the potentially negative effects and to exploit the opportunities of the demographic dividend

## INTRODUCTION

The world population will reach 8 billion in November 2022. Africa's share of this population is now experiencing a brutal growth since the current United Nations (UN) projections show that this share will grow from less than one-tenth to one-quarter in a century. Demography is in this regard, the great challenge for Africa in the 21<sup>st</sup> century. As a matter of fact, the rapid population increase is reflected, among other things, by a rapid urbanization, a sudden increase in the number of people to be educated, cared for and integrated into the labour market.

**Demographic resilience** is about countries “anticipating and understanding how their populations change...” and to “develop unique data-based responses that can help mitigate the potentially negative impacts and fully exploit the opportunities that also accompany demographic changes...”<sup>1</sup>

Demographic resilience thus underlines the importance of anticipating and planning for demographic changes and investing in education, health, access to decent work and gender equality. It also focuses on the use of statistical data to guide public policy and development planning.

While there is a consensus in the international community about the crucial role of education, health, decent work and gender equality in the development process, it must also be recognized that education, health, decent work are human rights issues.

In this brochure, we aim to analyse the impact of population growth in

Cameroon on access to education, health care and decent work. Issues of gender equality will be tackled in a cross-cutting way. Data come from a set of socio-demographic studies carried out in Cameroon.

“Everyone has the right to life... Everyone has the right to education... Everyone has the right to work... on fair and satisfactory working conditions... Everyone has the right to a standard of living adequate for the health and well-being of himself and of his family...” (Extracts from the *Universal Declaration of Human Rights*, United Nations, 1948).

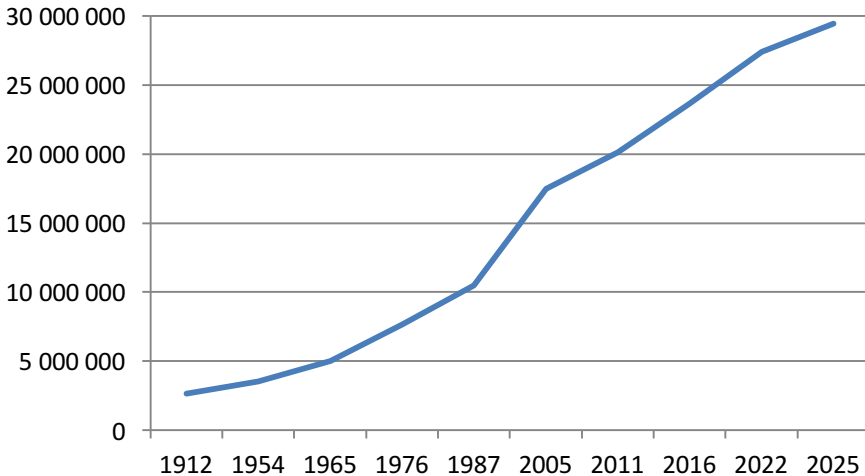
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<sup>1</sup>Extracts from World Population Day Circular - 11 July 2022

## I- Overview of the evolution of population, GDP and budgets of education and health systems in Cameroon

According to the results of the Third General Population and Housing Census (3<sup>rd</sup> GPHC), the population of Cameroon in 2005 was 17,463,836 and the average *inter-census* population growth rate (1987 to 2005) was estimated at 2.9%. Population projections place Cameroon's population at 27,419,137 inhabitants in 2022. By 2025, Cameroon's population will be about 30,000,000 inhabitants (Figure 1). The level of fertility (measured by the Total Fertility Rate (TFR)) is estimated at 4.8, that is to say nearly 5 children per woman, on average <sup>2</sup>.

**Figure 1:** Evolution of the population from 1912 to 2025



**Source:** BUCREP, National Report on the State of the Population of Cameroon – 2011 Edition; NIS, Population projections and estimates of priority targets for various health programs and interventions, 2016

Moreover, it should be noted that the population of Cameroon, like other African countries, is extremely young. In 2022, 43% of Cameroon's population is under the age of 15.

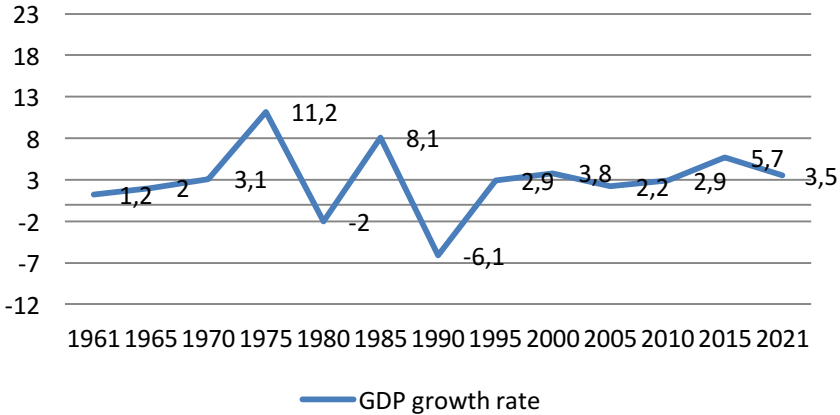
The role of human capital is crucial in the development process. This role is strengthened in the new information and knowledge economy where the

<sup>2</sup> 2018 CDHS V



emphasis is on skills and abilities, or capabilities (Sen, 1999). Capital is linked to investment. Investment in human capital is concentrated in all expenditure on the major axes of education and health.

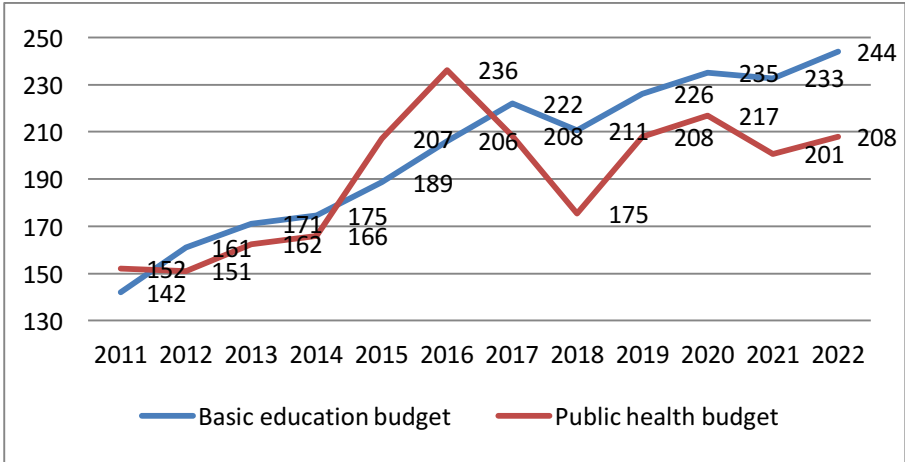
**Figure 2 :** Evolution of GDP growth rates (1961-2021)



**Source :** BM (<https://donnees.banquemondiale.org/indicateur/NY.GDP.MKTP.KD.ZG?locations=CM>)

Over the past decade (2012-2021), GDP growth was averagely 4.0% per year. Over the same period, the annual average rate of population growth was 2.6%. The gap between the GDP growth rate and the annual average population growth rate over this period is 1.4 percentage points, which is less than the 1.9 percentage point gap projected in the GESP, for a reduction of poverty to 28.7% in 2020.

**Figure 3 :** Evolution of budgets (billion CFA francs) allocated to basic education and health in Cameroon from 2011 to 2022



**Source :** Finance Laws of the Republic of Cameroon (for fiscal years 2013 to 2021)

Budgetary resources in the basic education sector have steadily increased to reach 244 billion in 2022. As for the budget allocated to health, it increased successively from 2012 to 2016, then decreased considerably between 2016 and 2018, before increasing again but without reaching its 2016 level.

## II- Effects of demographic variables on school and health systems

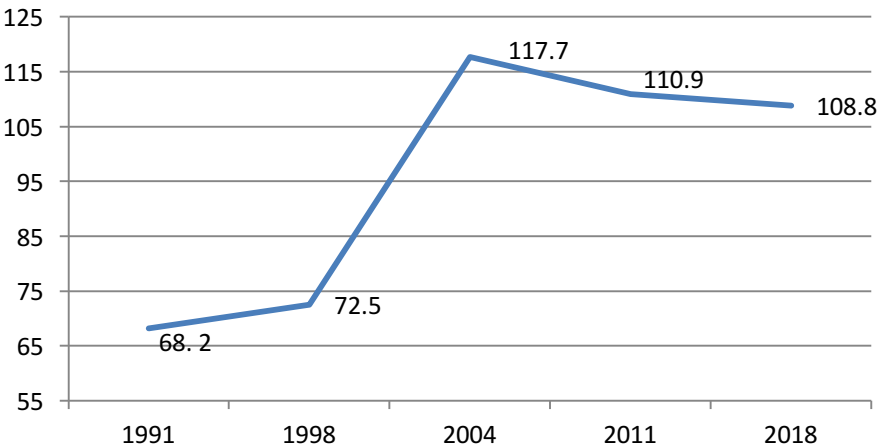
Along with social, economic, political and cultural variables, demographic variables play a central role in explaining the dynamics of education and health systems. These systems, reciprocally, act on demographic variables.

This section presents the effects of demographic variables on school<sup>3</sup> and health systems in Cameroon.

### Effects of demographic variables on school system

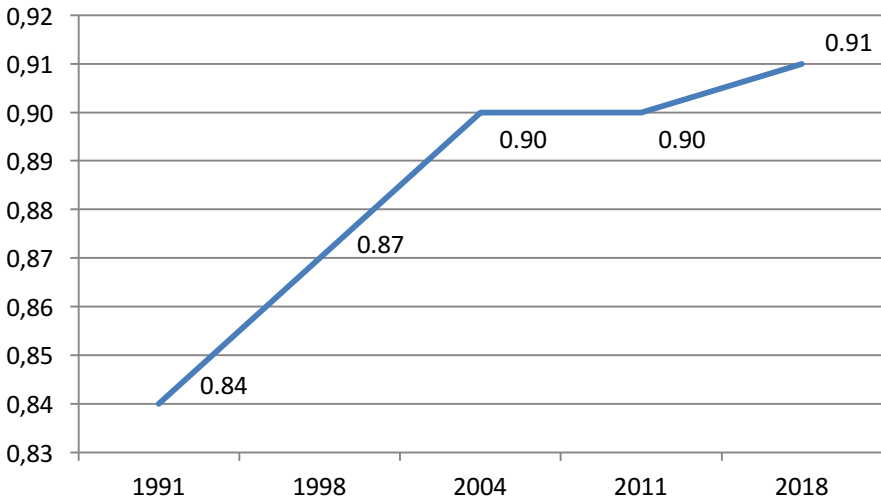
In Cameroon, there has been significant progress on indicators of school enrolment (school enrolment rates and gender parity index), although there are disparities according to regions. This progress is obviously to be compared with the figures, in absolute numbers, of the evolution of the de la population at school age.

**Figure 4 :** Evolution of the primary school enrolment rates



**Sources:** CDHS-I 1991, CDHS -II 1998, CDHS -III 2004, CDHS -MICS 2011 and CDHS -V 2018

<sup>3</sup> We will limit ourselves to the primary cycle which is compulsory for children at school age (6-11 years).

**Figure 5 :** Evolution the gender parity index at the primary

**Source:** CDHS-I 1991, CDHS -II 1998, CDHS -III 2004, CDHS -MICS 2011 and CDHS-V 2018

The base of the age pyramid is very broad for African countries that have not yet started their demographic transition. It is estimated that the population of primary school age (6-11 years) in Africa is three times that of industrialized countries with an age pyramid getting closer by a column (Figure 6). In Cameroon, the dependency rate between the population at school age and the adult population is about 0.3<sup>4</sup> (that is, 100 children of school age for every 30 adults). According to HUGON (2007), the gross school enrolment rate, or ratio, for a year, between school enrolments at a level (cycle) and the population at school age, can be used to analyze the interdependence between the school system and demographic variables. So, the gross enrolment rate (ts) can be defined in financial terms as the ratio between the actual expenditure on education for a given cycle and the expenditure that would have been required if the whole population of school age had been enrolled. It is written as follows:

<sup>4</sup> NIS, Population projections and estimates of priority targets for various health programs and interventions, 2016

$$ts = a_j/m_j \cdot b_j (1 + h_j) \cdot t_j \quad (1)$$

with  $a_j$  : share of cycle  $j$  expenditure on GDP (or macroeconomic variable) ;  $m_j$  : teacher/student ratio (or pedagogical variable) ;  $b_j$  : weighting of the teacher's salary in relation to the GDP per capita (or social variable) ;  $h_j$  : ratio of non-salary expenditures to salary expenditures;  $t_j$ : the ratio of population at school age to the total population (or demographic variable).

The two determining variables are, on the one hand, the difference between teachers' salaries and per capita income ( $b_j$ ) and, on the other hand, the demographic variable ( $t_j$ ) which is a function of the age pyramid. On the basis of the relationship (1), considering the age structure of the population (thus the dependency of the population at school age to the total population) and the differences in remuneration (salaries have an incentive effect on teachers), at the same rate of primary school enrolment ( $ts$ ), the relative financial effort (relative to GDP) in Africa (in Cameroon in particular) is much greater than that of industrialized countries.

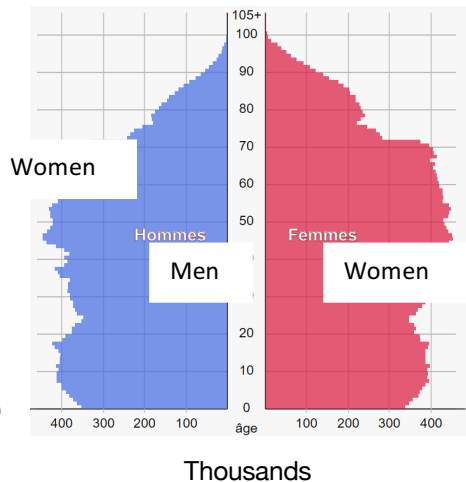
**Figure 6** : Comparison of age pyramids of populations in Africa and industrialized countries

Age pyramid of Cameroon Population in 2018



Source : NIS/CDHS-V, 2018

Age pyramid of France population in 2018

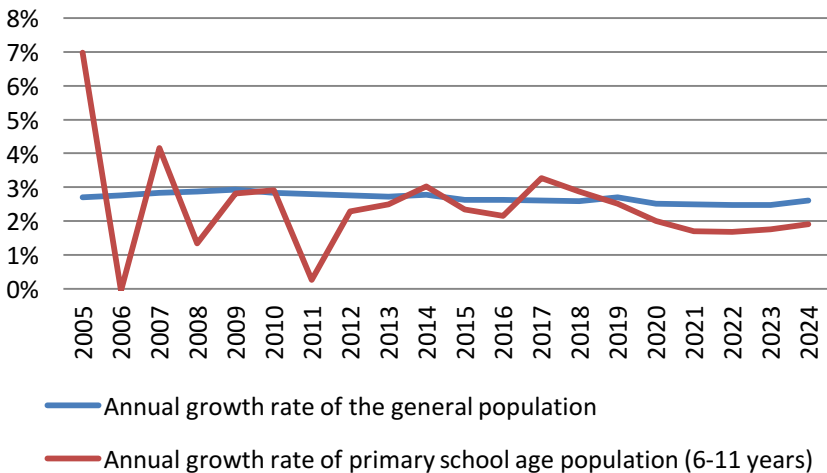


Source :

<https://www.insee.fr/fr/statistiques/3312958>

In Africa, the population of school age generally grows more often than the general population. In the case of Cameroon, the superiority of the growth rate for the population of school age is not clear (Figure 7). This presents an opportunity to capture the demographic dividend (school dividend in this case) by maintaining an investment with a constant rate of growth. As a matter of fact, to maintain a constant school enrolment rate, it is necessary to welcome each year more students, with an increase of more than 3 % (Figure 7).

**Figure 7 :** Evolution of the annual growth rate of the population at primary school age and the annual growth rate of the general population.



**Source:** NIS, Population projections and estimates of priority targets for various health programs and interventions, 2016

If for example, universal primary education by 2025 must be reached, given the current lags and the increase of the population of school age in Cameroon, the number of primary school pupils must move from 3,345,735 in 2022 to 4,552,034 in 2025, that is an average annual growth rate of 12%. If not, primary education for all will remain a mirage that shifts as we think we are getting closer to it.

<sup>5</sup>The net primary school enrolment rate is 77.5% (CDHS V, 2018). With 4,317,077 children of primary school age in 2022, it is deduced that 3,345,735 children are enrolled in primary school in 2022.

From the teacher student ratio (teacher/pupil ratio), the number of teachers needed to cope with the increase in the population of school age at a time  $t + n$  can be known. Then, from the teacher stock loss rate, the number of teachers to be recruited yearly to avoid discordant effects can be known. For a teacher/pupil ratio of 1/50, not only should the number of teachers in primary education be maintained above 91,041 until 2025, but their loss should be avoided if a widespread primary school enrolment is to be carried out.

**Table 1 :** Distribution of teaching staff in the Primary by Order (2017/2018 school year)

Order of teaching	Men	Women	Total
Public	29 831	26 555	56 386
Private	14 104	22 518	36 622
Community-based	214	501	715
<b>Total</b>	<b>44 149</b>	<b>49574</b>	<b>93 723</b>

Source : MINEDUB (<http://www.minedub.cm/index.php?id=71>)

**Table 2 :** Evolution of the population of primary school aged from 2005 to 2025

Year	2005	2006	2007	2008	2009	2010	2011
<b>Number at school age (Primary)</b>	2825995	3 023229	3 021708	3 147234	3 189377	3 278930	3 374443
Year	2012	2013	2014	2015	2016	2017	2018
<b>Number at school age (Primary)</b>	3383253	3 460659	3 547037	3 654484	3 739804	3 820577	3 945645
Year	2019	2020	2021	2022	2023	2024	2025
<b>Number at school age (Primary)</b>	4 059336	4 161476	4 244550	4 3 17077	4 390045	4 4 66836	4 552034

Source : NIS, Population projections and estimates of priority targets for various health programs and interventions, 2016

## Effects of demographic variables on the health system

Demographic variables also have an impact on the health care system. Health issues are also to be compared with population figures, in absolute numbers, in order to assess the magnitude of health phenomena on the population.

The issues of public health, food safety, water quality, sanitation and the environment are at the heart of population's health. Access to care and medicines is also essential.

The sanitary environment, especially water and sanitation, is crucial for population's health. Drinking water is vital. Target 6.1 of SDG Goal 6 aims to achieve universal and equitable access to safe drinking water at an affordable cost by 2030. Globally, there is a trend towards increasing access of Cameroon's populations to drinking water from an improved source<sup>6</sup>, from 42% in 2004 to 69% in 2011 and 75% in 2018. It is estimated that at this rate, in Cameroon, in 2022, about 7 million persons do not have access to safe drinking water. In addition, SDG 6 Target 6.2 aims by 2030 to ensure equal access to adequate sanitation and hygiene services for all, and to end open defecation, with particular attention to the needs of women and girls and persons in vulnerable situations. For improved sanitation facilities<sup>7</sup>, from 2011 to 2018, the percentage of the population using improved sanitation facilities increased from 40% to 58%. This indicates that in absolute terms, everything else equals, nearly 16 million people do not have access to adequate facilities in Cameroon, in 2022.

The infant and child age group (less than 5 years or 0-59 months) and women of reproductive age (15-49 years) are generally considered to be groups at risk due to the weight of infectious<sup>8</sup> and reproductive diseases. Children under 5 are the target of nutrition monitoring, vaccination, malaria and tuberculosis programmes. This target represents at least 15% of the total population over several decades (Table 3). Considering the demographic weight and the vulnerability of the population of this age group, its contribution to the overall burden of disease is noticed. A large part of the funding of the health system is therefore directed towards this category of the population which, moreover, benefits from a policy of gratuity within the framework of the priority programmes (free malaria treatment for children under five and pregnant women, etc.)

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<sup>6</sup> Improved drinking water supplies include tap water, pump or drill wells, protected dug wells, bottled water, protected spring water, and rainwater.

<sup>7</sup> Improved sanitary facilities include flush toilets (manual flushing where water flushes urine, human excrement and wastewater in pipes connected to the sewer system, a septic tank, a toilet system, etc.), a ventilated improved pit toilet, a pit toilet with slab, or composting toilet

<sup>8</sup> According to the WHO, worldwide, infectious diseases, including pneumonia, diarrhoea and malaria, as well as premature births, asphyxiation at birth, injuries, and birth defects remain the leading causes of death in children under 5 years.



As with education, the age pyramid can be linked to the care structures. This pyramid clearly shows an over-representation of the infant and child (see Figure 6). If we differentiate by age and gender the populations to benefit from health care (infant, child, adult, senile), most of the resources of health care concerns the infant, child and female populations

Children aged 0-11 months and pregnant women are target of the routine vaccination. A 0-11 month old child is considered fully vaccinated when he has received all doses of the planned vaccines while observing the minimum interval between doses. According to the results of the 2018 Fifth Cameroon Demographic and Health Survey (CDHS-V), 52% of children aged 12-23 months received all basic vaccines. This means that out of 797,907 children in this age group, 382,995 are not fully vaccinated in 2018.

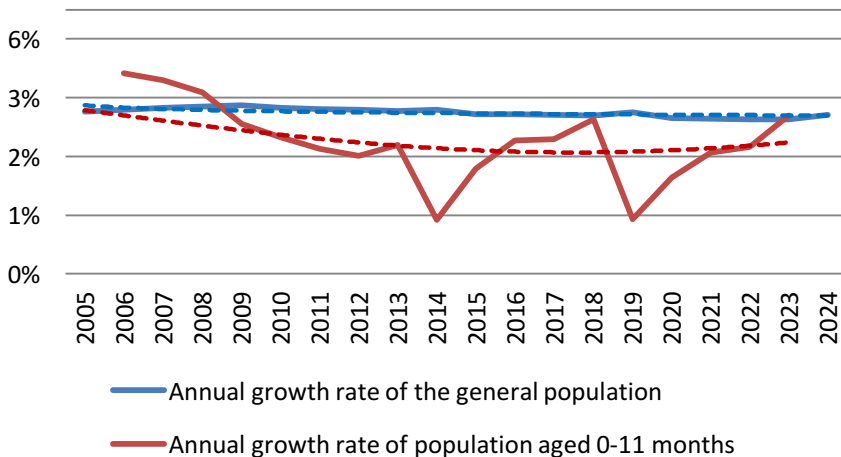
To fill the gap, both data on the current level of vaccination and the growth rate of the target population must be taken into account. The pattern of trends in the annual growth rate of the target population of 0-11 months suggests a declining rate of growth. Over the past decade, the annual population growth rate of 0-11 months has been close to 2% (Figure 8).

**Table 3** : Health Programs Priority Targets

Year	0-11 months		12-23 months		0-59 months		Pregnant women expected	
	Target population size	Target in percentage of total	Target population size	Target in percentage of total	Target population size	Target in percentage of total	Target population size	Target in percentage of total
2016	817510	3.5	766851	3.2	3738441	15.8	869745	3.7
2017	840654	3.5	776308	3.2	3814004	15.7	892970	3.7
2018	857962	3.5	797907	3.2	3885338	15.6	912408	3.7
2019	874840	3.4	814714	3.2	3951283	15.5	933071	3.7
2020	888916	3.4	831280	3.2	4028776	15.4	938566	3.6
2021	904194	3.4	845591	3.2	4110877	15.4	964219	3.6
2022	920610	3.4	859363	3.1	4187861	15.3	980986	3.6
2023	936955	3.3	875897	3.1	4265114	15.2	998295	3.6
2024	961049	3.3	891906	3.1	4347751	15.1	1026983	3.6
2025	947531	3.2	890263	3.0	4309832	14.6	1004803	3.4

**Source** :INS, Population projections and estimates of priority targets for various health programs and interventions, 2016

**Figure 8 :** Evolution of the annual growth rate of routine vaccination target and the annual growth rate of the general population



### III- Employment dynamics in Cameroon

As part of the fight against poverty, the Government has given priority to employment issues, with the aim of increasing the offer of decent jobs, matching employment offer and demand and improving the efficiency of the labour market.

In Cameroon, according to the results of EESI 2, the employment rate was 66.4% in 2010 against 68.3% in 2005. The average age of the active occupied population is 33 years and it is 52.2% male and 47.8% female. The average duration in the employment is 9.1 years.

The wage rate, defined as the ratio of the number of wage-earners to the active occupied population, is an indicator to measure decent work. The national wage rate is 20.3% in 2010 against 18.0% in 2005. This rate is lower in rural areas (9.4%) than in urban areas (41.4%).

## CONCLUSION

In conclusion, there are clear links between education, health and demographic variables. Access to education, access to health and access to decent work must be seen as objectives in their own if human capital and human rights are to be increased.

The leitmotiv of the demographic resilience approach is linked to the fact that, when data are sufficiently taken into account in public policy making, high population growth should not make development impossible, notably through efficient planning of universal education and access to health care for all.

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