

An Analysis of the Impact of HIPC Initiative on Poverty Alleviation in Developing Countries: Evidence from Cameroon

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By

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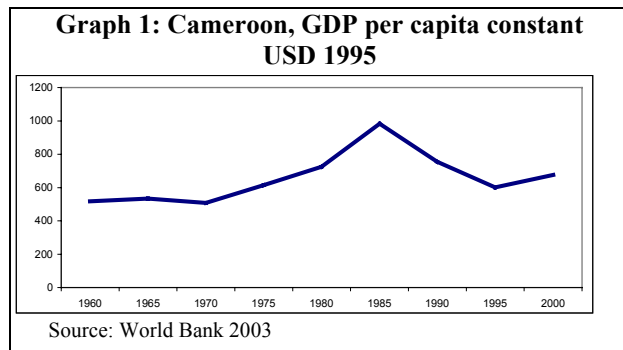
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1. Introduction

After independence in 1960, Cameroon's real economic growth was optimistic. Growth averaged 6 per cent during the 65-86 with agriculture being the main source of growth. When oil production started by the end of the 70s, Cameroon experienced a boom period. Its external resources balance that was negative in 1977 became positive. Gross domestic investment increased from 21% of GDP in 1977 to more than 30% in 1986. GDP per capita increased at about 4 percent during the 65-86. The boom period led to traditional growth sectors carelessness so their productivity declined. Public enterprises created during this period were highly inefficient. The banking system became very dependent on oil revenue as well as on government deposits.

In 1986 when the world market prices for cocoa, coffee and oil declined sharply, Cameroon's economy collapsed. The CFA Franc became overvalued in real terms. From 1985 to 1992, the external terms of trade fell by more than 55%. These combined shocks propelled Cameroon's economy into a long and deep crisis. The country's real GDP declined an annual average of 3.8 percent from 1986 to 1994. Real per capita income decreased an average of 6.5 percent during the same period. External debt rose, from 39 percent of GDP in 1986 to 65 percent in 1992 before escalating after devaluation (105 percent in 1994).



Following unsuccessful internal adjustment policies, Cameroon turned to the Bretton Woods institutions for assistance in 1988. The implementation of the first four programs was disappointing. The persistent overvaluation of the CFA franc (the common currency of Cameroon and 13 others African States) made the situation more difficult. In January 1994, the currency was devaluated by 50%. The benefits of devaluation were significant but slow. The post-devaluation inflation (about 35%) fell sharply to 4.3% in 1996.

As a result of the deep crisis, Cameroon impoverished. In fact, the percentage of population living under national poverty line increased from 40 percent in 1984 to 53.3 percent in 1996. Because of economic recovery due notably to devaluation and joint World Bank/IMF assistance programmes, the poverty headcount index dropped to 40.2 percent in 2001.

Poverty lines (68,800 in 1984; 185,490 in 1996 and 232,547 in 2001) were estimated using households' consumption. Final household consumption constructed for the determination of the national poverty line in 2001 included four distinct elements, namely: monetary consumption, self-consumption, transfers from other households, and imputed rent. Based on the basic needs approach, the

| | 1984 | 1996 | 2001 | Change As % |
|---|------|------|------|-------------|
| Incidence (P0) | | | | |
| Rural | | 59,6 | 49,9 | -9,7 |
| Urban | | 41,4 | 22,1 | -19,3 |
| Total | 40 | 53,3 | 40,2 | -13,1 |
| Depth (P1) | | | | |
| Rural | | 21,5 | 18,3 | -3,2 |
| Urban | | 14,7 | 6,3 | -8,2 |
| Total | | 19,1 | 14,1 | -5,0 |
| Sources: ECB 83/84, ECAM I and II; DSCN | | | | |

benchmark poverty threshold used was calculated using a food threshold, to which was added an amount for non-food basic needs. The food threshold was calculated from a household food basket composed of 61 goods representative of consumer choices as revealed by the survey. Purchasing power parity indices for Yaounde and other regions were calculated so as to value the basket of goods at Yaounde prices. The goods selected were combined to provide a working-age adult with a daily dietary consumption of 2900 calories. This caloric level was selected in light of the adult equivalent used for standardizing household expenditures. On this basis, the food threshold calculated at Yaounde prices was 151,398 CFA francs per year and per adult equivalent. For determining the total threshold, the non-food portion is estimated as a fraction of the food component. The minimum threshold was therefore set at 232,547 CFA francs, per adult equivalent and per year. Households where the annual consumption expenditure per adult equivalent was clearly below the minimum threshold were considered "poor".

It can be observed from the two latest household surveys that the decline in poverty has not been followed by reduction in inequalities. The Gini index shows that, despite

poverty's slow down, inequalities have remained constant and have in some cases increased. For example, in 1996 the richest 20 percent consumed seven times as much as the poorest 20 percent; in 2001, this ratio was eight to one.

| Table 2: Income inequalities: Gini index and average expenditure by quintile | | | | | | |
|---|---------|---------|---------|---------|---------|---------|
| | 1996 | | | 2001 | | |
| | Urban | Rural | Total | Urban | Rural | Total |
| Gini index | 0.449 | 0.345 | 0.406 | 0.406 | 0.369 | 0.408 |
| Average expenditure by quintile (CFA Francs) | | | | | | |
| Poor (bottom 20%) | 77,824 | 80,398 | 79,724 | 94,166 | 83,956 | 85,495 |
| Rich (top 20%) | 66,3805 | 491,856 | 585,168 | 758,960 | 600,618 | 693,882 |
| Total | 322,421 | 200,805 | 243,240 | 408,115 | 233,734 | 294,403 |

Source: ECAM I and II; DSCN

International institutions (notably the World Bank and IMF) renewed their assistance to Cameroon by the earlier 90s. With a deepening poverty and unsustainable debt service burden, Cameroon satisfied a three-year track record of implementations under the supervision of the World Bank and the IMF from 1997 to 2000. Success in this three-year program took Cameroon to the Decision Point meaning qualification as a Heavily Indebted Poor Country (HIPC). Consequently, based on an Interim Poverty Reduction Strategy Paper (I-PRSP) produced during the first half of 2000, Cameroon prepared a full Poverty Reduction Strategy Paper (PRSP) in accordance with a participatory process that gave the poorest inhabitants an opportunity to freely explain their perception of poverty, to list the major determinants of poverty and to recommend measures to alleviate it. The PRSP, finalised in April 2003, was accepted by the World Bank and IMF Board in July of the same year. The document gives important details about Cameroon's policy to tackle poverty. The implementation of this document would certainly have important effect on the country's medium and long-term growth and therefore on poverty.

In this context, the Government of Cameroon, with the support of International donors notably the World Bank, and the UNDP, set up a macro model which main goal is to project the country's main economic aggregates to support the country's PRSP. This macro model or SIPAE, helps the government of Cameroon projects the main variables necessary for future economic policy recommendation in order to meet the millennium

development goals. SIPAE is therefore the central framework used to project macro aggregates in the PRSP. This macro model is being revised as new information and details come up.

The last poverty profiles and poverty assessments in Cameroon were done using the 1996 national household survey (ECAM I) data. Since then, ECAM II (2001) was produced. The final PRSP is officially ready since July 2003. The two documents provide additional important information about Cameroon's poverty level (ECAM II) as well as the country's strategies of alleviating poverty (PRSP). The Government of Cameroon has set up a macro model to project the main economic aggregates of the nation. It seemed very worth to combine these three elements in order to produce a new synthesis of existing information concerning the poor, poverty and inequality on one hand and project poverty over a chosen time period on another hand. Such an activity would lead to more efficiency in poverty reduction policies and policies recommendations. In the context of Cameroon, the present study has an advantage over the previous ones (the World Bank 1995; UNDP 1998; Fambon and Baye 2002 among others) in the sense that, in order to project poverty and inequality indicators, it combines household survey, Government macro model, the country's PRSP and new Government macroeconomic policy orientations in reviewing its PRSP.

The purpose of the study is to use the Poverty Analysis Macroeconomic Simulator (PAMS), a World Bank framework used to analyse poverty, and updates its interface with the Government of Cameroon's macro model (SIPAE) to simulate the distribution and poverty impacts of key macroeconomic policies that are being implemented in the country's Poverty Reduction Strategy Paper framework. For the analysis of income inequality, the Gini coefficient and the Theil index are estimated and projected, whereas for poverty, the national poverty line is estimated and projected. The FGT class of poverty measures is then used to study the incidence, intensity and severity of poverty. All these indicators are computed for urban and rural locations as well as by socio-economic groups. Such estimations would certainly help to know whether Cameroon

would satisfy the poverty millennium development goal with the support of International Community.

2. The Methodology: Linking SIPAE to PAMS

PAMS_SIPAE is a combination of the World Bank framework, Poverty Analysis Macroeconomic Simulator or **PAMS** with the Government of Cameroon's macro model, the SIPAE. PAMS technique consists in extending the relationship between macroeconomic outcomes such as GDP growth, consumer prices, inflation and employment, and the income of various groups in the economy. Income is broken down into various socio-economic groups and economic sectors. The solution that is a distributional dynamic process between several typical socio-economic groups uses the representative household (RH) hypothesis. Each RH being employed in a different economic sector, it is possible to disaggregate the production side of the economy. The labour market reflecting the skill composition of the labour force, the dichotomy between the rural and the urban sectors, the effects of sectoral output growth and real wages on the demand for labour are very important to PAMS. General features of PAMS consist of three recursive layers: a macro model running on top of the SIPAE; a labour market model (a meso layer) and a household survey simulator, a micro layer.

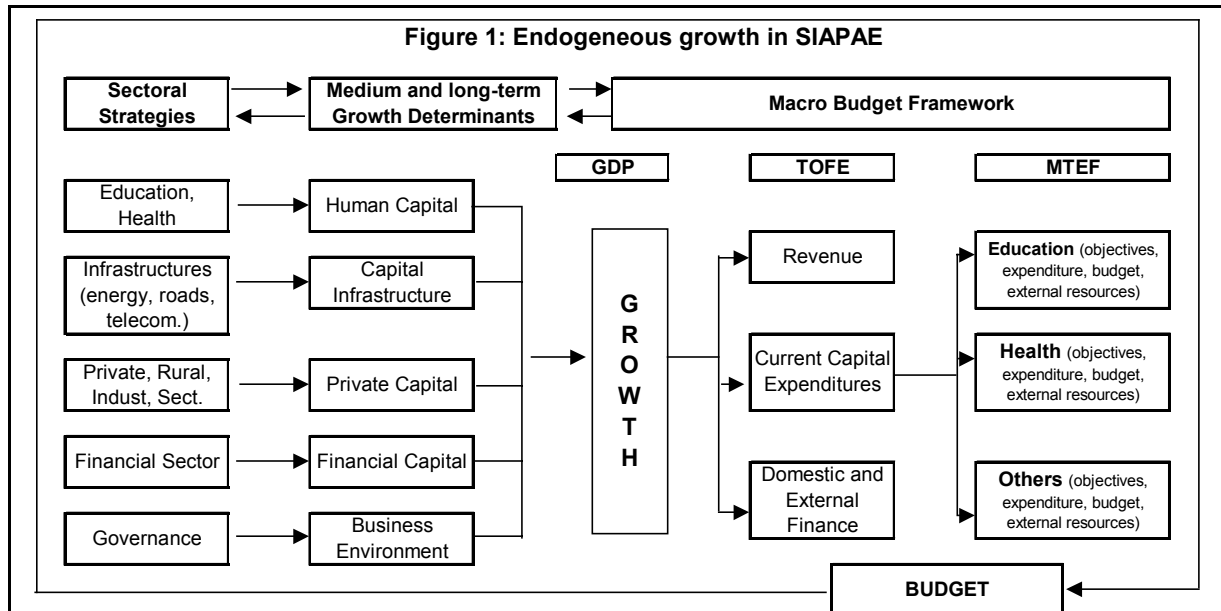
SIPAE provides PAMS_SIPAE macro consistency. The coefficients and relationships of the model are estimated using the country's time series data. SIPAE also gives national account consistency in both real and nominal terms. It ensures that at an aggregate level, the budget constraints of economic agents are respected. SIPAE predicts at an aggregate level changes in macroeconomic variables such as GDP, public expenditure, taxes, private consumption, savings and investment, the balance of payment, and the aggregate price level that is used to project the poverty line.

Production at period t (GDP) in SIPAE, hereafter referred by Y_t is obtained using the following general form equation.

$$Y_t = (\textit{Exogenous}, \textit{Physical Capital}, \textit{Human Capital}, \textit{International Conjuncture}) \quad (1)$$

where $Exogenous = f(Sectoral\ strategies, New\ policies)$

$International\ conjuncture = f(International\ prices, Exchange\ rates, World's\ growth)$



Source: MINFI, Department of Forecast

The **labour market model** simulates the labour market linked to the consistency of the SIPAE. PAMS breaks down the economy into two basic components: the rural and the urban areas. Within each component, the formal and informal sectors are distinguished. Each sector is broken down into two sub-sectors, the production of tradables and the production of non-tradables. This procedure allows linking each sub-sector of the production side to each component of the labour market. Demographic elements, skill categories and exogenous migrations affect labour supply. The demand for labour is broken down into economic sector, skill level and urban/rural location and is a positive function of sectoral output and a negative function of real wages. A feature on taxes, transfers and social expenditures helps making average transfers and taxation of the specific representative household with the objective to estimate the disposable income of each representative household.

Labour demand in each sub-sector can be skilled or unskilled. In this study, the rural sector is supposed to hire only unskilled workers. Contrary to the basic PAMS framework that considers that each sector can hire only one type of labour, the urban formal non-tradable sector hires both skilled and unskilled labour. The urban tradable sector is supposed to hire only skilled workers. Public civil servants are supposed to be skilled. The urban informal sector labour force is supposed to be unskilled. The following equations summarize the labour model.

The sum of the production of all m socio-economic groups is consistent with the total output of SIPAE.

$$Y_t = p_t \sum_k Y_{k,t} \quad (2)$$

where p_t denotes the overall price level at period t

To facilitate calculation of each representative group's disposable income, total government expenditure (taxes) can be expressed as the sum of budgetary transfers for (or taxes paid by) each representative group. These transfers (or taxes) can be disaggregated at per capita level, the basic assumption being that each household pays taxes and receives lump sum budgetary transfers from the government's budget.

$$G_t = \sum G_{k,t} \quad (3)$$

$$G_{k,t} = L_{k,t}^s (G_t / L_t^s) \quad (4)$$

$$T = \sum_k T_{k,t} \quad (5)$$

$$T_{k,t} = L_{k,t}^s (T_t / L_t^s) \quad (6)$$

Disposable income of each group ($DINC_{k,t}$) is decomposed into a wage income ($(p_t w_{k,t}) L_{k,t}^s$), government net transfer ($G_{k,t} - T_{k,t}$) and non-labour income ($\overline{OINC}_{k,t}$).

$$DINC_{k,t} = (p_t w_{k,t}) L_{k,t}^s + (G_{k,t} - T_{k,t}) + \overline{OINC}_{k,t} \quad (7)$$

The sum of disposable income is consistent with the overall GDP less taxes. Renters and capitalists' profits are therefore estimated by the difference between total income and total wage income.

$$\sum DINC_{k,t} = Y_t - T_t \quad (8)$$

Labour demand is a positive function of sectoral output (from m representative groups) and a negative function of real wage.

$$L_{k,t}^d = \kappa_k^d y_{k,t}^\alpha \bar{w}_{k,t}^{-\beta} \quad (9)$$

Labour supply is a fraction of total population and is decomposed into m socioeconomic groups. This fraction represents the participation rate.

$$L_{k,t}^s = \theta_t (POP_t) = \sum_k L_{k,t}^s \quad (10)$$

Population grows at a given natural growth rate plus an exogenous population flow (F_t). The household survey gives the population at $t = 0$.

$$POP_t = (1 + n_t) POP_{t-1} + F_t \quad (11)$$

Real wage of the kth group is a function of initial real wage and the excess of labour supply to labour demand.

$$w_{k,t} = \eta_k w_k^{-\epsilon} \left(\frac{L_{k,t}^d}{L_{k,t}^s} \right)^{-\delta} \quad (12)$$

The labour market that generates income by group is very important for the estimation of poverty at the third layer by the household simulator.

The Household Simulator

The household survey (ECAM II) provides information about initial population, initial levels of expenditure by economic sector of employment, by skill levels, by rural or urban location, and by formal and informal activities. The average wage and non-wage income of workers in each representative household can therefore be calculated. Once the disposable income is generated by the labour market, it is possible to project income of each household or individual in the household by assuming that the income or expenditure of each individual shifts in the same proportion as for the group. Using the

overall price level and household disposable income makes possible to project poverty and inequality indicators. The **Household Survey Simulator**, which is the third layer of PAMS, does this. Poverty headcount $P(0)$ can be calculated at the individual level. Weighted calculations show population at the national level. Unweighted calculations show population at the sample level. Inequality indicator (the Gini in the present) is calculated at the intergroup level.

Poverty Head count index is a function of population, labour demand, disposable income and poverty line.

$$P(0)_t = f(POP_t, L_{k,t}^d, DINC_{k,t}, \bar{z}_t) \quad (13)$$

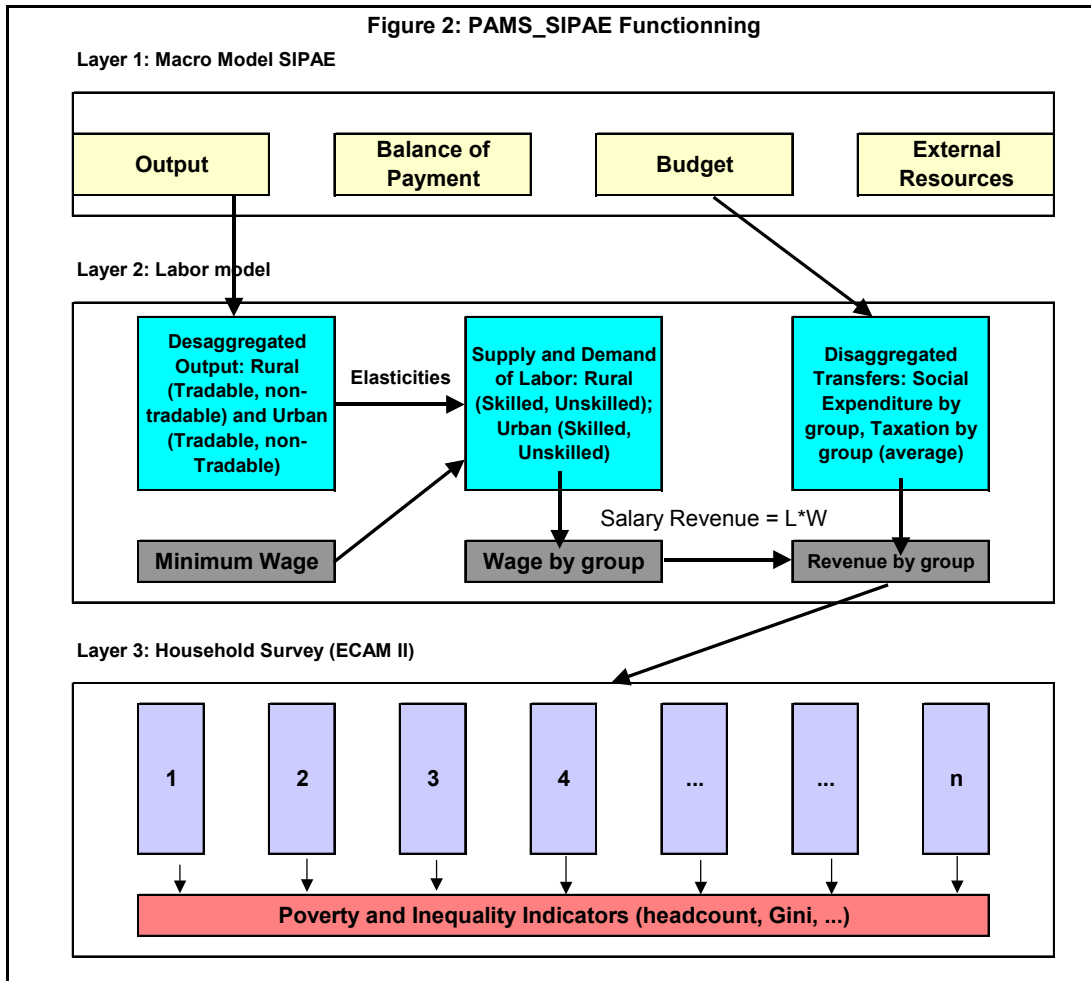
The intergroup Gini depends upon the labour demand and the disposable income.

$$Gini_t = f(L_{k,t}^d, DINC_{k,t}) \quad (14)$$

The poverty line shifts with the overall price level

$$\bar{z}_t = \bar{z}_{t-1}(1 + p_t) \quad (15)$$

In the present case, the breakdown of production (GDP from SIPAE) and labour (employment from labour model) led to the following representative households in PAMS: rural unskilled workers of tradable goods sector, rural unskilled workers in the subsistence sector, rural unskilled self-employed workers, rural unskilled civil servants, urban unskilled workers in the non-tradable formal sector, urban skilled workers in the non-tradable formal sector, urban skilled workers in the tradable sector and urban skilled civil servants. The wages of each representative group is a product of the average wage rate of the group and the average dimension of the group. The number of representative households is completed by considering unemployed people (whose income can be obtained from the household survey) and capitalists and renters whose non-wage income (profits) is obtained by the difference between total income and wage income.



Source: Developed from World Bank 2002

ECAM 2001 II (the 2001 national household survey) provides information about initial levels of income and expenditure by economic sector of employment, by skill levels, by rural or urban location, and by formal and informal activities. The average wage and non-wage income of workers in each RH comes from ECAM 2001. Once the disposable income is known, it is possible to project income of each household or individual in the household by assuming that the income or expenditure of each individual shifts in the same proportion as for the group. Using the overall price level and household disposable income help to project poverty and inequality indicators.

2005 to about 10 per cent in 2015. The growth of the agricultural sector is projected at 3 - 4 per cent on average during this time period.

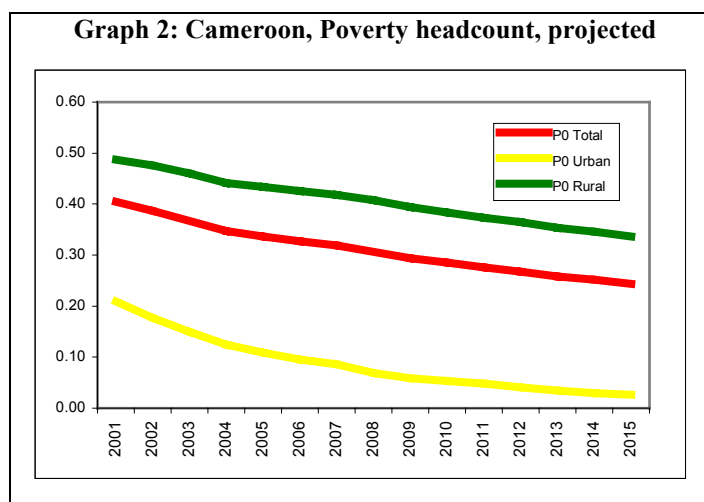
| Table 3: Cameroon, Baseline Scenario for PAMS_SIPAE | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 |
|--|------|------|------|------|------|------|
| Real Sector (%) | | | | | | |
| GDP growth rates | 4,5 | 5,0 | 5,6 | 6,1 | 6,2 | 6,4 |
| Primary sector | 3,4 | 3,5 | 3,6 | 3,8 | 3,9 | 4,0 |
| Secondary sector | 3,7 | 5,3 | 5,0 | 5,7 | 6,5 | 7,5 |
| Tertiary sector | 5,1 | 5,4 | 6,6 | 7,0 | 6,8 | 6,9 |
| GDP deflator | 2,9 | 2,0 | 1,4 | 2,8 | 2,5 | 1,9 |
| Consumption Price Index | 0,7 | 2,0 | 2,0 | 2,0 | 2,0 | 2,0 |
| Terms of Trade | 11,1 | 2,0 | -4,9 | -2,4 | -1,5 | -0,2 |
| Public Finance (% GDP) | | | | | | |
| Revenue net of grants | 16,8 | 16,8 | 17,3 | 17,1 | 17,0 | 16,9 |
| Oil | 3,8 | 2,9 | 2,6 | 2,1 | 1,8 | 1,8 |
| Non-oil | 13,0 | 13,9 | 14,7 | 14,9 | 15,2 | 15,1 |
| Total expenditures | 15,4 | 15,4 | 15,7 | 15,4 | 15,4 | 15,6 |
| Recurrent | 12,9 | 12,3 | 12,4 | 12,2 | 12,0 | 11,9 |
| Capital | 2,4 | 3,1 | 3,2 | 3,2 | 3,4 | 3,7 |

Source: Cameroon's PRSP (updated)

3.2 Empirical Results

3.2.1 Baseline Results

Graph 2 provides projections of poverty indicators at national, urban and rural levels. According to the results, it is very likely that poverty would decline considerably among Cameroon's populations compared to the actual level. This can be



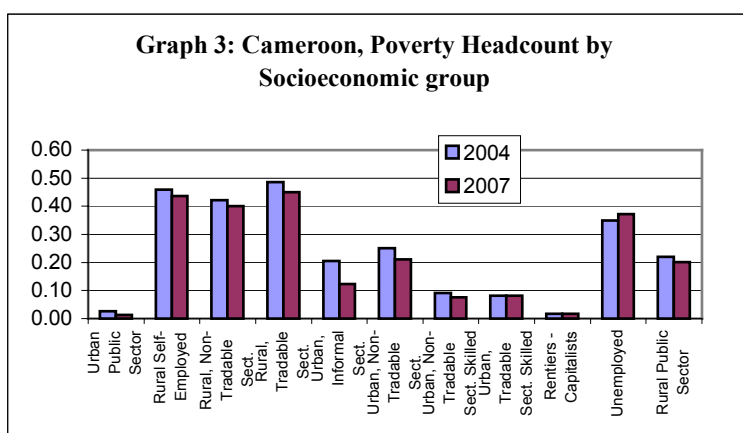
observed by the reduction in the poverty headcount index from 40.2 percent in 2001 to about 29 percent in 2010. Poverty declines more rapidly in the urban sector than in the rural sector. This results from the high projected growth in the industrial and services sectors. The projections indicate that with the above mentioned base line growth over the

period the targeted poverty rate of 20 to 25 percent by 2015 would be achieved as the corresponding projected poverty headcount index is estimated at 24 percent.

| Table 4: Cameroon: Poverty and Inequality Projected, Selected years | | Base Year | | Projected | | | | |
|--|------------|------------|------------|------------|------------|------------|------------|------------|
| | 2000 | 2001 | 2004 | 2005 | 2007 | 2009 | 2011 | 2015 |
| Statistics by Weighted Expenditure | 2000 | 2001 | 2004 | 2005 | 2007 | 2009 | 2011 | 2015 |
| Poverty line (in LCUEq.1-2\$PPP/day) | 641 | 637 | 636 | 646 | 658 | 669 | 679 | 700 |
| Poverty line (in LCU/year) | 234,103 | 232,579 | 232,185 | 235,926 | 240,279 | 244,279 | 248,122 | 255,553 |
| Poverty line (in current USD/year) | 0.91 | 0.87 | 1.02 | 1.04 | 1.06 | 1.08 | 1.10 | 1.14 |
| Mean Income | 358,074 | 356,074 | 411,670 | 423,348 | 462,479 | 506,707 | 556,102 | 666,333 |
| Income Gap | 0.36 | 0.36 | 0.33 | 0.33 | 0.32 | 0.32 | 0.31 | 0.30 |
| Total Population | 15,100,000 | 15,522,800 | 16,863,566 | 17,335,745 | 18,320,138 | 19,360,429 | 20,459,792 | 22,849,340 |
| Sample size (household) | 15,472,557 | 15,472,557 | 15,472,557 | 15,472,557 | 15,472,557 | 15,472,557 | 15,472,557 | 15,472,557 |
| Poor (Headcount in sample) | 6,360,584 | 6,256,150 | 5,369,148 | 5,214,006 | 4,927,453 | 4,547,782 | 4,266,192 | 3,773,433 |
| P0 (Head Count index) | 0.41 | 0.40 | 0.35 | 0.34 | 0.32 | 0.29 | 0.28 | 0.24 |
| P1 (Poverty Gap) | 0.15 | 0.14 | 0.12 | 0.11 | 0.10 | 0.09 | 0.08 | 0.07 |
| P2 | 0.20 | 0.18 | 0.15 | 0.15 | 0.13 | 0.12 | 0.11 | 0.09 |
| Gini | 0.16 | 0.15 | 0.16 | 0.17 | 0.18 | 0.20 | 0.22 | 0.27 |
| Theil | 0.26 | 0.23 | 0.26 | 0.27 | 0.29 | 0.31 | 0.34 | 0.43 |

In 2001, the intergroup Gini is 15% while the Theil indicator represents 23%. These two indicators increase with GDP, reaching up to 27 percent and 43 percent respectively in 2015. So in Cameroon, inequalities would increase with the increase in income. This is because GDP growth does not benefit equally to individuals. Growth that contributes to poverty reduction also contributes to increasing inequalities.

An analysis of poverty by occupational categories reveals the following for 2004. First, poverty is relatively low among skilled workers of urban public and private sectors and capitalists. The rural tradable and non-tradable sectors (for



which nearly 50 per cent of population is poor) are the most hit by poverty. For the rural tradable sector, this can be explained by the fact that workers of this sector face

deteriorating terms of trade due notably to a downward trend in international commodity prices and a relatively high upward trend of prices of manufactured goods and necessities. Poverty head count index in the rural self-employed sector is about 29 percent. In the urban sector, poor unemployed people represent about 35 percent of total unemployed persons.

3.2.2 Some Simulations

Projecting growth of more than 5 per cent over more than 10 years in Cameroon might be very optimistic. This section simulates the distribution and poverty impact of some policies being implemented in Cameroon's PRSP. In fact, some of the important assumptions of Cameroon's future economic growth lays on new investments in electricity sector, on policy shifting towards investment in productive infrastructure and on public service efficiency. The non-observation of these policies would certainly have an impact on poverty and inequality in Cameroon.

□ AES_SONEL Investment

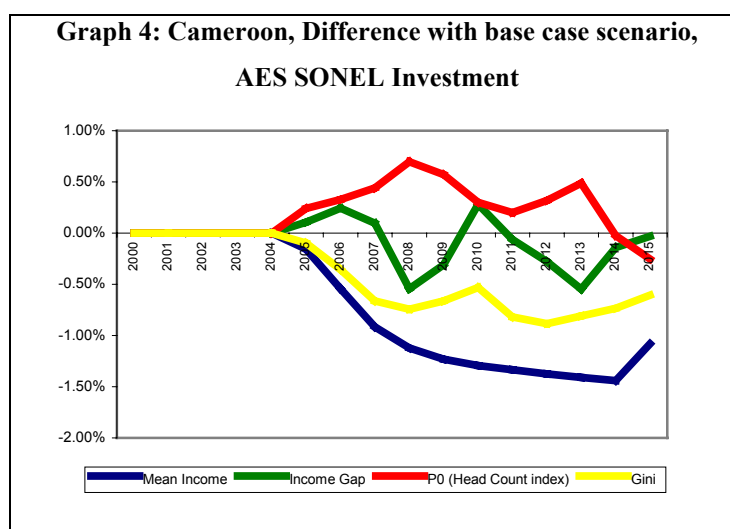
For the last three-four years, Cameroon is facing selective electricity cuts that generally occur during the dry season and at the beginning of the raining season (November – April). This is a direct consequence of the lack of maintenance of the existing investment on one hand and the absence of new investment on another hand. With the combination of deficit water and increasing electricity demand, the monopoly operating in Cameroon (AES_SONEL) is obliged to distribute electricity on the base of a regional and temporal planning. This situation limits efforts to development and can put in danger the main resolution of the PRSP. One of the major points on which the baseline scenario of Cameroon's PRSP lays is the consideration of projected **AES SONEL investments** with the objective of overcoming electricity power deficit. As an example, the projected industrial growth rate of the baseline scenario is largely determined by these investments. In fact, as an example, the new investments to be undertaken at Limbe (85 MW) and Logbaba (13 MW) in 2004-2005 would certainly account for an increase in energy production. In the absence of these investments, energy production would go down and

so limit efforts to growth. The present paragraph is aimed at simulating the impact of the absence of such investments on poverty, compared to the baseline scenario.

| | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 |
|--------------------------------------|------|------|------|------|------|------|
| Baseline Scenario electricity growth | 7.9 | 8.0 | 5.6 | 6.0 | 7.0 | 7.5 |
| Scenario 1: electricity growth | 7.9 | 8 | -6.6 | -3.0 | 7.0 | 7.5 |
| Real sector (%) | | | | | | |
| GDP growth | 4.5 | 5 | 3.9 | 3.8 | 4.6 | 6.0 |
| Primary sector | 3.4 | 3.5 | 3.6 | 3.8 | 3.9 | 4.0 |
| Secondary sector | 3.7 | 5.0 | 0.1 | -0.2 | 3.5 | 6.8 |
| Tertiary sector | 5.1 | 5.4 | 5.2 | 5.2 | 6.1 | 6.5 |
| GDP Deflator | 2.9 | 3.0 | 2.4 | 3.2 | 2.5 | 1.9 |
| Consumer Price Index | 0.7 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Terms of Trade | 11.1 | 2.0 | -4.9 | -2.4 | -1.5 | -0.2 |

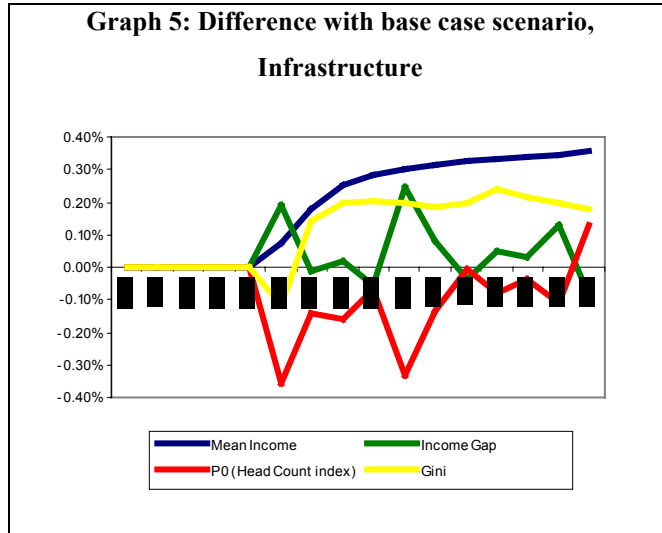
The non-realization of AES SONEL would lead to a decrease in electricity production of about 6.5 percent in 2005. This reduction in energy production would limit GDP growth to 3.9 percent instead of 5 percent as compared with the baseline scenario. The impact of non-respect of AES SONEL investment plan on the real sector of Cameroon’s economy can be observed in table 5.

As a consequence, poverty and inequality indicators would be deteriorated as compared to the baseline scenario. Globally speaking, as a consequence of a decreasing mean income, poverty would increase in the range of 0 to 0.75 percent as compared to the baseline results. Graph 4 shows how poverty and inequality indicators would change in the absence of investment in electricity as announced by ASE SONEL.



□ Financing Productive Infrastructure

Financing Productive Infrastructure is seen in Cameroon's PRSP as one of the major elements capable of boosting poverty reduction. It might also be interesting to simulate an increase in the share of such investment in total government budget. To undertake this simulation, it is supposed that government increases the share of productive infrastructure and



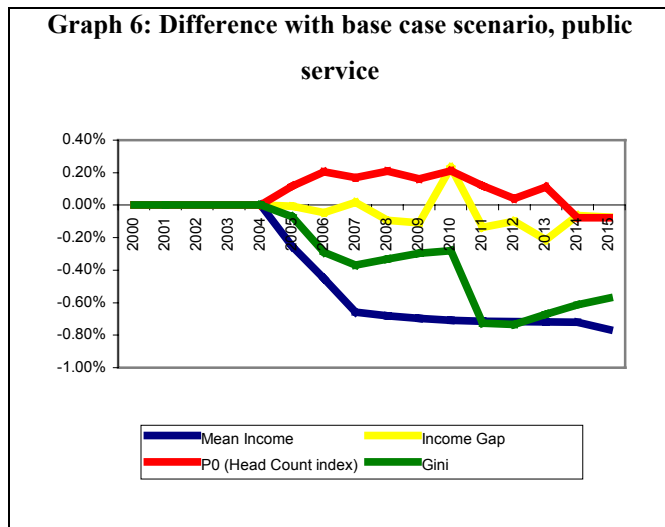
compensates this increase by reducing the share of military and security expenditure in total government budget. A ten percent increase in the share of productive infrastructure expenditure in 2005 would lead to poverty reduction during the same year to about 0.35 percent as compared with the base case scenario. This can be explained by the fact that such investment directly contributes to income distribution in the short run.

□ Improving efficiency of administrative services

Improving efficiency of administrative services and institutional framework is one of the seven strategic areas of the Government of Cameroon in its fight against poverty as stated in the country's PRSP. However, the baseline implicitly supposed a hundred percent efficiency in public services, that might seem less realistic. If we suppose a fifty percent efficiency in public service, that would lead to a decrease in public administration services growth, limiting by this way the nation's GDP. Table below gives a broad view of the consequence of fifty percent efficiency in public services on selected aggregates.

| Table 6: Cameroon, Simulation 50% Public Services Efficiency | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 |
|---|------|------|------|------|------|------|
| Baseline scenario Public Services growth rates | 6.1 | 6.0 | 7.0 | 5.8 | 5.9 | 5.9 |
| Scenario 3: 50% efficiency in public services | 6.1 | 6 | 3.5 | 2.9 | 3.8 | 3.8 |
| Real sector (%) | | | | | | |
| GDP growth | 4.5 | 5 | 5.1 | 5.6 | 5.8 | 6.1 |
| Primary sector | 3.4 | 3.5 | 3.6 | 3.8 | 3.9 | 4.0 |
| Secondary sector | 3.7 | 5.3 | 5.0 | 5.7 | 6.5 | 7.5 |
| Tertiary sector | 5.1 | 5.1 | 5.7 | 6.2 | 6.3 | 6.3 |
| GDP deflator | 2.9 | 2.0 | 1.6 | 3.0 | 2.6 | 2.1 |
| Consumer Price Index | 0.7 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Terms of trade | 11.1 | 2.0 | -4.9 | -2.4 | -1.5 | -0.2 |
| Public finance (% GDP) | | | | | | |
| Revenue excluded grants | 16.8 | 16.8 | 17.3 | 17.1 | 17.0 | 16.9 |
| Total expenditures | 15.4 | 15.4 | 15.7 | 15.4 | 15.4 | 15.7 |

Promoting public service efficiency as part of good governance would successfully contribute to reduce poverty. Figure 7 indicates that in the presence of 50 percent efficiency in public services, poverty estimations obtained by the baseline should be adjusted, as its level would increase. But the percentages of adjustment being lower, results would not be far away from those of the baseline scenario.



To sum up, poverty incidence does not differ enough if we compare the baseline results and different simulations undertaken, meaning that it is very likely that projected poverty and inequality indicators would be observed if the country's economy does not face a severe choc and if the PRSP is well implemented. Table 7 is a summary of the main results of both baseline scenario and different simulations presented.

| Table 7: Cameroon: Poverty Head Count Index, Summarized Results, selected years | 2001 | 2004 | 2005 | 2007 | 2015 |
|--|------|-------|------|------|------|
| • Baseline scenario | 40,2 | 35 | 34 | 32 | 24 |
| • No investment for AES SONEL | 40,2 | 35.2 | 34.3 | 32,2 | 24 |
| • 10 % increase in Productive infrastructure budget | 40,2 | 35 | 33.9 | 32 | 24 |
| • 50% Public Services Efficiency | 40,2 | 35.05 | 34.1 | 32.1 | 24 |

Note that these simulations are limited in the sense that they only consider direct effects. I recognize that indirect effects may be more important than direct effects, leading to different conclusions. However, I could not measure indirect effects because of time constraint as for this purpose I would need to compute an important number of elasticities, not possible immediately.

4. Concluding Remarks

Eradication of extreme poverty in Cameroon constitutes one of the major objectives of the Government. This can be observed in the country's Poverty Reduction Strategy Paper. This poverty reduction strategy document had been designed and prepared using a participatory approach, involving at all stages participants from public administrations, private operators, civil society and development partners. The participatory approach is aimed at tackling poverty from its roots as poor contributed to define poverty among others. Broadly speaking, according to poverty projection using PAMS_SIPAE techniques, results indicate that it is very likely that Cameroon would reduce its poverty indicators by the 2015 horizon with the support of International Community.

Taking into account some simulation about electricity production, public service efficiency and the composition of public spending in favour of productive infrastructures, results still outline that it is very likely that Cameroon would meet this millennium goal by 2015 as its poverty headcount would be around 24 percent. However, inequalities would increase according to the results. To ameliorate income distribution, Cameroon needs to adopt distributive policies that are more in favour of the poor. One way is by

encouraging the participation of the poorest to the nation's effort of construction (new jobs), another way would be by financing their local projects. The best way would be by ameliorating the quality of human capital (education, health) and infrastructure capital in short, medium and long term.

One should however note that the poverty millennium development goal would be achieved if and only if the PRSP is fully implemented. Unfortunately, this seems to be a biggest concern as the country didn't succeed to reach the achievement point meaning that what is stated in the PRSP was not successfully implemented during the first execution year. Consequently, if this trend continues, Cameroon would not achieve this goal not because of the absence of important assets, but because of poor governance.

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