

UNIVERSITY OF OREGON  
ECONOMICS DEPARTMENT  
EUGENE, OREGON

# A Reassessment of The Poverty Level in Burkina Faso

---

Implementation of A Weakly Relative Poverty  
Line

By  
Mahama Abdel Samir Sidbewende Bandaogo  
Spring 2009

Under the Supervision of  
Prof. Peter Lambert

**Abstract:** Based on the concept of a weakly poverty line developed by Ravallion and Chen (2009), I establish a new poverty line for Burkina Faso and undertake a reassessment of the poverty level in the country between 1998 and 2003.

## **Table of Contents**

<b>Introduction .....</b>	<b>3</b>
<b>Data .....</b>	<b>6</b>
<b>Past Poverty Assessment .....</b>	<b>8</b>
The Poverty Index: The Foster J., J. Greer and E. Thorbecke (FGT) Family of Poverty Indices.....	8
Past Assessments of the Poverty Level: By the INSD.....	9
Revised Assessment of the Poverty Level: By Michael Grimm and Isabel Günther.....	12
<b>Reassessment Using Weakly Relative Poverty Line.....</b>	<b>15</b>
Weakly Relative Poverty Line.....	15
Reassessment of the Poverty Level.....	16
<b>Conclusion.....</b>	<b>18</b>
<b>Appendix.....</b>	<b>21</b>
<b>References.....</b>	<b>23</b>

## **Introduction:**

Burkina Faso, formerly known as Upper Volta, is a land locked country in Sub-Saharan Africa with a current population of 14 017 262<sup>1</sup> people, about three million of whom live outside the country. A former French colony that obtained independence in August 1960, Burkina Faso is one the poorest countries in the world according to the World Bank's assessment. This situation is mainly due to the low level of education of its population and the fact that its economy is very dependent on agriculture, which is not very productive because of the dry tropical climate that prevails in the country. According to the "Institut National de la statistique et de la Demographie" (INSD), more than 75% of the population engages in subsistence farming, from which they derive their main income. This figure has remained steady over the years. The country's real GDP has seen steady growth since 1994 (after the devaluation of the F CFA<sup>2</sup>) and the growth has sometimes been over 5% in the past decade. The steady growth in real GDP was partly due to the increase in exports, which was made possible because of the increase in the production of export products like cotton. The INSD states that the production of cotton has doubled since 1994. Furthermore the structural reforms implemented by the government also had a positive impact on the growth of real GDP. Despite this steady growth of the economy, poverty assessments done by various institutes such as the INSD and the World Bank have concluded that the level of poverty, specifically the head count,

---

<sup>1</sup> According to the INSD

<sup>2</sup> Currency shared by old former French colonies in West and Central Africa

in Burkina Faso has actually increased between 1994 and 2003, establishing the so called "Burkinabe paradox."

The situation, the increase in poverty despite the positive growth in real GDP, then raises many questions. Did poverty really increase during these years? If yes, what explains the increase in poverty? First of all, all the studies (there were three studies) conducted concluded unanimously that poverty did indeed increase between 1994 and 1998, but the Grimm and Günther concluded that it decreased between 1998 and 2003, while the INSD concluded that it increased between 1998 and 2003. Since it is unanimous that poverty did increase between 1994 and 1998, what explains that? The first answer could be that inequality has increased while the economy was experiencing a steady growth. In "Household Welfare and Poverty Dynamic in Burkina Faso", Celestin Monga and others supported the claim of an increase in inequality between 1994 and 1998. The claim was also supported by Michael Grimm and Isabel Günther. Since inequality has indeed increased, that then could explain why poverty has increased while real GDP has grown between 1994 and 1998.

Between 1998 and 2003, the INSD reported an increase in the poverty level. Is this increase in poverty explained by any phenomenon? Or, did previous poverty assessments of the country make some methodological mistakes during the assessment of the poverty level in Burkina Faso as suggested by Michael Grimm and Isabel Günther in their paper titled "Growth and Poverty in Burkina Faso. A Reassessment of the Paradox?" In the paper, they argued that poverty has actually decreased between 1998 and 2003, contrary to what has been concluded by previous assessments, and that the previous conclusions of an increase in poverty (between

1998 and 2003) were due to some methodological mistakes. These mistakes, they pointed out, were mainly due to the over indexation of the poverty line to account for inflation, which led to very high poverty lines in both 1998 and 2003. The poverty lines were inflated because the price level of consumption products went up, but the price level of products consumed by the population in poverty, the products that make up most of the poverty line, did not increase as much to justify the previous percentage of inflations of the poverty line (as it was done by the previous studies). Grimm and Günther then revised the poverty line by calculating a new percentage of inflation and concluded that poverty actually did decrease.

Are there aspects of the income distribution that might explain the increase in poverty despite the growth in real GDP? Or could we implement a new type of poverty measurement to assess the poverty level? Past poverty measures have all used the absolute poverty line, which is a poverty line that is constant over time and across space, and is only adjusted to account for inflation and/or regional price differences. Under the use of such a poverty line, once someone is classified as in poverty, one is in poverty regardless of time and space. There have been many arguments against such a poverty line and in their recent paper "Weakly Relative Poverty", Martin Ravallion and Shaohua Chen came up with the idea of a weakly relative poverty line. A relative poverty line is one that, contrary to the absolute poverty line, changes over time and across space. A weakly relative poverty line will have both characteristics of being absolute and relative, but weakly relative. This notion of a weakly relative poverty line incorporates both a level physical survival, which encompasses the basic needs (food and non-food consumption such as hospital visits etc) and a social inclusion aspect, which does address the need to fulfill

some societal requirements in order to belong. That is because people in a society need to survive by eating right, having access to the necessary social services, but also they need to have a sense of belonging to the society they live in; one needs to be able to respect traditional celebrations by cooking for instance or other rituals specific to the society. This latter aspect introduces the need of a poverty line that is to some extent relative and would vary from society to society and from time to time. Burkina Faso, of course, is not an exception. Therefore, I will convert the absolute poverty line used in past studies to a weakly relative poverty line.

The paper will be organized as follows. The first part of this paper will examine the data and discuss any adjustment made to the raw data. Then I will do a survey of past assessments of the poverty level in Burkina Faso, namely for the years 1994, 1998, 2003. The third part of the paper will expand on the idea of weakly relative poverty line. Then I will measure the poverty level using poverty lines that are weakly relative.

### **Data:**

The data sets used for this study are three household surveys conducted by the INSD in 1998, 2003 and 2005. Each data set contains a survey on about 8500 households both in rural and urban areas (In 1998, 8478 households were surveyed and in 2003, 8500 households were surveyed). A two stage random sampling method was used to select the households

participating in the surveys. The country was divided into 10 economic regions in 1994 and 1998, but was divided into 13 regions thereafter. Within each economic region enumeration areas were sampled and within each enumeration area, households were then sampled. In the first stage of the selection, enumeration areas were sampled in every economic region with probabilities proportional to the size (in terms of population) of each enumeration area. Then in the second stage, with fixed probability, households were sampled in each enumeration area.

The questionnaires used in the surveys were based on the standard survey model developed by Marchant et al in 1987, and were very similar with minor changes from year to year. This similarity across survey questions allows for dominance comparison between the distributions.

The data contain expenditures and income level, but the measures in the study use expenditures of the households surveyed. The use of expenditures is justified by the fact that they are a better indicator of the true income level, when a precise estimate of the income level cannot be determined. Ravallion and Chen (1997) stated that "In developing countries particularly, measurement errors are thought to be greater for income." In Burkina Faso, as mentioned early, the majority of the population derives their main income from agriculture and do not have clearly determined source of income, like salary, that can be used to assess the poverty level.

## Past Assessments of the poverty level in Burkina Faso

### The Poverty Index: The Foster J., J. Greer and E. Thorbecke (FGT) Family of Poverty Indices

As mentioned earlier, past poverty assessments of Burkina Faso have used an absolute poverty line and the head count ratio as a poverty index. These poverty assessments particularly used the FGT family of poverty indices, but set  $\alpha=0$ , which results in the head count ratio.

The FGT family of poverty indices (P) is a poverty measurement that is decomposable and additive in terms of subgroups so that a change in the poverty level of a subgroup would have an impact on the overall poverty measurement. In other words, if a population is divided into different groups (racially, for example), and if the poverty level of one of the groups increases then, all else fixed, the total poverty among the population also increases. Similarly, if the poverty level of one of the groups decreases then, ceteris paribus, the total poverty among the population decreases as well. Overall, this measurement examines poverty as weighted by the population shares of the different subgroups that make up the population being analyzed.

The FGT family of poverty measurement satisfies both the *monotonicity* and the *transfer axiom*. The monotonicity axiom says this: "given other things, a reduction in the income of a poor household, must increase the poverty measure." It is now clear that if the income of a poor household,  $y_i$ , were to decrease then its poverty gap ( $g_i$ )<sup>3</sup> would increase; this change

---

<sup>3</sup> defined as  $g_i = z - y_i$  where  $z$  is the poverty line and  $y_i < z$



would automatically increase the poverty measure proposed by FGT.  $P$ , as described by the formula below, satisfies the transfer axiom, which states: "Given other things, a pure transfer of income from a poor household to any other household that is richer must increase the poverty measure." This can be seen by the fact that the poverty gap will increase if such a transfer were to take place; following this increase, the poverty gap of the recipient would decrease (or remain at zero) causing  $P$  to increase. Furthermore, the poverty measure  $P$  partially satisfies the transfer sensibility axiom, which states that: "If a transfer  $t > 0$  of income takes place from a poor household with income  $y_i$  to a poorer household with income  $y_i + d$  ( $d > 0$ ), then the magnitude of the increase in poverty must be smaller for larger  $y_i$ ." The poverty measure is as follows:<sup>4</sup>

$$P_{\alpha}(y; z) = (1/n) \sum_{i=0}^q (g_i/z)^{\alpha}$$

$\alpha$  is the parameter of poverty aversion. So the higher  $\alpha$  is, the more weight is put on the poorest people. Then it is true that  $P$  satisfies the transfer sensibility when  $\alpha > 2$ . More precisely, it satisfies the monotonicity axiom when  $\alpha > 0$  and the transfer axiom when  $\alpha > 1$ . And when  $\alpha = 0$ ,  $P$  is the head count ratio.

#### Past Assessments of Poverty: By the INSD

---

<sup>4</sup> The family of poverty indices as established by FGT

During the first priority study ("Etude Prioritaire I") in 1994, the poverty line was estimated at 41,099 FCFA and reflected the minimum level of food consumption and non food consumption necessary to fulfill household's basic needs evaluated at the market price. This threshold was based on a daily calorie intake of 2,283 per adult consumption. The calorie level and a non food consumption level were both estimated at the market price and added together to yield the poverty line of 41,099FCFA. Furthermore, this poverty line represents about ¼ of the SMIG<sup>5</sup> and 2/5 of the international standard of \$1 per day established by Ravallion of the World Bank. The calorie consumption was based on adult consumption and a scale was established to correct for children's consumption level. A child's consumption level was scaled up by 0.7 to convert it into an adult's consumption level<sup>6</sup>.

In 1994, based on this poverty line, 44.5% of the population lived in poverty. The majority of the population in poverty lived in rural areas; the poverty level was at 10.37% in urban areas compared to 51.05% in rural areas. Thus, rural areas contributed to the national poverty level at a rate of more than 90%.<sup>7</sup>

Then in 1998, the poverty line of 41,099 FCFA (at 1994 market price) was adjusted for inflation and estimated at 72,609 FCFA. It was then concluded that 45.27% of the population lived in poverty. These measures are different across rural and urban areas, and rural areas still counted more population in poverty than urban areas did; 15.87% of the population in urban areas was in poverty compared to 50.66% of the population in rural areas. Overall, there was a

---

<sup>5</sup> "Salaire Minimum Interprofessionnel Garanti" which is the minimum salary (wage)

<sup>6</sup> From the INSD

<sup>7</sup> From "Etude Prioritaire I" by the INSD

Mahama Bandaogo  
A Reassessment of The Poverty Level in Burkina Faso

slight increase in poverty level by 0.77 percentage point. Furthermore, while there was a decrease of 0.39 percentage points in the poverty level in rural areas, it still remained at a record high and still contributed more than 90% to the national poverty level. We should note that the statistical significance of these changes in poverty level was not explored.

In 2003, the poverty line was estimated at 82672 FCFA and 46.4% of the population lived in poverty. Again, there was an increase in the poverty level from 1998. The poverty level in rural areas increased between 1998 and 2003 and was estimated at 52.3%, which exceeded its 1994 level of 51.05%. On the other hand, in urban areas the poverty increased for the second consecutive time and was estimated at 19.9% in 2003.

**Table 1: Poverty and Inequality trend- Official estimates (2003)**

	1994			1998			2003		
NPL (F CFA)	41, 099			72,690			82,672		
(1994=100)	(100)			(176.9)			(201.2)		
	Urban			Rural			National		
	1994	1998	2003	1994	1998	2003	1994	1998	2003
P0	10.4	16.5	19.9	51.0	51.0	52.3	44.5	45.3	46.4
Gini-index	0.45	0.51	0.49	0.38	0.37	0.39	0.46	0.46	0.46

Mahama Bandaogo  
A Reassessment of The Poverty Level in Burkina Faso

*Source:* INSD

Notes: The NPL is yearly per capita and the Gini-index is population weighted.

Poverty has increased from 1994 to 2003 according to these figures, and as mentioned earlier, there are different opinions about the reasons explaining such an increase in poverty during that prosperous time in Burkina Faso. Some have argued that the increase in the inequality level among the population explains the increase between 1994 and 1998. In their paper titled "Poverty Dynamics in Burkina Faso", Celestin Monga, Hippolyte Fofack and Hasan Tuluy (2001) argued that income disparities across socioeconomic groups and geographical regions were significant and rose between 1994 and 1998, thus undermining the growth registered in the average income level. Urban areas, where poverty increased the most, also registered the most increase in income inequality, which was already at a very high level. The same reasoning would also explain the increase in poverty between 1998 and 2003, but it turned out, as indicated by the gini coefficients, that the inequality level remained approximately constant between 1998 and 2003. The question then becomes, what explains the increase in poverty?

**Revised Assessment of the Poverty Level: By Michael Grimm and Isabel Günther**

It was argued by Grimm and Günther (2005) that poverty did increase between 1994 and 1998, but decreased after that, between 1998 and 2003. They also supported the claim that the increased inequality between 1994 and 1998 fully explains the increase in poverty

during that period. The authors further argued that the reason for the previous conclusion of an increase in poverty between 1998 and 2003 was due to an over inflation of the poverty line as mentioned earlier. The authors then proposed a set of new poverty lines for 1994, 1998, and 2003.

In 1998, the poverty line estimated in 1994 was inflated to reflect the increase in the price level in the country. While the CPI increased by 22.7%, the poverty line was increased by 76.9% (between 1994 and 1998). And between 1998 and 2003, while the poverty level increased by 13.7%, the CPI had increased by 7.1%; but are these rates of inflation of the poverty line justified?

The basic food consumption level accounts for more than 50% of the poverty line, while it accounts for only 10% of the CPI. In his way, it would not be correct to adjust the poverty line based solely on the CPI. (See Appendix for graph) While the CPI increased by 22.7% between 1994 and 2003, the price level of basic food more than doubled, which fully justifies the huge inflation of the poverty line. But the graph shows that between 1998 and 2003, the price of cereals did increase, but then decreased and went below the price level of 1998, which does not justify the percentage of inflation between these two years.

The authors also noted that the non-food component of the poverty line was not inflated properly during these periods and its proportion was even changed, and so it needed some adjustments.

A correction to the inflation of the poverty line should then be made to justify every percent increase in the poverty line. To correct for these misspecifications, the author proposed calculating new poverty lines for the three years. To do so, they used the nominal value of the poverty line in 2003 and the shares of cereal-food, other food and non-food as observed in the households survey in 2003. From there, the cereal food (37% of the poverty line) was deflated to 1998 and 1994 using the observed price changes over the years (See appendix for the graph of the change in the price of cereal food). Furthermore, the other food component and the non-food component of the poverty line were appropriately deflated to 1994 and 1998 using the exact corresponding changes as indicated by the changes in the CPI. After these adjustments were made new poverty levels were then measured.

**Table 2: Poverty and Inequality trend- (With Revised Poverty Line)**

	1994			1998			2003		
Revised NPL (F CFA)	53,219			82,885			82,672		
(1994=100)	(100)			(155.7)			(155.3)		
	Urban			Rural			National		
	1994	1998	2003	1994	1998	2003	1994	1998	2003

Mahama Bandaogo  
A Reassessment of The Poverty Level in Burkina Faso

P0	14.7	27.3	20.3	63.4	68.7	53.3	55.5	61.8	47.2
Gini-index	0.45	0.50	0.48	0.39	0.35	0.39	0.47	0.45	0.45

Source: "Growth and Poverty in Burkina Faso. A Reassessment of the paradox." By Michael Grimm and Isabel Günther

Notes: the NPL is yearly per capita

The poverty level did increase significantly between 1994 and 1998, jumping from 55.5% to 61.8%. Then, as supported by the authors, poverty indeed decreased between 1998 and 2003, from 61.8% to 47.2%, which is a huge decrease in poverty. One can also note the contrast between urban and rural areas in terms of poverty levels. Rural areas remain the most touched by poverty and still contribute more than 90% to the national poverty level<sup>8</sup>. Just like the national level of poverty, poverty increased in rural areas between 1994 and 1998 and then decreased between 1998 and 2003 to a level lower than the level of 1998 (the trend was: 63.4%, 68.7%, and 53.3%). On the other hand, poverty in urban areas increased between 1994 and 2003 then decreased between 1998 and 2003, but to a level higher than the level of 1994 (14.7%, 27.3%, and 20.3%).

Both studies used an absolute poverty line to assess the poverty level in Burkina Faso and came to the same conclusion that poverty increase between 1994 and 1998. Their conclusions differ in whether or not poverty increased between 1998 and 2003. Now, in the

<sup>8</sup> From "Etude Prioritaire I, II, III" by the INSD

next part of this paper, I will explore the idea of weakly relative poverty line. Furthermore, I will implement this idea to calculate new poverty lines.

## **New Poverty Assessment**

### **Weakly Relative Poverty Line**

Ravallion and Chen (2009) proposed a global poverty line that is weakly relative similar to the global absolute poverty line of \$1 per day. [In their paper, then argue against a strongly relative poverty line.] Then propose that poverty measures satisfy the weak relativity axiom: *“If all incomes increase (decrease) by the same proportion then an aggregate poverty measure must fall (rise).”*

As discussed earlier, people not only do search to physically survive by having the basic food and non-food consumption, but also they seek to satisfy certain social needs. For the purpose of measuring a global relative poverty line, Atkinson and Bourguignon (AB) proposed the idea of combining this idea of physical survival and social inclusion. They proposed that a person is in poverty if he/she does not meet the minimum basic needs to survive, or does not meet the minimum needs for social inclusion. Then if  $Z^*$  is the minimum income (or expenditures) necessary to fulfill basic consumption needs, AB proposed a new poverty line as follows:

$$Z_i = \max(Z^*, kM_i) \quad 0 < k < 1 \quad \text{where } M_i \text{ is the average income level.}$$



This specification fails to satisfy the weak relativity axiom, so the generalized AB poverty lines were introduced by Ravallion and Chen (2009):

$$Z = \max(Z^*, \beta + kM_i)$$

Where  $\beta$  stands for the lower bound of the social inclusion needs.

Thus these generalized poverty lines satisfy the “weak relativity axiom if the poorest people have non-negligible social inclusions needs.”<sup>9</sup>

Furthermore, AB’s specification of a relative poverty was transformed by Ravallion and Chen to yield an additive poverty line that reconciles both the capability of physical survival and social inclusion. In that way, the weakly relative poverty line, as established by Ravallion and Chen (2009) is:

$$Z = Z^* + kM_i$$

Where  $k$  is the elasticity of the poverty line to the mean income in the country.

### **Reassessment of The Poverty Level**

In our implementation of the weakly relative poverty line, we chose to use the national absolute poverty line, instead of the global absolute poverty line of \$1 per day proposed by Ravallion. This will allow us to make a robust dominance comparison with past poverty

---

<sup>9</sup> Proposition 2, Ravallion and Chen (2009) Weakly Relative Poverty. pp 8.

measures. Furthermore, I will use the national poverty line provided by the INSD to establish a weakly relative poverty line, and then I will use the revised national poverty line to establish another weakly relative poverty line. Thereafter, I will assess the poverty level under these two sets of weakly relative poverty lines. Also, we chose to use  $k = 1/3$  as proposed by Ravallion and Chen (2009). In this way, the poverty lines contained in Table 3 were obtained:

**Table 3: Poverty- Reassessment with WR Poverty Lines**

	1998	2003
<i>Weakly Relative NPL (F CFA)</i>	105,750.7	124,307.8
<i>PO</i>	66.7%	66.1%
<i>Weakly Relative NPL (FCFA)</i>	115,945.8	124,307.8
<i>PO</i>	67.3%	66.1%

Source: Data from INSD (EPI, EPII, EPIII)

The poverty lines were calculated by the author (yearly per capita)

Under both poverty lines, the poverty line used by INSD and the one revised by Grimm and Günther, each modified to become weakly relative, poverty has indeed decreased between 1998 and 2003. It decreases by less than a percentage point (0.6%) under the INSD's poverty line and by 1.2% under the revised poverty line. Under these circumstances, we can conclude

with a high level of probability that poverty decreased between 1998 and 2003. This is consistent with the economic theory that, *ceteris paribus*, a positive economic growth translates to a decrease in poverty.

### **Conclusion**

Unanimously, past poverty assessments of Burkina Faso concluded that poverty increased between 1994 and 1998. The situation was puzzling because during the same period of time, the country was experiencing a positive real GDP growth. Further investigations by various studies revealed that inequality among the population increased from 0.45 to about 0.50, thus explaining the increase in poverty. In other words, the effects of the positive growth of the GDP on the poverty level were undermined by the increase in inequality. Urban areas saw the most increase in inequality, which was already at a high level, thus registering a higher increase in poverty. Though in rural areas poverty decreased between 1994 and 1998, they still contributed at a stagnant rate of more than 90% to the national poverty level. The disagreement surrounded the behavior of the poverty level between 1998 and 2003, which was said to have increase by the INSD and was later said to have decreased by Grimm and Günther.

After establishing that the poverty line was wrongly inflated by the INSD, Grimm and Günther corrected the inflation rate of the poverty line both between 1994 and 1998, and 1998 and 2003. As mentioned earlier, they came to the same conclusion that poverty increased

between 1994 and 1998 due to the increase in inequality. Contrary to the INSD, they concluded that poverty did instead decrease between 1998 and 2003. They argued that the poverty line should not been inflated as much as it was by the INSD. The price level of the consumption goods (food particularly) that make up the poverty line did not increase as much to justify the inflation rate of the poverty line as it was done. Correction for these methodological mistakes revealed a decrease in the poverty level between 1998 and 2003.

All the assessments of the poverty level in Burkina Faso used an absolute poverty line and came to different conclusions about the behavior of the poverty level between 1998 and 2003. Based on Ravallion and Chen's paper, it would be appropriate to use a weakly relative poverty line that takes into account not only the basic needs for physical survival, but also the needs for belonging in a particular society; for instance celebrating special occasions specific to that society. Just like Ravallion and Chen pointed out in their paper, even poor people in Yemen need to bring quat leaves to a "quat session", which constitute a very important aspect of every Yemenis social life<sup>10</sup>. From all these observations, the authors establish the concept of a weakly relative poverty line that encompasses all of the above characteristics. Thus, using this idea of a weakly relative poverty line, I reassessed the poverty level in Burkina Faso between 1998 and 2003. I did so by using both the absolute poverty lines established by the INSD and Grimm and Günther and I transformed them to be weakly relative following the formula established by Ravallion and Chen. Then under both poverty lines, I concluded that poverty did indeed decrease between 1998 and 2003, which is

---

<sup>10</sup> From "Weakly Relative Poverty" by Ravallion and Chen

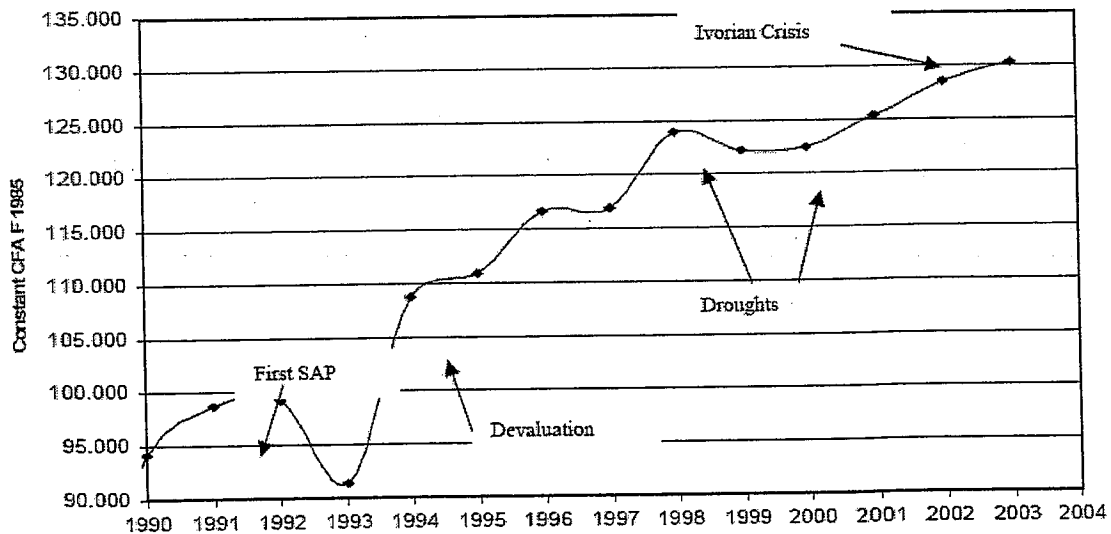
Mahama Bandaogo  
A Reassessment of The Poverty Level in Burkina Faso

consistent with the theory that, *ceteris paribus*, a positive growth in real GDP should cause a decrease in the poverty level. Also, since inequality remained constant during that same period of time, nothing can explain why poverty would increase despite the positive growth in real GDP.

**Appendix**

I- Burkina Faso registered positive real GDP growth since 1994 as shown in the graph below.

**Graph 1- Real GDP growth in Burkina Faso**

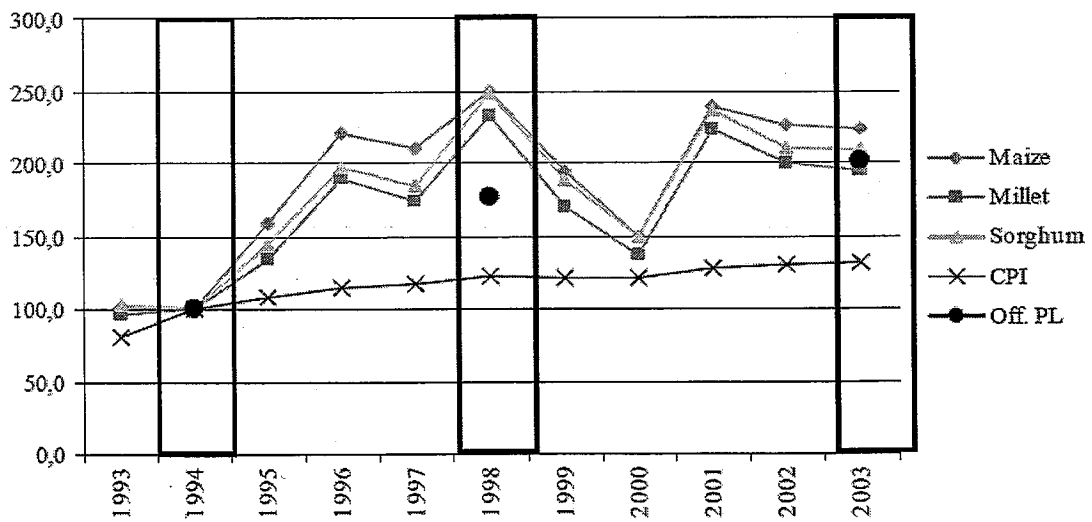


Source: "Growth and Poverty in Burkina Faso. A Reassessment of the paradox." By Michael Grimm and Isabel Günther

Mahama Bandaogo  
 A Reassessment of The Poverty Level in Burkina Faso

II- Cereals such as corn, millet constitute the majority of food consumption of people in poverty in Burkina Faso. Due to the inconsistency of the rainy season from year to year, the price of cereals fluctuates frequently.

Graph 2- The changes in the price level of cereal food.



Source: "Growth and Poverty in Burkina Faso. A Reassessment of the paradox." By Michael Grimm and Isabel Günther

**References:**

INSD, 1994, Etude Prioritaire I

INSD, 1998, Etude Prioritaire II

INSD, 2003, Etude Prioritaire III

Michael Grimm and Isabel Günther, 2005, "Growth and Poverty in Burkina Faso. A Reassessment of the Paradox"

Foster J., J. Greer, E. Thorbecke, (1984), "A Class of Decomposable Poverty Measures" *Econometrica*, vol. 52. pp 761-766

C. Monga, H. Fofack, H. Tuluy, 2001, "Household Welfare and Poverty Dynamics in Burkina Faso." *Policy Research Working Paper 2590*, World Bank.

M. Ravallion, S. Chen, 2008, "Weakly Relative Poverty." *Development Research Group*, World Bank.

Ravallion, Martin, Gaurav Datt and Dominique van de Walle, 1991, "Quantifying Absolute Poverty in the Developing World", *Review of Income and Wealth* 37: 345-361.

Mahama Bandaogo  
A Reassessment of The Poverty Level in Burkina Faso

Atkinson, Anthony B., and Francois Bourguignon, 2001, "Poverty and Inclusion from a World Perspective." In Joseph Stiglitz and Pierre-Alain Muet (eds) *Governance, Equity and Global Markets*, Oxford: Oxford University Press.