Turning Devaluation into Pro-Poor Growth: Senegal (1994-2002)

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Abstract: This chapter describes the sustained growth episode that followed the 1994 devaluation of the CFA Franc in Senegal and resulted in a significant reduction in poverty. It traces its causes to the cut in real wages in the public sector and in the formal sector. The latter freed some fiscal resources that the government used for boosting public investment. It also entailed an increase in profits that boosted investment in the private sector. These two effects combined to boost growth for more than a decade, which witnessed a significant fall in the share of agriculture in GDP. Hence, poverty was reduced not by redistribution from the rich to the poor, but from wages to profits, which boosted growth. However, the government was not rewarded for the fall in poverty induced by its investment policy, and it was democratically ousted in 2000. This suggests that pro-poor growth may not pay, from a political point of view. This might discourage governments from aiming at this type of outcome, in democratic societies.

1. Introduction

Senegal is a typical example of a slow-growth/high stability economy, like many others in the CFA Zone. This economy shares some of the features of the Sahelian countries, like its agriculture dominated by groundnut exports, and frequent droughts. Nevertheless, its coastal position gives it a definite advantage for industrial development. It is the closest Sub-Saharan African economy to the main European markets by sea. This has also given rise to a long tradition of out-migration, with a resulting large inflow of remittances (Manchuelle, 1997). Hence, many non agricultural sources of income have allowed this country to be one of the most urbanized one in Africa, with almost 50 % of its population living in the urban sector. Its capital city, Dakar, was the capital city of the French AOF (Afrique Occidentale Française) in the colonial days, and still plays a prominent role in the UEMOA (West African Economic and Monetary Union). It hosts in particular the headquarters of the BCEAO (Central Bank of West African States). Being a medium-sized country, by the standards of West Africa, Senegal reflects quite accurately the evolutions of the UEMOA economies, as far as its macroeconomic experience is concerned, without affecting them much in return. Nevertheless, its relatively high level of industrial development and of urbanization give this country some relevant idiosyncratic features. In particular, in contrast to many neighboring countries, agriculture plays here a secondary role in determining growth, while manufacturing and services are playing a central part.

Moreover, it is by far the most democratic country of the region, with competitive elections taking place on schedule with very limited violence (Ka and Van de Walle, 1994, Azam, Dia and N'Guessan, 2002). The first two presidents after independence, Leopold Senghor and Abdou Diouf were members of the socialist party. However, the latter was a more technocratic "modernizer" than the poet-president Senghor, whose development strategy was more focused on cementing national unity through a clientelist regime than on the development of an efficient economy. Until 1993, the ballot was not really secret and a lot of social pressure was exerted on the voters, especially in the groundnut basin (Schaffer, 1998). There, the Mouride brotherhood was controlling the votes, and benefited from a long-

lasting clientelistic relationship with the government (Boone, 2003). The re-introduction of the secret ballot in 1993 improved the working of the democratic institutions. The last presidential elections saw the replacement of the socialist Abdou Diouf by the liberal Abdoulaye Wade, who took over in April 2000.

The only serious stain on the democratic reputation of the Senegalese government since independence has been the problem of lower Casamance (Boone, 2003). This region is predominantly peopled by an ethnic minority, the Diola, whose social system is very different from the hierarchical Sahelian social organization characteristic of the other ethnic groups. The latter is based on a typical caste system with a well-defined ruling elite. The numerically dominant Wolof group is already marginally different from the typical Sahelian type. Their religious leaders have overthrown the traditional aristocracy in the course of the 18th century, giving rise to the current domination by the Sufi brotherhoods. But the Diola, like the smaller groups also present in the area, are radically different. They have no traditional hierarchy, and are resisting any type of authority. The Muslim brotherhoods, which play a crucial role in the political control of the rest of the country, are powerless in this region. There is thus no basis on which the typical African system of political management, relying on the co-optation of the traditional elite into the government-sponsored clientelistic system, can be grafted onto such an ethnic group (Boone, 2003). The attempts made by the different governments in Dakar to control administratively this area, with an increasing military presence, ended up in a low-intensity civil war. Many civilians were killed by both sides in the 1980s and 1990s. Hence, this potentially rich region, fit for export agriculture as well as for tourism and fishery, has remained relatively under-developed. A peace agreement has been signed in March 2001 but lower Casamance is the region of Senegal with the highest incidence of poverty (République du Sénégal, 2004).

The present paper aims at analyzing Senegal's medium-run growth experience over the last decade of the 20th century, with a focus on its impact on the poor. This experience reflects very largely that of the UEMOA, beside some idiosyncrasy mentioned above. Therefore, the major macroeconomic event that took place over this period is the 1994 devaluation of the CFA franc. In many respects, this draws a clear dividing line between a

"before" and an "after", i.e. two periods characterized by a very different macroeconomic adjustment strategy.
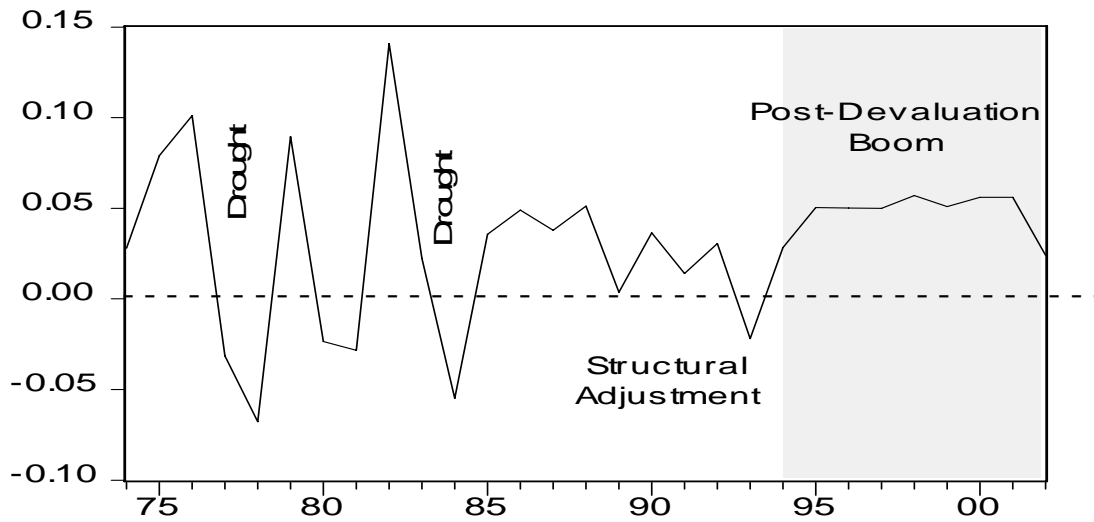
Source: Berthélemy *et al.* (1996), IMF (2003, 2000, 1996).

Figure 1: Senegal's Growth Experience 1974-2002
(GDP, % per annum)

Figure 1 depicts the growth experience of Senegal over nearly three decades starting in 1974. Three phases can clearly be identified: (i) the instability phase, until 1984, (ii) the "real-side" structural adjustment phase, 1985-93, and (iii) the post-devaluation boom. Hence, the devaluation was a clear success, from a macroeconomic viewpoint, as it entailed a significant turnaround from low and unstable growth to a sustained boom. The instability phase is marked by a series of external shocks, including the groundnuts and phosphates boom, in the wake of the 1974 oil shock (Azam and Chambas, 1999). The subsequent downturn is punctuated by two severe drought periods, in 1978 and in 1983-84, as well as by the world recession of 1980-81. Although Senegal implemented a first stabilization plan as early as 1979, with some support from the Bretton Woods institutions, it is not until 1985 that the government got seriously involved in the adjustment effort (Rouis, 1994, Ka and Van de Walle, 1994). Moreover, a serious banking crisis occurred all across the UEMOA in 1987 and 1988, which seems to have given a "wake-up call" to the political elite of the Zone, entailing the emergence of a genuine "ownership of reforms" in some of these countries (Azam, Biais and Dia, 2004). As a result, structural adjustment really started in Senegal in the late 1980s,

and included among other reforms the privatization of several parastatals (Azam, Dia and N'Guessan, 2002).

However, in most countries of the CFA Zone, the main problem of the "real-side" adjustment policy (i.e. without changing the exchange rate) was the inability of the governments to cut significantly their wage bills. The wages and salaries of the civil servants and the public sector employees have been cut only in some countries, during that period, and only by a marginal percentage. The high level of these wages was correctly perceived as the main adjustment problem by many analysts (e.g. van de Walle, 1991, Azam, 1995, Rama, 1997). This problem had two important dimensions. One was that the government wage bill was then consuming an excessive share of fiscal resources, while these wages were also exerting a strong influence on those of the formal sector. Rama (1997) has shown how the wage rates in the civil service and the public sector play a leading role in the determination of the cost of labor for the whole formal sector, and are thus affecting significantly its competitiveness.

Unfortunately, while reforms were seriously starting in some of the countries of the Zone, the terms of trade of the most important CFA economies deteriorated markedly, and so for several years, from 1987 on (Azam, 1997). In particular, the terms of trade of Côte d'Ivoire deteriorated severely, with a depressing influence on the whole UEMOA area (then UMOA). The early 1990s thus witnessed a relatively disappointing growth experience, which ended up in a serious recession in 1993, affecting more or less the whole UEMOA zone. Together with some uninspired policy decisions, which are spelt out in Azam (1997), this made the 1994 devaluation unavoidable. The latter had been postponed for a long period, and was largely anticipated by the relevant agents in the area.

The post-devaluation boom resulted in a sustained growth episode and a significant reduction in poverty. The survey data for Senegal do not allow as thorough an analysis of the dynamics of poverty over the relevant period as that performed on Côte d'Ivoire and Niger in Azam (2004). There are two high-quality surveys, performed in 1994/95 (ESAM 1) and in 2001/02 (ESAM 2), which allow for a correct poverty analysis in this country. Both of them took place unfortunately after the devaluation had taken place. Table 1 shows the

change in poverty observed between these two dates. These poverty measures are computed

from the ESAM datasets using the so-called FGT measure, due to Foster *et al.* (1984)[1].

Table 1: Change in Poverty (1994/95 – 2001/02)

	National		Dakar		Other Cities		Rural	
	1994	2002	1994	2002	1994	2002	1994	2002
Head-Count (P_0)	67.9	57.1	56.4	42.0	70.7	50.1	71.0	65.2
Poverty Gap (P_1)	23.6	18.3	17.7	12.0	24.4	16.1	25.3	21.4
Poverty Depth (P_2)	10.6	7.9	7.4	4.7	10.8	6.9	11.7	9.4

Source: République du Sénégal (2004).

Table 1 thus shows that the response of poverty to the fast recovery of growth was

significantly positive over the medium run. The poverty measures are computed separately

for Dakar, Other Cities and Rural, in order to control for differences in the relevant consumer

price index. They are then aggregated at the national level. Table 1 shows that the fall in

poverty is significant for each sector and each measure.

Section 2 brings out the main impact of that devaluation, showing that the first-order

effect was a massive cut in the real wages of the public sector employees, which spilt over to

the rest of the formal sector. Then, section 3 shows how this entailed a positive growth

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[1] Denote y_i individual i's level of income, usually measured by his (her) consumption level, assuming that the individuals are ordered by increasing income, and denote by z the poverty line. Then, individual i's consumption gap may be defined as the percentage shortfall of his (her) consumption level below the poverty line: $G_i = (z - y_i)/z$. The FGT measure is then given by:

$$P_\alpha = \left(\frac{1}{n}\right) \sum_{i=1}^{q} \left(\frac{z - y_i}{z}\right)^\alpha ,$$

where n is the size of the population, q the index of the individual whose consumption level lies just on the poverty line, and α is a parameter capturing the analyst's concern for the depth of poverty. If $\alpha = 0$ is chosen, then this index is just the head-count index $H = q/n$. If $\alpha = 1$ is chosen instead, the poverty measure that we get is the product of the headcount index by the average consumption gap among the poor $H\,\overline{G}$, where $\overline{G} = \sum_{i=1}^{q} G_i / q$. This index thus takes into account not only the incidence of poverty, but its average depth also. More emphasis can be put on the depth of poverty by weighing each individual's consumption shortfall by itself, i.e. by choosing $\alpha = 2$. These three measures are computed for Senegal in table 1 for 1994 and 2001, and are respectively presented under the three headings described above: "Head-Count", "Consumption Gap" and "Poverty Depth".

response, thanks to a timely boost in public investment. Section 4 brings out the main problem with the Senegalese pro-poor growth policy, namely the lagging response of perceived poverty. This lagged response probably played a part in the democratic ousting of the government that engineered the favorable investment policy mentioned above. Section 5 concludes by drawing some of the main lessons from the Senegalese experience.

2. The Main Impact of the 1994 Devaluation

As shown econometrically by Azam and Wane (1999), this devaluation had very little impact on relative consumer prices, and its main effect was a highly significant cut in the real wage rates in the formal sector. That analysis was performed for Côte d'Ivoire, Niger and Senegal only. However, it seems quite representative of the events that took place in most countries of the CFA Zone. The following discussion gives the flavor of this argument.

Figure 2 depicts the real prices of food, clothing and transport and other services in Dakar, in logarithm. Taken together, these prices account for 79.8 % of the basket of goods included in the CPI. This graph provides a mixed picture of the effects of the devaluation on relative prices. There is some evidence of real depreciation, if one regards clothing as a non traded good. Then, we observe an increase in the real price of food, a tradable good, by a few percentage points. There is a more sizable fall in the real prices of transport, more or less representative of the non tradable service sector, by about 10 %. A similar fall had taken place just before the devaluation. However, the real price of clothing goes even further down, by more than 10 %, while it is hard to believe that this is really a non traded good. May be the trading margins are the dominant component of the price of clothing, explaining this real fall. However, the clothes "made in Sandaga", the Dakar clothes-producing informal sector, can be found all over West Africa. Moreover, the transport index is in fact mainly comprised of public transports, which account for 40 % of this item. The data show that this is the price that mainly lagged behind inflation, because it was fully controlled. Lastly, one observes a convergence of the food and transportation indexes at the end of the period, suggesting that the change in relative consumer prices was over at the end of the fourth year after the devaluation. Hence, the careful examination of these real prices suggests that

putting too much confidence on a story emphasizing real exchange rate adjustment would be unwarranted. Moreover, the relative consumer price changes are at best of short duration, and cannot explain the longer stretch of growth during the post-devaluation boom. Much more significant is the change in real wages and salaries in the formal sector.
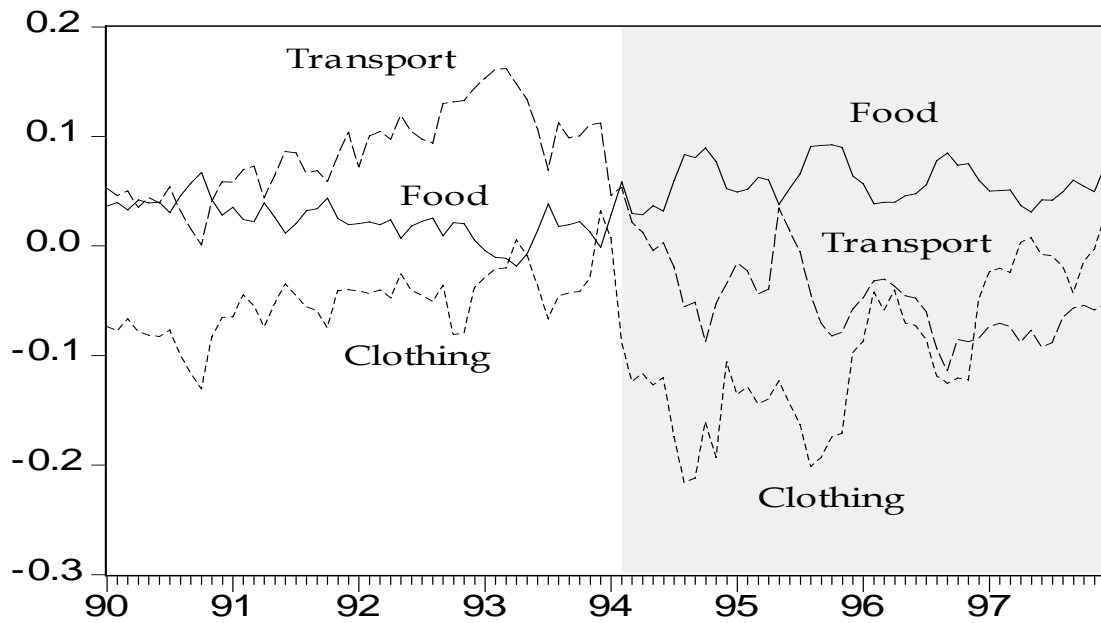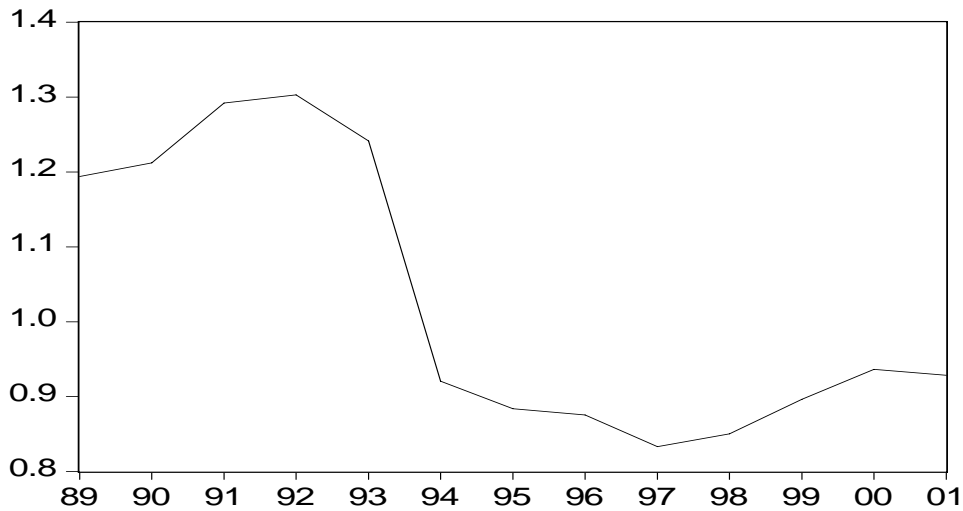

Source: Computed from IMF (2000, 1996).

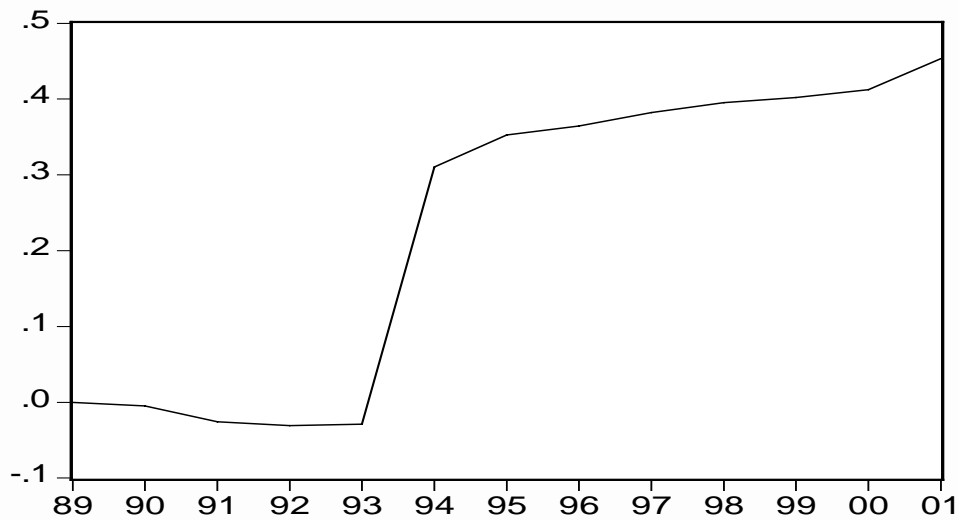**Figure 2: Real Consumer Prices (Dakar, logarithm)**

Figure 3 shows the time profile of the real average wage of civil servants in Senegal. The sharp fall entailed by the devaluation comes out clearly, as well as the subsequent stagnation at a level close to 40 % below its peak 1992 value. The 1994-1997 period is marked by a continuous decline, as the devaluation was progressively affecting consumer prices, while nominal wages were fixed. A slight recovery, by about 10 %, occurred subsequently until the year 2000. Figure 4 shows how the consumer price index in Dakar, used for deflating the average wage of civil servants at figure 3, responded to the devaluation. Therefore, beside its obvious macroeconomic dimension, the 1994 devaluation is a remarkable shock affecting the distribution of income, particularly in the urban sector. In the late 1980s, the public sector wages were about 10 times higher than average GDP per capita, in Senegal, and in several other UEMOA countries (Azam, 1995). It was even higher in some

of them (e.g. 15 times so in Burkina Faso). This ratio fell drastically in the wake of the devaluation, as the public sector wages fell by about 40 %, in real terms, while GDP per capita increased continuously by more than 2.5 % per annum.

Source: Computed from IMF (2003, 2000, 1996).

Figure 3: Real Average Wage of Civil Servants (logarithm)

Source: IMF (2003, 2000,1996).

Figure 4: Consumer Price Index
(End of year, Dakar, logarithm)

As shown above at figure 1, the post-devaluation boom was remarkably long lasting. In particular, together with Benin, another democratic regime among the UEMOA countries,

Senegal did not experience the recession of the year 2000 that plagued the economies of the zone. The next section shows that a public investment boom, made possible by the improved budgetary situation entailed by the devaluation, played a crucial part in boosting growth and keeping it going after 1997. It is only after this additional impulse was given by the government that private investment picked up significantly, turning the post-devaluation boom into a lasting growth episode. Hence, the expected competitive effect of the devaluation did not materialize entirely, as export agriculture did not respond as expected, as its share in GDP shrunk. In the meantime, its fiscal effect played the central part, through the fall in the real value of the government wage bill, which in turn freed the resources that financed the increased public investment.

3. The Determinants of Pro-Poor Growth in Senegal

The post-devaluation boom sketched above presents a striking example where a sustained economic recovery ends up pulling a lot of people out of poverty. The present section aims at identifying the main determinants of this overall fall in poverty over the 1994-2001 period. It focuses on the determinants of the strong pro-poor growth that dominated the end of the century. It begins by a sectoral decomposition of GDP growth, which brings out some significant structural change. Berthélemy *et al*. (1996) have shown that the change in the allocation of labor among the different production sectors is the key determinant of aggregate growth in Senegal. The following analysis provides some support to this view.

Production Sector Effects

The particularly good performance of the rural areas in terms of poverty reduction identified above occurred despite a fairly irregular growth path of the agricultural and livestock sector. The latter experienced a serious depression in 1997 and 1998, discussed further below, followed by a brisk recovery in 2000 and 2001. Figure 5 shows a decomposition of GDP (at constant 1987 prices, in log) over the 1991-2001 decade. It shows that the tertiary sector, which comprises mainly transportation, commerce and other services, experienced a pretty fast growth since the devaluation. In real terms, several of its component sectors experienced some very fast growth episodes during this period, like

transportation for example, which grew by 8.1 % per annum on average over 1997-2001. This tertiary sector claims more than half of total GDP in this country (nearly 60 % in fact). It includes also the telecommunication sector, which was profoundly reformed during that period in Senegal, and grew quite fast subsequently (Azam, Dia, and N'Guessan, 2002).
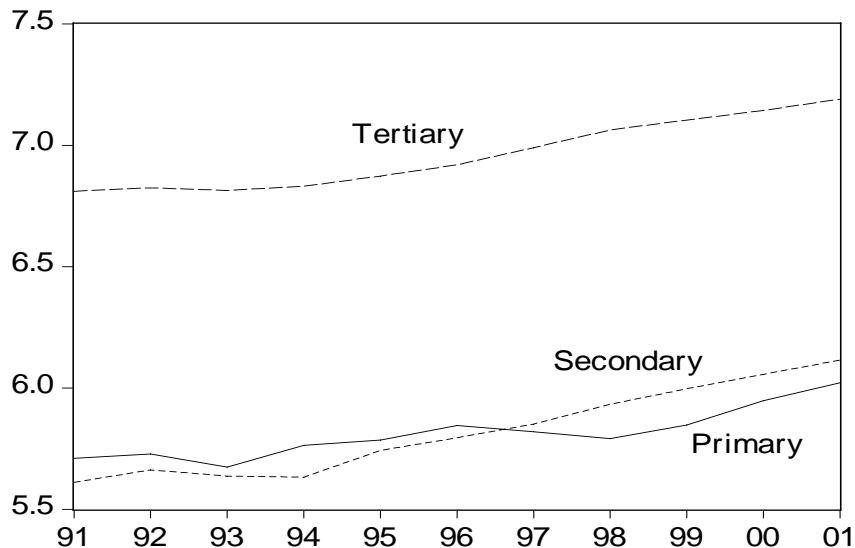
Source: IMF (2003, 2000)

Figure 5: GDP per Sector (1987 Constant CFA F)

Similarly, the secondary sector experienced a fast growth of output after the devaluation. The chart shows that this sector, which comprises mainly industry and construction and public works (in addition to the relatively negligible mining and oil milling sectors), benefited markedly from the devaluation. It experienced two years of negative growth in 1993 and 1994, during and just after the recession that affected the whole UEMOA area, and recovered briskly after that. In fact, its growth was uninterrupted until 2001. By contrast, the primary sector, i.e. mainly agriculture and livestock, experienced a slower growth, and its relative share went down. Its growth rate was negative in 1997 and 1998 (- 10.6 % and – 7.4 %, respectively), while it had a very fast recovery in 2000 and 2001, with two digit growth rates (21.3 % and 13.8 %, respectively). These wide fluctuations are largely due to the vagaries of the Sahelian climate, while price effects do not seem to have been very significant determinants of the supply response. This comes out pretty clearly from the following two charts.
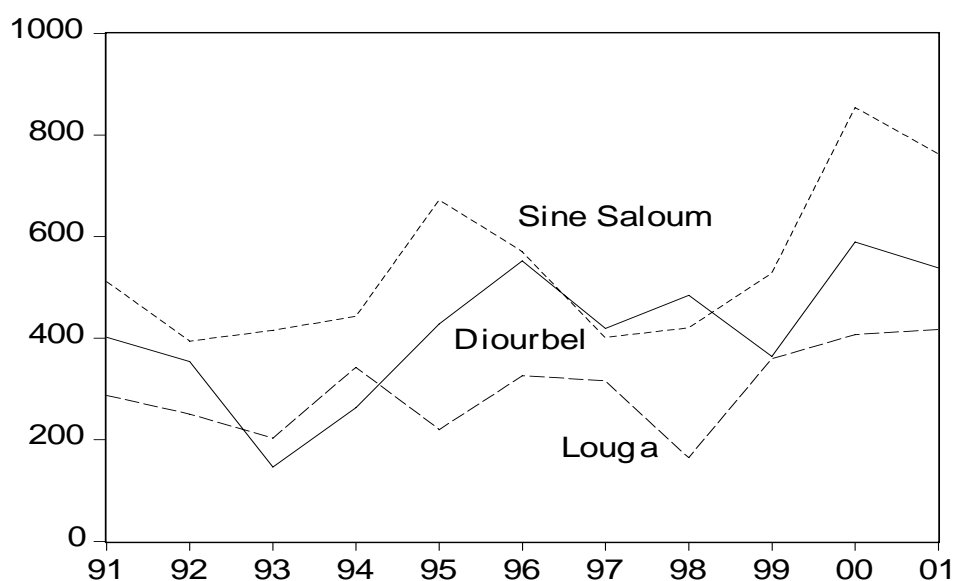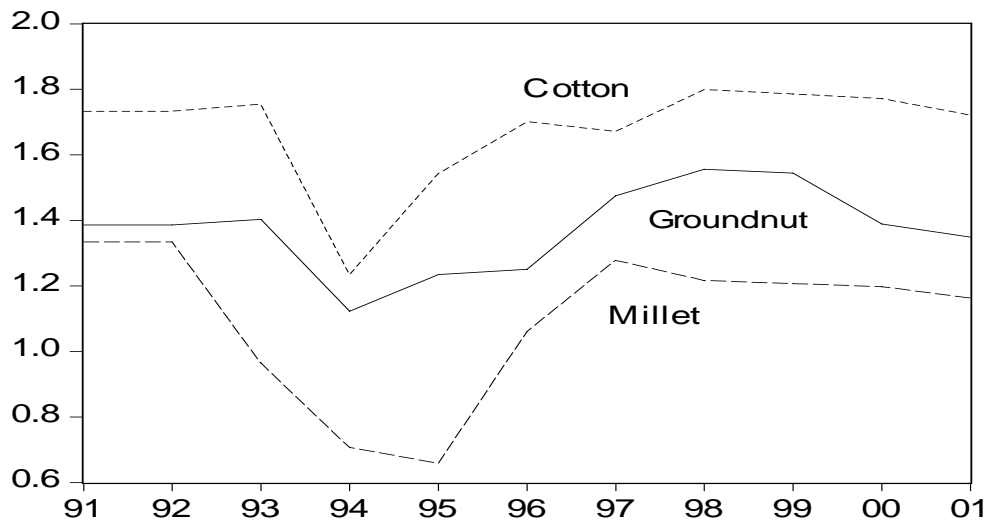
Source: IMF (2003, 2000).

Figure 6: Rainfall on the Groundnut Basin

(Millimeters during the rainy season (May-October) preceding the crop year shown)

Figure 6 represents the level of rainfall on three of the main production areas of the groundnut basin. This chart shows clearly that 1992–93 and 1997-98 were pretty dry years, while 2000-01 were exceptionally good years. By contrast, figure 7 shows that producer prices were recovering from the real shock induced by the devaluation during the period 1997-98. This confirms the well-known result in agricultural economics that price effects on agricultural productions are drawn out, while climatic shocks have immediate effects. On the other hand, the income effects of these real price changes are felt immediately by the farmers. The deep fall in the real prices of the crops that occurred in 1994 entailed probably a large temporary increase in poverty in the rural areas. However, these producer prices have been deflated using the general consumer price index, which only covers Dakar for most of the period. This might not describe accurately the relevant consumer price changes that affected farmers, as their typical consumption basket comprises a lower share of imported goods, while they consume a large share of their home-produced food. However, there is no suitable price index covering the rural sector.

Source: IMF (2003, 2000).
Note: The deflator used only accounts for Dakar over most of the period.

Figure 7: Real Producers' Prices

This chart shows that the real price of millet, which is not exported on the international market, except by cross-border trade, fell in 1993, reflecting the recession observed that year for the whole UEMOA. The fall in the real price of the two export crops at the time of the devaluation suggests that the pass-through rate was pretty low, so that the marketing sector benefited most from this policy move, rather than the farmers. In other words, the tertiary sector benefited from an implicit subsidy from the farmers, in the wake of the devaluation. This probably explains to some extent the fast growth of the tertiary sector observed above, at figure 5. Then, real producer prices picked up somewhat, but hardly recovered their pre-devaluation levels. It is only during the drought years that the real price of groundnut went above its pre-1994 level. This probably softened marginally the poverty impact of the drought on the agriculturists.

Therefore, the remarkable reduction in poverty in the rural sector that we observed in the introductory section cannot be credited to either a spectacular growth in output or a significant increase in the real price of the produce. Most probably, but the data are lacking to confirm this assertion, it is a demand-driven migration into the urban areas, where industry and services have been thriving, that made a serious dent in rural poverty. The

drought that took place at the end of the century, which revived certainly the memories of the 1970s and 1980s, also provided some incentive for labor to migrate to the more progressive sectors.

These results are consistent with those of Berthélemy *et al.* (1996) showing that over the period 1961-1990, the increase in total factor productivity, which can be estimated using an aggregate production function, is in fact entirely due to the reallocation of labor from the low productivity primary sector to the higher productivity secondary and tertiary sectors. Poverty thus probably fell in the rural sector because the least productive farmers migrated to the cities, where they found higher productivity jobs. Hence, in the case of Senegal, it seems that the rural sector can be viewed as a fairly stagnant reserve of labor, somehow in the spirit of the seminal Lewis model (Lewis, 1954). The difference with the latter is that such a diagnosis is true despite the fact that the primary sector is not just a "subsistence sector", but is also exporting a large share of its output. Azam (1993) presents an extension of the Lewis model, motivated by an analysis of Côte d'Ivoire, which brings out the importance for growth of the taxation of the high wages, assumed to accrue to skilled labor, and the productive use of the resulting tax proceeds by the government. The following analysis suggests that the experience of Senegal provides some support to this view, interpreting the outcome of the devaluation as a massive increase in the taxation of the high wages, as suggested above.

The Investment Boom

Figure 8 shows that the post-devaluation recovery was boosted by a major effort concerning public investment. As a percentage of GDP, it went up from an average share of 4.6 % of GDP in 1991-93 to an average share of 6.8 % of GDP over 1996-2001. The resumption of private investment is also quite remarkable, although its time profile is less smooth. It increased from an average share of 8.9 % of GDP in 1991-93, to an average of 10.6 % of GDP in 1996-2001. It is highly probable that the former played a part in creating the appropriate climate for the latter. The time profile of the private investment share suggests that the devaluation took some time before it elicited a positive response from private investors. This is clearly one of the predictions of the theoretical framework analyzed in Azam (2004). In this

case, the households earning formal sector wages expect the devaluation to happen. These households anticipate its negative effects on their incomes by accumulating savings beforehand, with a view to smooth out consumption later when their incomes are cut by the devaluation. Private saving thus declines in the wake of the devaluation, and because of the low level of intermediation, this affects private investment simultaneously. However, other mechanisms have also probably been at work. The pre-devaluation slow growth and recession had probably left quite a lot of productive capacity idle, so that firms had to cut significantly in the latter before the creation of new capital stock became a priority.
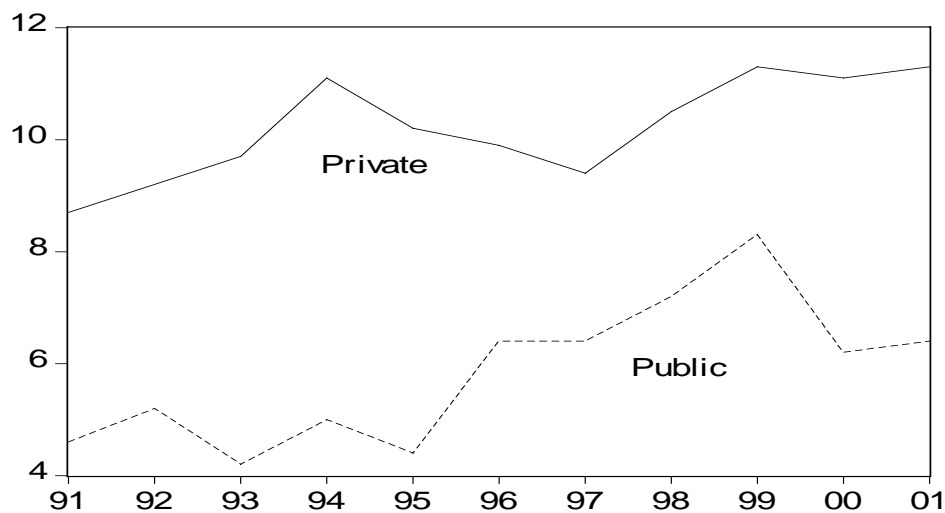
Source: IMF (2003, 2000).

Figure 8: Private and Public Investment (% of GDP)

Moreover, the private sector was also waiting for more information to come about the effects of the devaluation, and about the true intentions of the government regarding the management of the post-devaluation boom. The option value of waiting was also probably enhanced by the unprecedented violence taking place in lower Casamance in 1995. This is epitomized by the disappearance of four French tourists between Ziguinchor and Cap Skirring, widely interpreted as a kidnapping by the Casamance rebellion. The military response to this event triggered a lot of violence all over Casamance, with both civilian and military casualties, followed by a relatively calm period until June 1997.

It seems quite likely that the significant increase in public investment, which occurred from 1996 onward, was the true trigger of the private investment recovery. In a financially open economy like Senegal, with a fixed exchange rate, there is no crowding-out effect to be feared, while the demand-boosting and productivity-enhancing effects of public investments are dominant. This central role of public investment, marking the end of a period of falling private investment, does not mean that the devaluation had no useful effect. It means instead that the positive impact took a more roundabout channel than usually expected. The improved situation of the government budget, and in particular the fall in the real wages of the civil servants and other government employees, due to the devaluation, freed some fiscal resources that the government was able to use for investing. This is the main cause of the investment boom described above. The real wage effect was reinforced by a slight fall in the number of civil servants, which fell from 66,696 in 1994 to 65,259 in 2001, so that the civil service wage bill fell from 7.4 % of GDP in 1994 to 5.2 % in 2001. However, other policy measures have been taken by the Senegalese government in favor of private investment.

Table 2: Fiscal Burden Scores (2003)

UEMOA Members	Fiscal Burden Score	Other African Countries	Fiscal Burden Score
Senegal	2.5	Gambia	3
Mali	3	Ghana	3.5
Niger	3	Guinea	3
Togo	3	Nigeria	3.5
Benin	3.5		
Burkina Faso	3.5	Algeria	3.5
Côte d'Ivoire	3.5	Morocco	4
Guinea-Bissau	4	Tunisia	4

Source : Heritage Foundation (http://www.heritage.org/research/features/index/).
Note : The index is coded from 1 (low taxation of profits and incomes) to 5 (high taxation).

Although it had a self-proclaimed socialist government ever since independence, until the March 2000 election, Senegal has adopted an investor-friendly policy during the course of the reform period, particularly from the end of the 1980s onward. A wave of

privatization took place, mainly in the utilities sector, sending a good signal to investors (Azam, Dia and N'Guessan, 2002). The main incentive comes from the fiscal burden, which is low by African standards. Table 2 represents the scores given to various countries in the UEMOA and its neighborhood by the experts of the Heritage Foundation. This is a composite index that takes into account the highest rate of income tax, as well as the average one, and the most relevant marginal income tax rate for the average tax payer. Additionally, as a check on the credibility of these tax rates, the share of public expenditures in GDP is also taken into account.

Table 3: Maximum Corporate Tax Rate (2003)

UEMOA Members	Maximum Corporate Tax Rate (%)	Other African Countries	Maximum Corporate Tax Rate
Benin	35	Gambia	35
Burkina Faso	35	Ghana	32.5
Côte d'Ivoire	35	Guinea	35
Guinea-Bissau	35	Nigeria	30
	(50 for oil)		
Mali	35		
Senegal	35	Algeria	30
Togo	40	Morocco	35
			(39.6 for banks and insurance)
Niger	42.5	Tunisia	35

Source : Heritage Foundation (http://www.heritage.org/research/features/index/), originally from Ernst & Young *2002 Worldwide Corporate Tax Guide*.

Table 2 shows that in general, the UEMOA countries have a slightly more favorable score than the comparison countries, which are taken both from North Africa and from non-UEMOA West Africa. Out of these 15 countries, Senegal has by far the best performance, even among the UEMOA countries. Hence, the boosting effect of the public investment boom described above was supported by a highly favorable tax framework. As a result of the investor-friendly climate created over the last few years of the century, this country's rating

has improved significantly. Since 2001, Senegal is rated B+ by Standard & Poors, a score that only South Africa and Botswana are beating in Sub-Saharan Africa.

Table 3 shows the maximum corporate tax rate among the same group of countries. Most of them have a maximum rate of 35 %, with the exception of Niger and Togo, within the UEMOA, which have a slightly higher rate, and the oil producing Algeria and Nigeria, which have a lower rate aimed at compensating for the "Dutch Disease" effect due to oil exports, as well as Ghana. The latter is also a coastal country with a potential comparative advantage in non traditional exports, like Senegal, which pursues quite an aggressive policy aimed at attracting foreign investors.
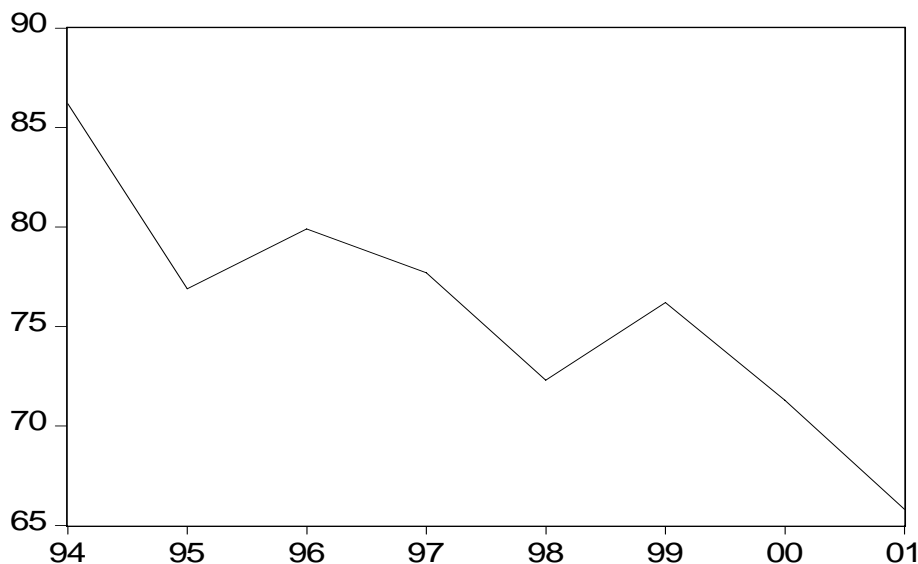

Figure 9: Public Debt to GDP Ratio (%)

A further relevant piece of information regarding the investment incentive structure is provided by figure 9. It shows the ratio of public debt to GDP, which is a major indicator of macroeconomic stability in the CFA Zone (Azam, 1997). This ratio can be viewed by investors as a threat of future tax increases, according to the mechanisms described in Cohen (1993) and Eaton (1993). The intuition for this effect is that a high public debt ratio now may be regarded by potential investors as entailing a future increase in taxation, for financing the corresponding debt service. This chart clearly shows that the Senegalese government made a sustained effort for reducing that threat, the so-called "debt overhang" effect, as the ratio fell

from 86.2 in 1994 to 65.8 in 2001. A major dent in this series shows up in 1998, when Senegal reached a Paris Club agreement worth about CFAF 23 billion. Moreover, Senegal will benefit from some debt reduction within the HIPC initiative, as decided in June 2000. The latter will be effective only outside the period under analysis, but has probably a positive effect on expectations. All these developments are taking place against a background of sustained reduction of the debt-to-GDP ratio.

Senegal thus comes out as a particularly attractive investment destination among the countries from North and West Africa. It does not seem that the few breaches of privatization contracts, imposed paradoxically by the liberal president Abdoulaye Wade, have much damaged this country's good reputation. An example is provided by the re-negotiation of the licenses for the mobile telephone operators Alizée and Sentel (see Azam, Dia and N'Guessan, 2002), which ended up in a surcharge being imposed on them. Its attractiveness is also supported unwittingly by Côte d'Ivoire, whose political instability (the 1999 coup d'etat, the 2000 uprising, and the civil war started in 2002 …) has destroyed its own attractiveness. In many ways, Senegal is left as the unique investment opportunity among Francophone countries.

It is remarkable that the sustained growth of the post-devaluation boom was not hampered by a shortage of human capital. Berthélemy et al. (1996) have a fairly negative diagnosis about the education policy pursued by Senegal between independence and the early 1990s. They acknowledge that the enrollment rate has increased massively. Between 1960 and 1990, it went from 22 % to 57 % in 1990, as far as primary education is concerned, from 2 % to 16 %, in secondary education. However they estimate that the quality of education is poor and deteriorating, and not fitted for sustaining economic development. They criticize in particular the Senegalese education policy for putting too much emphasis on classical education. By contrast, Diagne et al. (2002) estimate that human capital was not a brake on the resumption of growth after the devaluation. They find a positive and nearly significant impact of enrolment in primary education on growth, with a nine-year lag. This effort has not been reduced during the post-devaluation boom, and the gross rate of enrolment went from 54.3 % in 1993 to 69 % in 2000 (Loum, 2001).

Moreover, one may argue that the early effort made by Senegal in favor of education also had an indirect political impact on the government's ability to engineer the timely public investment boom. This comes out clearly by comparison with neighboring Mali. There also, the 1994 devaluation of the CFA F freed a lot of fiscal resources by cutting the government's real wage bill. However, these resources had to be invested in education, as General Moussa Traoré's dictatorship, which fell in 1991, had neglected that sector. The newly established Malian democracy increased the primary enrolment rate from about 30 % in 1991 to about 60 % in 2000, in response to a strong popular demand. Senegal had made a similar effort much earlier on, and was thus in a position to focus its investment effort on medium-run growth, as described above.

4. The Low Political Gains from Pro-Poor Growth

The experience of Senegal suggests that engineering pro-poor growth did not pay for the incumbent government. The government was not rewarded for its good performance regarding pro-poor growth, as Abdou Diouf was ousted in the 2000 elections. An important reason for this negative outcome was probably the fall in the incomes of the urban elites, while the subjective perception of poverty lagged significantly behind its objective changes. It seems that households perceive a sense of lasting "crisis", whenever they have experienced poverty. This entails a trade off between pro-poor growth, with the initial sacrifice that it requires, and political support.

Despite the remarkable fall in poverty documented above, based on the change in consumption experienced by Senegalese households over 1994-2001, perceived poverty has increased significantly in this country. This comes out of the EPPS 2001 survey (Enquête sur la perception de la pauvreté au Sénégal). This is a survey on the subjective perception of poverty by the Senegalese households, which used the same sample as ESAM 2. Figure 10 shows that a vast majority of the household surveyed did not perceive any improvement in the poverty situation.
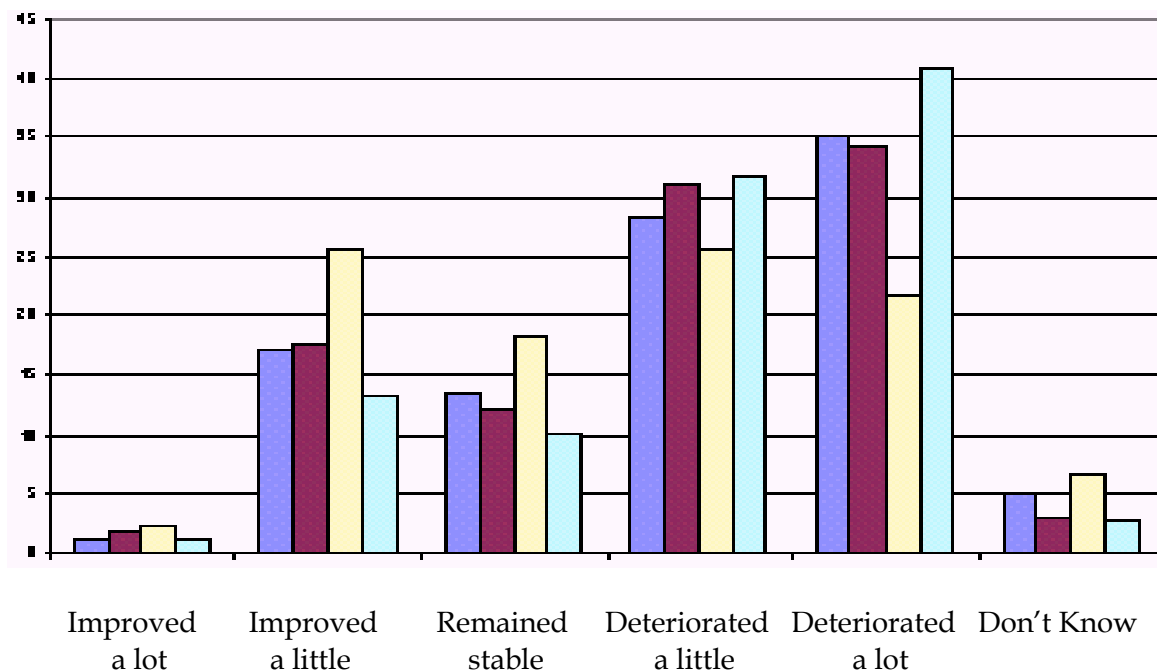
Note: For each type of response, the households are ranked from left to right as: non poor, poor, not feeling poor, and feeling poor.

Figure 10: Perceived Change in Poverty (EPPS 2001 Survey)

More than 85 % of them estimate that poverty remained stable or deteriorated during the 5 years preceding the survey. This is particularly noticeable among the poor or among those who perceive themselves as poor. The survey shows that these two groups of households are quite different. The overlap between the two categories is highly imperfect. Almost 2/3 of the sample households perceive themselves as poor, which is quite a large overestimate. Moreover, a significant share of the objectively poor does not perceive themselves as poor (République du Sénégal, 2004). Strangely enough, this divergent diagnosis is not based on a conceptually different view about poverty. More than 50 % of the respondents to the survey consider "the inability to feed one's family" as the main correlate of poverty (République du Sénégal, 2004). This is not grossly inconsistent with the consumption-based approach, adjusted by the number of adult equivalent household members, used in the objective poverty assessment.

Hence, this suggests that there is a strong persistence in the perception of poverty, such that investing in increased poverty now with a view to improve significantly poverty

later might be a risky choice from an electoral point of view. This disconnection between the subjective and the objective changes in poverty raises an important political problem. In a democratic country like Senegal, this reduces the incentive faced by the government to actively fight poverty, as the resulting improvement is not correctly perceived as such by the voters. President Diouf, who presided over the implementation of the growth-boosting policy in the late 1990s, was beaten at the March 2000 elections, while a sense of "crisis" was widespread in the electorate. However, nothing really proves that the perception by the voters of the change in poverty played any part in determining this outcome. May be "Sopi" – the change, in Wolof – was desired for its own sake, as a way of checking that the elections were not rigged, as was widely believed in the previous cases.

5. Conclusions

The Senegal case study shows that poverty went down significantly during the last decade of the 20th century, from 1994/95 to 2001/02, both absolutely and relatively. The devaluation of the CFA franc that occurred in January 1994 entailed both a major macroeconomic shock, and a major reshuffling of the distribution of income, mainly among the urbanites. The latter got the main blow of the devaluation, as the fall in the real wages of the civil servants and other public sector employees spilled over onto the incomes of the urban informal sector. Moreover, the change in the real producer prices in agriculture, which was documented at figure 6, suggests that poverty also went up in that sector in the wake of the devaluation, before it improved significantly later on. This fall in the real price of their output, together with the low level of rainfall, probably created a fall in the peasants' incomes, which helped provide the incentives to migrate to the cities, where the other sectors experienced quite a high rate of growth, after 1996.

During the three years following the devaluation, despite the fast recovery of GDP growth, and the fall in the real wage rates in the urban sector, private investment did not pick up. It only did so after 1996, when the government used the fiscal resources freed by the reduction in the real value of its wage bill for financing a major increase in public investment. The resulting investment boom stretched out the post-devaluation boom in time,

and managed to tide the Senegalese economy over the regional recession of the year 2000. During this third phase, from 1996 to 2001, the poverty effect of the accelerated growth seems spectacular.

This summary description of the growth and poverty process during the last decade of the 20th century, until 2001, suggests that macroeconomic policy is playing a major role in determining the dynamics of poverty. However, when it involves a huge change in relative incomes, like the 1994 devaluation did, such a policy can also be viewed as a redistribution policy. The real wages of the formal sector workers were drastically cut, falling by about 40 % until the end of the period. Its impact was thus akin to that of a major increase in income tax for these people. Nevertheless, the analysis of the time profile of investment suggests that Senegal could only reap the full benefit of the devaluation when its government chose to use this fiscal windfall for financing a boom in public investment. The latter was in turn transmitted to private investment, which boomed also at the end of the century. In other words, the fiscal effect of the devaluation seems to have played a more important part in launching and sustaining the post-devaluation boom than the redistribution effect. Conversely, the success of the pro-poor growth episode of the end of the century, over the half-decade 1996-2001, is due to the combination of two effects: first, the devaluation reduced drastically the government's wage bill, acting in fact like a major increase in the income tax affecting these people, and second, the resources thus freed were wisely used by the government for boosting the economy by an appropriate mix of increased public investment and public debt reduction. The latter combined with various fiscal measures for creating an "investor-friendly" environment, which invited private investment to follow in the steps of public investment.

In Senegal thus, the road which leads from a cut in the incomes of the rich to an increase in the incomes of the poor is quite a complex one. This is probably true also in most countries of the world. The bottom line is that pro-poor growth occurred at the end of the century because the government engineered a sustainable change in the *functional* distribution of income, from wages to profits, and not just a transfer of income from the rich

to the poor. This change was obtained by an increase in public investment and the creation of an "investor-friendly" environment, based on low corporate taxation and low public debt.

This is the core lesson of Senegal's pro-poor growth experience: profitability fuels private investment, and the latter is the engine of sustained growth. This simple message has been emphasized time and again in the literature (e.g. Malinvaud, 1980). As the former chancellor of West Germany Helmut Schmidt used to say: "The profits of today are the investments of to morrow and the investments of to morrow make the employment of the day after to morrow" (cited in Malinvaud, 1980, p.4). Therefore, as poverty is liable to lag significantly behind growth, it takes a sustained effort in favor of profitability to pull a significant number of people out of poverty. The Senegalese experience described above shows that devaluation is only one of the possible means that can be used for that purpose, acting like a tax on formal sector wages. It suggests that timely and efficient public investment is also quite important, as is important to cut the public debt overhang. These are probably not the only ways that profitability can be supported, and other means to the same end should be sought in different institutional and political settings. The unprecedented stretch of fast economic growth that resulted from this strategy managed to pull a large share of the Senegalese population out of poverty. Unfortunately, from the point of view of the incumbent government, the objective reduction in poverty was not correctly perceived by the voters. This was shown by the survey performed in 2001 on the subjective perception of poverty. It might also have played a part in determining the election results of the year 2000, where the incumbent government was ousted. Although it is not certain that the misperception of the change in poverty played a significant part in this outcome, it might have had some impact. May be, in a democratic polity like Senegal, the true political challenge is to find a strategy for reducing the subjective perception of poverty. The latter probably affects electoral outcomes, and no genuine "ownership" of pro-poor growth policy will emerge without it in democratic countries.

The Senegalese experience thus suggests that pro-poor growth was triggered by a fall in the real wages of civil servants, which was engineered by the devaluation. This raises an important issue regarding why such a cut was impossible to implement by other means

during the "real-side" adjustment phase. Probably, Keynes' relative wage theory would go a long way in explaining this fact (Keynes, 1936). The devaluation made it highly plausible that nobody would escape from the real wage cut, while a political decision of cutting nominal wages would raise the suspicion that some "happy few" would escape, and would thus be resisted. The Senegalese experience also suggests that the benefit of such a cut would not have materialized without a timely decision by the government to use the fiscal resources thus freed for boosting public investment rather than letting the wage bill catch up on prices. However, its subsequent electoral defeat suggests retrospectively that it might be politically preferable to choose a policy mix more in favor of the urban elite's wages, as the poor do not perceive accurately how they benefit from pro-poor growth. Nonetheless, "Sopi" made the Senegalese proud of their democracy, thus producing an additional public good that should be added to the national accounts.

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