

Structural adjustment and poverty in Nicaragua

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1. Introduction

Nicaragua has carried out structural adjustment policies since 1988, but these efforts have been intensified since 1990. The first problem these policies had to address was hyperinflation, which mounted to 13,490 per cent in 1990. In 1991, stabilization was finally successful. Many market reforms were also carried out. Until 1993, however, economic growth was still stagnant and growth rates per capita were still negative. As of 1994, economic growth became positive but the high population growth implies that growth per capita has still been very modest (1.6 per cent per year, on average).

This paper examines the consequences of these stabilization and adjustment policies on poverty in Nicaragua. With respect to the measurement of poverty, the paper uses the two living standard measurement surveys of which data have now become available: one held in 1993, and another held in 1998. The first year represents the lowest point in terms of average income per capita since the 1970s. A comparison with the results for 1998 is interesting, since the effect of the modest per capita income growth between 1993 and 1998 can be assessed.

The aim of the paper is not only to show what happened to poverty, but also to establish a link with government policies. It therefore begins by examining the theoretical linkages between macroeconomic policies and poverty reduction, paying attention to the possibility for “pro-poor growth”. Policies can have direct effects on poverty reduction, via influencing the distribution of income and assets, and indirect effects, through their impact on economic growth. The existing distribution of income and assets proves to be important for the poverty reducing elasticity of economic growth. In addition, the possibilities for pro-poor growth are enhanced if economic growth favours poor regions and has positive employment effects.

In order to examine the impact of structural adjustment policies on poverty reduction, we must also examine which policies have been implemented and what were the consequences of these policies for relative prices. The empirical part of the paper begins with a presentation of the overall results with respect to poverty reduction. This is then followed by an analysis of the possible indirect and direct links between policies and the observed poverty effects.

2. Macroeconomic policies and poverty reduction

In general, macroeconomic policies may reduce poverty in two ways: directly, through their effect on the distribution of income and assets, and indirectly, through their effect on economic growth. In the short run, even without economic growth poverty may reduce if the income distribution becomes more equal. This seems to have happened in Honduras between 1985 and 1993 (Morley, 1998). However, there may be trade-offs between policies that reduce income inequality and policies that increase economic growth. This holds, in particular, if redistribution policies have negative incentive effects, or if these policies are carried out through the government budget and lead to unsustainable budget deficits which ultimately lower the growth rate. However, win-win policies are also possible. This can be achieved if assets are redistributed, for example through land reform, or through investment in basic social services (Hanmer, Pyatt, & White, 1999).

Economic growth on its own will not reduce poverty if all the benefits of that growth accrue to the rich and none to the poor. Together with the above analysis this means that in theory, economic growth is neither necessary nor sufficient for reducing poverty. In practice, however, many economists agree that the effect of economic growth on poverty reduction is the most important (Bulmer-Thomas, 1996), and that economic growth is a necessary condition for, at least, *sustainable* poverty reduction.

The extent to which economic growth leads to poverty reduction depends on several factors (Hanmer et al., 1999). First, the existing distribution of income and assets is important. The more equal the initial distribution is, the more likely it is that rich and poor benefit from economic growth. A second important factor, however, is the extent of poverty at the outset. In other words, *where* the poverty line is drawn will determine how easy it is to reduce poverty. For a given growth rate and given inequality, it is easier to reduce poverty when 50 per cent of the population is poor than when only 20 per cent is poor. For the absolute number of poor to fall, the population growth rate is a third important factor. For countries with a Gini coefficient of between 40 and 60 per cent, with initial poverty at about 50 per cent and with about 3 per cent population growth, economic growth per capita needs to be at about 3 or 4 per cent for the absolute number of poor people not to increase (Hanmer, Pyatt, & White, 1997: 4.5). These calculations assume that economic growth in itself is neutral, that is, it leaves the income distribution unchanged.

Several studies computed the poverty reduction elasticity of growth for Latin America. It seems that in the 1980s, when growth per capita was negative, this was accompanied by an even larger increase in poverty, in the sense of a per cent reduction of the headcount ratio: the elasticity was -1.6 (Psacharopoulos, cited in Morley, 1998). Between 1985 and 1995, when most countries experienced positive economic growth p.c., poverty reduced but the elasticity was only -1 , on average (Morley, 1998). Morley concludes that this figure is lower than what is usually found for other regions, but that it is consistent with the relatively large income inequality in Latin America. One could add here that the low elasticity may also be due to lower initial levels of poverty as compared to, for example, Sub-Saharan Africa. For Latin America, it has been shown that the extent to which growth leads to poverty reduction depends, in particular, on the initial distribution of *human* capital. In addition, this poverty reducing effect depends on the equality in access to land and other physical resources (Londoño & Szekely, 1999).

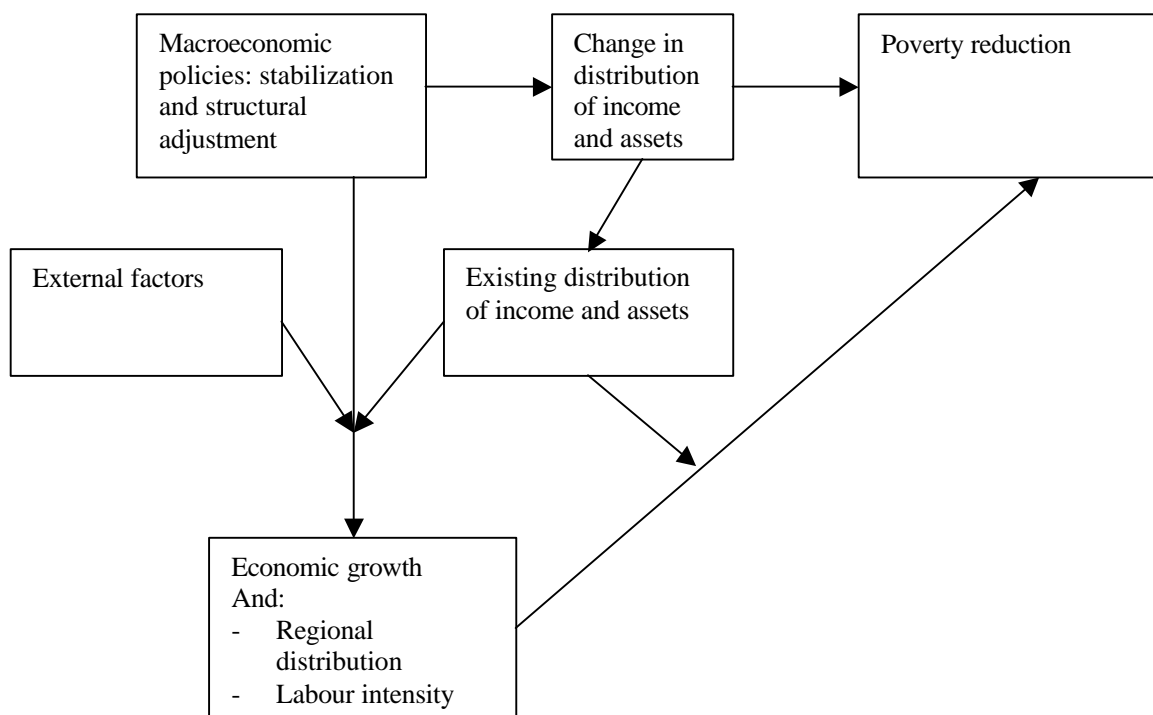
In addition to these general effects of growth on poverty reduction, the extent of “trickling down” to the poor also depends on the *kind of growth* that results from macroeconomic policies. The question is to what extent growth is “pro-poor”. Pro-poor growth is “a pattern of growth in which the income of the poor grows more rapidly than that of the non-poor” (Hanmer et al., 1999: 814). Growth can be pro-poor if it leads to higher returns for those assets that the poor possess disproportionately. In general, growth is more likely to be pro-poor if it is accompanied by increased employment. This may be the case of the relative price for labour (the wage rate) reduces relative to the price of capital.

However, there is some debate about the need for growth to be labour intensive. Hanmer et al. (1999) argue that labour intensity of growth is not an important factor since there are limits to the degree of substitution between capital and labour that is possible. In addition, even if there is substitution, the relation between wages and productivity is more important than the wage rate as such. For both reasons, the crucial factors are investment in complementary assets and increased productivity, and not so much the labour intensity of production. Although I agree that investment is crucial, a reduction of relative wages may help to bring about this investment in the short run, especially in export oriented investment. Given the high levels of unemployment and underemployment in Nicaragua, it is important that growth is labour intensive so that it is accompanied by rising employment. In the long run, however, poverty reduction will also require a growth of labour productivity and of wages.

Apart from the labour intensity of growth, whether growth is pro-poor will also depend on the regional distribution of that growth. This assumes that there are limits to labour mobility: it is not feasible nor desirable that all people move from poor regions to richer regions, if relative prices would so induce. Since poverty in Nicaragua is more severe in rural areas (see below), poverty will be more reduced if growth benefits the rural areas more than the urban areas.

Figure 1 summarises the different relationships involved between macroeconomic policies and poverty reduction. The horizontal relationships in the top of the figure represent the direct links between these policies and poverty reduction. The indirect effect is the effect through economic growth. The effect of policies on growth will be mediated by external factors, such as demand for export products and domestic supply constraints (see also below). In addition, the existing distribution of income and assets will have some influence on the growth rate, since it determines to what extent all people can benefit from favourable changes in relative prices. Policies, external factors and distribution together will also determine the labour intensity and the regional distribution of growth. Finally, the effect from growth to poverty reduction is again mediated by the distribution of income and assets, which in turn may be changed by policies. For simplicity the figure deals with relative poverty reduction, so that population growth is not included. However, we should bear in mind that population growth is still almost 3 per cent in Nicaragua, so that bringing about an absolute reduction in the number of poor is even more difficult.

Figure 1. The relationship between macroeconomic policies and poverty reduction



Structural adjustment is a package of policies with many possible effects on economic growth and poverty reduction. A first distinction that must be made is that between stabilisation and economic reforms. The latter include measures such as liberalisation of goods and factor markets, liberalisation of foreign trade, and privatisation. Stabilisation, or the reduction of (hyper) inflation, is usually seen as a necessary condition for economic growth. However, stabilisation itself is often not accompanied by growth in the short term, since it entails a reduction of domestic demand by lowering government expenditure and restricting credit. In Latin America, stabilisation policies were often accompanied or followed by large amounts of inflows of foreign aid or private capital. In these cases, stabilisation may be inconsistent with “adjustment”: while foreign capital inflows may help maintaining government expenditure and real wages, they also lead to overvaluation of the exchange rate which is harmful for production of tradables and thus retards adjustment.

The aim of adjustment in strict sense, or economic reforms such as trade liberalisation, liberalisation of goods and factor markets, and privatisation, is to increase production. In principle, prices and trading are left to the market. A country will then produce according to its “comparative advantage”. Sectors that were not competitive at world market prices have to increase productivity, or must close shop. Other sectors that are competitive will be able to expand production. This is theory. In practice, one has to analyse, first, what exactly happened to relative prices as a result of the change in policies. From the perspective of achieving growth and poverty reduction, some prices are particularly important. These prices include the real exchange rate, taxes on exports and imports, and the price of labour relative to the price of capital (credit).

A very important price is the exchange rate. If the exchange rate is still kept overvalued in view of the stabilisation objective, the switch to producing according to comparative advantage will be delayed. Prices of nontradable goods will still be protected, while tradables will be harmed. In Nicaragua, as in many other countries, this will imply that urban areas benefit at the cost of rural areas. It may also imply that wages are still relatively high, thus harming the expansion of employment. Structural adjustment will normally increase the price of credit (the interest rate) so that labour intensive production is more stimulated. In addition, barriers to imports will be lifted and import tariffs will be reduced. If this is combined with an overvalued exchange rate, the effects will be harmful for both import competing and exporting sectors. If the real exchange rate depreciates, the lowering of tariffs only leads to reductions in the import competing sectors but it will stimulate exports.

Apart from these aspects of implementation, several other conditions on both the demand and the supply side must be fulfilled for a country to benefit from these market reforms. On the demand side, it is important that demand for locally produced goods is available. As long as stabilisation policies prevail, domestic demand is often limited. With respect to export demand, many developing countries are dependent on primary products for which demand is in decline or fluctuating from year to year. The positive effect of higher relative domestic prices for exportable, for example for coffee, may be nullified by lower export prices.

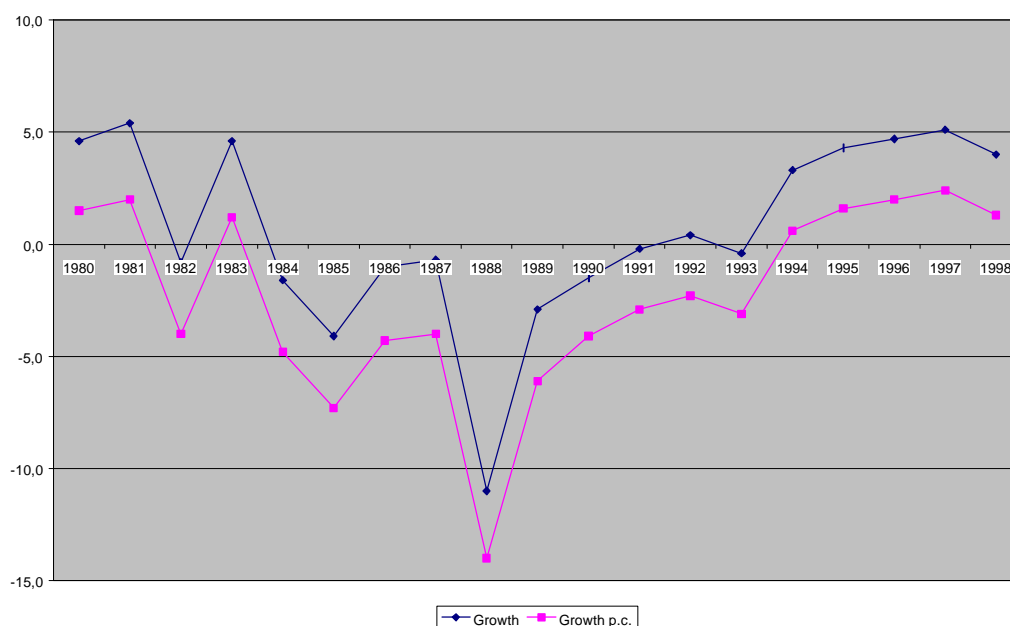
On the supply side, it is important that a “supply response” comes about. This supply response may be constrained by a variety of reasons. Potential producers may lack ownership rights to land or to other physical assets or credit, infrastructure may be lacking, the access to markets may be lacking for other reasons, for example a lack of information, or markets may not be existent at all. These factors may hold, in particular, for specific ethnic groups or for women.

The conclusions thus far on the developments in poverty and the income distribution in Latin America and the Caribbean in the 1990s are that poverty has diminished, although not always in absolute numbers. The main effect seems to have been growth in average incomes and in investment. The income inequality has remained more or less at the same level (Londoño & Szekely, 1999). On the basis of a comparative analysis of Chile, Mexico and Peru, Sheahan concludes that the first adjustment phase of liberalisation *cum* stabilisation has been harmful for the poor in all three countries. Although foreign capital inflows enhanced stabilisation and even induced economic growth, this growth had low employment intensity. A second phase, experienced by Chile in the 1980s and already observable in Mexico, is accompanied by a real depreciation of the exchange rate and by export promotion policies, thus leading to higher employment levels and a reduction in poverty. In a third phase, so far only observable in Chile, efforts are made to increase human capital of the poor. This further reduces poverty and improves the income distribution (Sheahan, 1998).

3. Structural adjustment in Nicaragua

In this section, the contents of structural adjustment policies will be examined, and the change in relative prices as a result of these adjustments policies: in particular the real exchange rate, import tariffs, export taxes, wages, credit. There is no doubt that stabilisation and structural adjustment was very necessary in Nicaragua in 1990. Inflation stood at 13,490 per cent, and economic growth per capita had fallen by 4 per cent or more annually since 1984 (Figure 2). The disastrous economic situation was to a large extent due to the consequences of the civil war, which in turn had been fuelled by US support for the opposition to regime. However, economic policies also played a role. During the Sandinista government (1979-1990), the state had set many prices and had allocated foreign exchange and credit centrally. All exports had to be sold to the state. The banks had been nationalised, as were many enterprises in agriculture and industry.

Figure 2. Economic growth in Nicaragua, in per cent, 1980-1998



Source: for the 1980s: CEPAL reports, and for the 1990s: Central Bank of Nicaragua.

Although tax income rose in the 1980s due to both more taxes and a better administration, government expenditure increased more. Within government policies, state investment, improvements in basic health and education and subsidies for basic consumer goods and services took a high priority. In combination with the land reform carried out, these policies greatly improved the distribution of assets and income in the early 1980s. With the intensification of the civil war in 1983-1984, inflation ran out of control, and black and parallel markets became increasingly important, as well as barter trade. In general, inflation hurts the poor more than the rich. However, in Nicaragua the poor were still to a large extent protected against high inflation in the 1980s. First, many workers with fixed incomes received part of their income in kind, in the form of packages of basic goods. Secondly, rationing was applied for the allocation of a package of basic foodstuffs and soap. And thirdly, small peasants had access to credit at negative real interest rates. This could be used for buying inputs for production, but more often it provided the money for buying basic consumer goods. Fourthly, basic health and education services were free.

In 1988 and 1989, the Sandinistas made a serious attempt to stabilise the *córdoba*. A currency reform was implemented which implied a large devaluation and a partial unification of exchange rates. Large numbers of government workers were laid-off and wages were reduced. Credit was restricted although real interest rates remained negative. The package led to a reduction in price distortions, a reduction in government expenditure and in the deficit, and to increased exports in 1989. There were two major problems with the package. One was that credit policies were still permissive. It was clear that in Nicaragua the high inflation was not only caused by magnetisation of the government deficit; the extension of credit at low real interest rates and leading to very low repayment rates also played an important role. All banks were state owned and could not therefore fail, so the losses were in fact added to the deficit of the public sector and were monetised. A second problem was that these structural adjustment measures were not accompanied by foreign aid, which could have reduced the recessionary impact of these measures. As a result, inflation increased and GDP continued to decline.

The collapse of the economy was an important factor behind the defeat of the Sandinistas in the 1990 elections. In the second half of the 1980s, the social achievements of the early Sandinista years began to evaporate. The quality and quantity of education and health services diminished rapidly: they had been targets for contra destruction and the government increasingly did not have the money to recuperate or maintain them. On top of that came the stabilisation measures of 1988 and 1989, which rendered many people without a job and reduced real wages for most others.

The first priority for the Chamorro government, which took office in 1990, was the stabilisation of the *córdoba*. However, the early attempts were not successful. In March 1991, a new stabilisation plan was announced, and this plan proved to work. The *córdoba oro* (gold *córdoba* with rate 1:1 to US\$), introduced in August 1990 as parallel currency, was now fully introduced and at the same time devalued. The rate was then maintained at 1:5. In this way, the exchange rate could play the role of a nominal anchor (Dijkstra, 1997). In addition, a tight credit policy was maintained: the amount of domestic liquidity would be related to the stock of foreign reserves. Although government expenditure was reduced, the budget deficit remained large. The main difference with the earlier stabilisation effort in 1990 was that an agreement with the unions on wages had been reached, and that foreign aid was now available on a large scale. The Chamorro government also began immediately with reforms (structural adjustment in strict sense). These reforms, covering many areas, will be outlined below.

Exchange rate policies

In 1990, a currency reform was carried out which implied a large devaluation. Only two exchange rates remained, namely the official and the parallel rate. In 1991, the *córdoba* was further devalued but was then remained stable at a level of 1: 5 until January 1993. Since prices still increased somewhat, there was some real appreciation in 1992. After a devaluation of 20 per cent in January 1993, a crawling peg was maintained with a pre-announced 12 per cent rate of annual devaluation (Table 1). This probably led to a real depreciation in 1993. The depreciation of 1997 may be due to an underestimation of inflation in that year, since a new computation for measuring consumer price increases was introduced.

Most observers agree that there has been some overvaluation between 1990 and 1993: the stabilisation phase. Proving this is difficult. In the 1980s, there were many different exchange rates but they were all grossly overvalued, creating many price distortions. A comparison with that period cannot be made, and figures for 1990 when there was still hyperinflation cannot give an indication either. However, many observers argue that the devaluation of March 1991 was not sufficient to eliminate the earlier overvaluation. Even if it were sufficient in March 1991, it can be argued that there was overvaluation between 1991 and 1993: the nominal rate was maintained until January 1993 while there was some price inflation, implying a gradual

appreciation. All in all, the real exchange rate was probably somewhat overvalued until 1993, and has since been maintained at a more competitive level.

Table 1. Inflation and exchange rates in Nicaragua

	1990	1991	1992	1993	1994	1995	1996	1997	1998 ²
(1) Inflation	13490,3	865,6	3,5	19,5	12,4	11,1	12,1	7,3	13,2
(2) Nominal exchange rate	3000,0	5,0	5,0	6,4	7,1	8,0	8,9	10,0	11,2
(3) Rate of nominal devaluation	6957,5	939,6	0,0	27,0	12,0	12,0	12,0	12,0	12,0
(4)=(1)-(3) Rate of real appreciation	6532,8 ¹	-74,0 ¹	3,5	-7,5	0,4	-0,9	0,1	-4,7	1,2

¹Figures on real appreciation for 1990 and 1991 are not reliable.

²Expected figures.

Source: Central Bank of Nicaragua.

Price policies

Most domestic prices were liberalised in 1990. Some exceptions remained, such as the prices for public transport (buses), energy and water. In practice, the liberalisation sometimes gave way to new monopolies or oligopolies. An example is the price of soap, for which a cartel, dominated by enterprises related to the Chamorro family, determined the price.

Trade policies

Although foreign exchange controls “de jure” continued to exist until 1993, “de facto” access to foreign exchange became free in 1990. This liberalisation of the foreign exchange market implied a big change as compared to the earlier period. Between 1990 and 1992, most import tariffs were rapidly reduced to 20 per cent, but there were exemptions. The tariff reduction process was partly reversed in the years after 1992. Some tariffs increased again, while the number of exemptions also increased. In addition, concomitantly with the liberalisation, the government introduced import permits for some important products. The holders of these licenses exerted monopoly power in the domestic market, so that not all import prices came down. This permit practice seems to have gone long unnoticed by the World Bank and the IMF. However, in 1997 these institutions pressured the government to abolish the permits as part of the preconditions for the second ESAF (Dijkstra, 1999). This pressure succeeded because a domestic force, namely the capitalists that were related to the new Alemán government and that had not obtained permits themselves, supported it. The 1998 ESAF agreement also included the lowering of all import tariffs to 10 per cent within 30 months.

Financial and monetary policies

In 1991, private banks were admitted along with the nationalised banks, and interest rates were liberalised. In practice, the newly emerging private banks began to take most deposits. However, state banks still allocated most of the credit. This meant that state banks also bore the losses as a result of non-repayment, which occurred on a large scale in 1991 and 1992 as a result of low cotton prices, in particular. In the context of the stabilisation effort, monetary policy became very strict. The credit ceiling was determined by the foreign exchange income available (Evans, 1995). In practice, small borrowers were rationed out (Jonakin, 1996). Private banks obtained large profits due to large spreads (Evans, 1998). All in all, credit policies changed drastically in the 1990s as compared to the 1980s, when real interest rates were negative and a large proportion of credit was allocated to small farmers. In 1997, the credit policy temporarily became more permissive and some small farmers benefited (Banco Central de Nicaragua, 1998).

The Chamorro government still succeeded in obtaining international aid for recapitalising ailing state banks, officially, to soften the social consequences of adjustment – but practice was different. However, after several failed attempts at making them profitable, the government was pressed to liquidate or privatise them. The biggest state bank, the *Banco Nacional de Desarrollo* (Banades), was finally liquidated in 1998 under the Alemán government. Offices were either closed or sold to private banks. In the latter case, the World Bank and the Inter-American Development Bank (IDB) would pay \$35,000 to private banks for each branch office purchased. World Bank and IDB would also pay losses involved in closing offices.

Privatisation

The Chamorro government began the privatisation of the 351 state enterprises in agriculture and industry already in 1990. The process took five years, and was accompanied by many disputes between former owners, new managers, and workers and peasants on the allocation of these firms. In the meantime, many enterprises suffered from insecurity that hampered their access to credit. In 1993, a law was approved on the distribution of these assets: 25 per cent would go to former owners, 25 per cent to the workers, and 50 per cent to former soldiers of both the army and the contrarevolutionaries. Former owners who could not get back their properties would receive indemnisation bonds. Many former state enterprises were closed. On the completion of the process, the state had suffered a net loss, in spite of the fact that these enterprises had produced 30 per cent of GDP. It was also clear that the privatisation was an excellent opportunity for the government to favour its constituency or to pacify opposition leaders.

The donors were also demanding the privatisation of state utility companies, such as the Telecommunications Company TELCOR, later called ENITEL. The proceeds of this privatisation were to be used for the paying of the indemnisation bonds (Gobierno de Nicaragua, 1993). TELCOR was a profitable company, and its privatisation met with strong opposition from both workers and unions, and from Parliament. Although this privatisation was a condition for both the first (1994) and the second ESAF, the privatisation has still not been completed.

Fiscal policies

The large fiscal deficits of the 1980s were the main cause of the hyperinflation in 1988-1990. With the Sandinista stabilisation attempt of 1988-89, expenditure had been reduced. Large numbers of government officials and soldiers were laid-off, real wages and subsidies were reduced, and state investment heavily cut. In 1990, however, expenditure increased again. This was partly due to campaign-related expenditure but even more to the “robberies” (*piñata*) during the few months of the interregnum.

Since 1990, taxes as percent of GDP have increased. Government expenditure diminished in 1991, but increased again between 1991 and 1994 (Table 2). The budget deficit excluding grants was reduced from 20 per cent of GDP in 1999 to 7 per cent in 1991. However, it remained at these rather high levels during the 1990s. The deficit of the overall public sector was even larger. This includes the losses of state banks and state public utility enterprises. Foreign grants have always financed these deficits to a large extent.

Table 2. Income and expenditure of central government and overall public sector, in per cent of GDP

	1990	1991	1992	1993	1994	1995	1996	1997 ¹
Revenues	14,6	19,5	20,5	20,1	20,5	22,0	21,9	24,4
Tax income	13,1	17,7	19,3	18,7	19,4	20,6	20,7	23,0
Non tax revenues	1,5	1,8	1,2	1,4	1,1	1,4	1,2	1,4
Expenditure	34,8	27,0	28,2	27,4	30,6	30,9	30,4	30,2
Recurrent expenditure	33,3	23,5	22,2	20,6	21,5	19,3	19,7	20,1
Capital expenditure	1,6	3,5	6,0	6,8	9,1	11,6	10,7	10,1
Balance excl. grants	-20,2	-7,5	-7,6	-7,3	-10,1	-8,8	-8,4	-5,8
Grants	1,5	11,6	4,3	7,3	4,9	8,4	6,9	4,3
Balance incl. Grants	-18,7	4,1	-3,3	0,0	-5,2	-0,5	-1,5	-1,5
Balance public sector excl. grants			-8,5	-8,6	-12,5	-11,2	-14,2	-8,9
Balance public sector incl grants			-3,5	-0,2	-6	-5,1	-5,6	-3,9
Financing of deficit:								
External	8,0	0,5	10,3	1,3	8,3	4,3	6,7	2,8
Internal	10,7	-4,6	-6,7	-1,2	-2,3	0,8	-1,0	1,1

¹Estimates.

Source: Central Bank of Nicaragua for central government operations and financing of deficit in 1990 and 1991, IMF (1998a), for balance public sector and financing, 1992-1997.

4. Overall developments in poverty

In Nicaragua, two comparable living standard measurement surveys have been held, namely in 1993 and in 1998. In these surveys, poverty has been measured on the basis of per capita household expenditure. The results of the latter survey have now just become available. Unfortunately, no comparable surveys have been carried out before 1993. In 1985 there was a survey held by INEC (Instituto Nacional de Estadísticas y Censos), which uses household incomes. Given the highly distorted prices and incomes in the 1980s, one can wonder how reliable these figures in themselves are. It is furthermore problematic to compare them with the 1993 data because of widely different survey methodologies.

Nevertheless, Arana and Rocha (1998) do compare these poverty figures for 1985 and 1993. They conclude that poverty (the headcount index) increased from 43 to 68 per cent, using for both surveys a poverty line of a monthly income of US\$ 60 for household heads. Whatever the exact figures may have been, an increase in poverty between 1985 and 1993 is not surprising given the large falls in GDP per capita between these years (Figure 2 above). Poverty seems to have increased more in urban than in rural areas (Arana & Rocha, 1998). Moreover, there proved to be a severe deterioration of income distribution: while the two poorest deciles earned 10 per cent of total income in 1985, this was only 1 per cent in 1993. The two richest deciles increased their share in income from 27 per cent to 52 per cent (Arana & Rocha, 1998: 622). Although the deterioration in the distribution may be overestimated, some can be expected. In 1985, the effects of the redistribution policies of the Sandinista government were still notable.

In 1991, inflation was finally controlled. In most countries, the stabilisation of the economy is in the benefit of the poor, so that the distribution of income improves and poverty reduces. Morley (Morley, 1998: 61) assumes that this also holds for Nicaragua. Arana and Rocha however, conclude that controlling inflation did not help to reduce poverty in Nicaragua. They argue that this was due to the large proportion of workers in the informal sector as compared to the formal sector. This share was 70 per cent in 1993. Workers in the informal

sector do not live on fixed incomes so suffer less from inflation; as a result, they also do not benefit from the reduction of inflation. In my view, a more convincing explanation for the limited effect of stabilisation on poverty reduction is the severely deteriorated distribution of income in the early 1990s. As argued above, under the Sandinista government the poor were still to a large extent protected from the high inflation rate. The urban workers were protected by the rationing system and the income in kind that went along with the very low real wages, and peasants benefited from the widespread provision of credit at real negative interest rates.

Between 1993 and 1998, economic growth was positive at an annual rate of 4.3 per cent, and income per capita also increased, albeit by a mere 1.6 per cent per year. Cumulatively, income per capita increased by 9 per cent between 1993 and 1998. With a poverty reduction elasticity of – 1 per cent which proved to be the average for Latin American countries (Morley, 1998), poverty should have been reduced by 9 per cent. In 1993, poverty was at 50.3 per cent. If Nicaragua would have the same poverty reduction elasticity as the average Latin American country, poverty should have reduced to 45.8 per cent. Actually, poverty reduced by less, namely by 2.4 percentage point to 47.9 per cent (Table 3). Nicaragua thus performs worse than the average Latin American country, while Latin America is already doing worse than other regions due to its high income inequality. It can be expected that the unequal distribution of income is also one of the main causes for this Nicaraguan result.

Table 3. The poverty headcount ratio in 1993 and 1998, in percent, and the change in percentage point

	<i>Extreme poverty</i>			<i>Poverty</i>		
	<i>1993</i>	<i>1998</i>	<i>Change</i>	<i>1993</i>	<i>1998</i>	<i>Change</i>
National	19,4	17,3	-2,1	50,3	47,9	-2,4
Urban	7,3	7,6	0,3	31,9	30,5	-1,4
Rural	36,3	28,9	-7,4	76,1	68,5	-7,6
Managua	5,1	3,1	-2,0	29,9	18,5	-11,4
Pacific coast						
Urban	6,4	9,8	3,5	28,1	39,6	11,5
Rural	31,6	24,1	-7,5	70,7	67,1	-3,6
Central region						
Urban	15,3	12,2	-3,1	49,2	39,4	-9,8
Rural	47,6	32,7	-14,8	84,7	74,0	-10,7
Atlantic Coast						
Urban	7,9	17,0	9,0	35,5	44,4	8,9
Rural	30,3	41,4	11,1	83,6	79,3	-4,3

Source: Gobierno de Nicaragua, *Perfil de la Pobreza 1993-1998, Evolución y situación actual*.

The result is even more disappointing, if we take into account that Nicaragua's initial (1993) poverty headcount ratio was high as compared to many other Latin American countries. On the other hand, the country's population growth rate is also rather high. The population increased from 4,2 million to 4,8 million people between 1993 and 1998 (Gobierno de Nicaragua, 1999), which implies an annual average population growth of 2.7 per cent.¹ Nicaragua thus probably satisfies the conditions referred to by Hanmer (*et al.*, 1999) above, namely about 3 per cent population growth rate, initial poverty at about 50 per cent, and we can also assume that the Gini coefficient is between 40 and 60 per cent. In this case, income per capita should grow by about 3 or 4 per cent annually for the absolute number of poor not

¹ I used this figure to approximate the *per capita* income growth rates for 1994-1998 (since no direct figures for these were available), subtracting 2.7 from the overall growth rate.

to increase. Since annual income growth per capita has only been 1.6 per cent between 1993 and 1998, we can expect that the absolute number of poor in Nicaragua has increased. This is confirmed by the results of the two poverty surveys. The absolute number of poor increased by 200,000 or by 9.5 per cent of the 1993 population (Gobierno de Nicaragua, 1999), in spite of a cumulative increases in real per capita income of also 9 per cent between 1993 and 1998. Again, this is a disappointing result.

Table 3 also suggests that the regional variations in the changes in the poverty index are large. In the urban areas of the Pacific region (the West) and of the Atlantic coast (East), poverty increased, while in all other regions including the rural areas of these regions, it decreased. Poverty fell most in Managua. In the following, I examine to what extent these results are due to the pattern (type) of growth that has been induced by the market reforms of the 1990s. In section 5, I look at the impact of stabilisation and structural adjustment policies on economic growth. I also analyse to what extent these effects are the result of 1) the implementation of structural adjustment policies, and 2) the factors influencing demand and supply as mentioned above, and 3) the existing distribution of income and assets. This is followed by an analysis of the sectoral and – to the extent possible – regional distribution of growth, and of the employment effects, in order to conclude about whether growth has been pro-poor. Finally, the direct impact of stabilisation and structural adjustment policies on the distribution of income and assets is examined. This is done by looking at government expenditure and tax policies, and at policies that affect the distribution of assets such as land and credit.

5. Indirect effects: adjustment and economic growth

The reforms of 1990, in particular the liberalisation of the foreign exchange market and the liberalisation of domestic prices could be expected to have a positive influence on economic growth. The same holds for the privatisation of state enterprises in industry and agriculture, but this process took several years. However, even after the success in stabilisation achieved in early 1991, the economy remained stagnant for some years. In the early 1990s, growth was hampered by factors both on the demand and supply side. Among the factors hampering growth on the demand side was:

- The overvaluation of the exchange rate combined with import liberalisation. From 1990-1993 there was some overvaluation of the exchange rate (see above). To some extent this was unavoidable given the priority for fighting inflation. However, IFI conditionality also implied that import tariffs were lowered. This was carried out rapidly in 1991 and 1992, although later some partial reversals occurred. As a result, imports increased in the early 1990s more than otherwise would have been the case, there was a boom of consumer goods imports (see above), and, as a result, local industries could no longer compete.
- The stabilisation policies themselves. Demand reduced due to lower real wages, restricted credit policies and lower government expenditure.
- The low international prices for coffee, cotton and meat. The government had expected to revive cotton, for example, by prioritising this sector in the allocation of agricultural credit. But cotton prices were so low, especially in comparison with prices of imported inputs, that cotton production virtually disappeared.

On the supply side, the following factors were relevant:

- Low productivity. This was a general problem in the economy, due to the civil war and Sandinista investment policies which gave priority to new projects and much less to maintenance.

- The insecurity of ownership. About 10 per cent of peasants who had received land during Sandinista land reforms in the 1980s had obtained legal titles to land. This caused insecurity of tenancy and these peasants did not have collateral for credit. After 1990, state farms were split up and handed over to former soldiers and *contras*; co-operatives were parcelled. It took some time before all these new owners obtained legal entitlements. In manufacturing, the privatisation of former state enterprises also took some time. For most enterprises, the process finished in 1994 or 1995. In the meantime, the firms that were going to be handed over to the workers faced problems in getting bank finance.
- The collapse of the state trading network in the countryside (Spoor, 1995). This affected the supply of basic grains, in particular. However, this seems to have been a temporary phenomenon since basic grains production began to grow already in 1992 (see below).
- Political instability. During the whole period of the Chamorro administration, there was intensive political polarisation. In the first years many strikes and other protest actions were held; later, the disputes were fought in Parliament. It is likely that these political uncertainties reduced the willingness to invest in the private sector. This factor probably continues to hamper private investment, since polarisation, strikes and protests are still the order of the day.

Since 1994, the economy has experienced positive growth rates. Although some of the above mentioned factors still applied (political instability, tight credit policies), changes came about in some other factors. The real exchange rate began to depreciate, the privatisation process of the 351 state enterprises was completed, prices improved for some export products, in particular coffee, trading networks were in place again and productivity began to increase in some areas. Recovery proved to be strongest in the primary sector, in particular, in agriculture: production increased by 16.9 per cent in 1994 while it had continuously declined from 1990 to 1993. Construction also registered high growth rates as of 1994. Recovery in the manufacturing industry started later (1995) and was much less pronounced. Value added in fisheries increased considerably from the beginning of the 1990s, but it started from a low base; this sector had suffered disproportionately from the war and the boycott in the 1980s. Not surprisingly, growth in the government sector continues to be negative over the whole period.

Table 4 confirms the important role of the primary sector in growth recovery. The primary sector contributes to half the total cumulative growth of the economy (1990-1997). Agricultural production represents the most important share of that, while cattle and fisheries contribute equally. Next to agriculture comes commerce (private trade) as an important growing sector. The contributions to growth of the manufacturing industry and construction are about equal, in spite of the much larger share of manufacturing in the base year GDP.

Table 4. Sources of growth

	1991	1992	1993	1994	1995	1996	1997	1990-97	1990-93	1994-97
Primary	-1,0	0,7	0,4	2,7	1,3	1,9	2,3	9,0	0,2	5,5
Agriculture	-0,8	-0,1	-0,9	2,4	1,2	1,8	1,7	5,6	-1,8	4,3
Cattle	-0,3	0,7	1,1	0,0	-0,4	0,1	0,5	1,7	1,5	0,3
Fisheries	0,1	0,1	0,3	0,4	0,6	0,0	0,1	1,7	0,5	0,5
Forestry	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Secondary	1,2	-0,9	0,1	0,7	1,4	1,4	1,5	5,7	0,4	4,6
Manufacturing	1,4	-1,2	0,0	0,2	0,6	0,5	0,8	2,5	0,2	2,1
Construction	-0,2	0,2	0,0	0,6	0,6	0,7	0,5	2,4	0,0	1,6
Mining	0,0	0,1	0,0	-0,1	0,2	0,2	0,2	0,7	0,1	0,8

Tertiary	-0,4	0,5	-0,9	-0,1	1,6	1,4	1,3	3,7	-0,8	4,6
Commerce	0,8	0,2	-0,4	0,3	0,9	0,9	0,9	3,9	0,6	2,9
Government	-1,6	0,0	-0,2	-0,6	-0,2	-0,4	-0,6	-3,6	-1,8	-1,3
Transport & Comm.	0,0	0,1	-0,2	0,0	0,2	0,2	0,3	0,8	0,1	0,8
Banking & Securities	-0,1	0,0	0,0	0,0	0,1	0,1	0,1	0,3	-0,1	0,4
Energy & water	0,0	0,1	0,0	0,1	0,2	0,2	0,2	0,9	0,1	0,6
Housing	0,0	0,0	0,0	0,0	0,1	0,1	0,2	0,6	0,1	0,5
Other services	0,2	0,1	-0,1	0,1	0,2	0,2	0,2	0,9	0,2	0,6
GDP	-0,2	0,4	-0,4	3,3	4,3	4,7	5,1	18,4	-0,2	14,8

Source: Elaboration of data from Central Bank of Nicaragua.

Looking at the composition of expenditure, domestic consumption first rises in the early 1990s and then begins to decline as of 1993. This decline of private consumption is accompanied by a rise in exports, thus confirming the role of the real depreciation of the exchange rate in stimulating exports. Between 1990 and 1993, a significant switch took place from public to private consumption. It is clear that the policy reforms carried out in 1990 had the immediate effect of stimulating private consumption at the cost of public consumption. This can be called the first adjustment of the economy. From 1994 onwards, another adjustment seems to have taken place that changed relative prices of tradables and nontradables. Both public and private consumption declined as a share of GDP since 1994.

Investment also increased as of 1994. However, until 1997 private investment was still below public investment. Public investment began to increase in 1994. Increasingly, public investment was directed to the rehabilitation of the existing social and physical infrastructure, which can be expected to crowd-in private investment. The response of private investment was also slow, however.

In 1997, public investment declined, not only as a share of GDP but also in real terms (by 9.5 per cent, Central Bank). Private investment increased significantly in 1997. The change in government may have been instrumental in this increase in private investment: the new government is closer to the traditional elite in the country. It remains to be seen, however, whether the trend continues.

Table 5. Composition of expenditure, in per cent of GDP, current prices

	1990	1991	1992	1993	1994	1995	1996	1997
Consumption	99	110	114	108	104	99	98	106
Private	67	90	95	91	88	84	83	91
Public	32	20	19	17	16	15	14	15
Investment	19	20	19	19	22	24	26	35
Fixed	20	18	20	19	22	24	27	35
Machinery & equipment	13	12	12	10	12	12	15	22
Construction	7	6	6	6	7	8	9	10
Other	1	1	2	2	3	3	3	3
Change in inventories	-1	2	0	0	0	0	-1	0
Private ¹			9	6	7	9	10	17
Public ¹			10	12	15	15	17	13
Exports	25	21	17	20	26	34	41	43
Imports	43	51	50	46	52	57	65	83
GDP	100	100	100	100	100	100	100	100
Memo item:								
Domestic savings ¹			-14	-9	-5	1	3	4

¹Source: IMF, Statistical Annex, March 1998. The 1997 investment figure in this source is lower than the figure of the Central Bank, while imports are also lower according to the IMF. For this reason: sum of public and private investment for 1997 is not equal to total investment.

Source: Central Bank of Nicaragua.

Sectoral income effects

Since no production data by region are available, we have to begin with an analysis of the sectoral distribution of economic growth. Within agriculture, basic grains already began to grow in 1993 and 1994. Export production decreased until 1994 but has recovered strongly since. The decomposition of agricultural growth strongly confirms the export-driven nature of economic growth since 1994 (Table 6). The depreciation made exports in general more profitable.

Basic grains recovery was due to the end of the war and the distribution of state farms to small peasants (mainly former *contras* and soldiers). The greater security in the countryside meant that the “agricultural frontier” was expanded: greater areas were taken into production, often at the cost of tropical forest. The distribution of former state enterprises was carried out in 1991 and 1992. In combination with the expansion of private trading networks in the countryside, these two factors led to the production increases of basic grains in 1992-1994, and also in later years. However, this is extensive growth. Yields per hectare have not increased, with the exception of rice production. No investment has been carried out, and the use of fertilisers has been reduced. This means that one can doubt whether this growth will be sustainable: the lack of fertiliser will reduce soil fertility. In response, peasants will go further into the forest, and this will reduce further the stock of Nicaragua’s forest and timber resources.

With respect to agricultural exports, some export prices began to increase, in particular for coffee. The volume of coffee production did not register an increase until 1995 and 1996. The increase was clearly a response to the high export prices. This means that the liberalisation of coffee exports (implemented in 1990) in itself was not enough to stimulate an increase in production. The price for cotton, the other main traditional export crop, remained so low that this production virtually disappeared from Nicaragua. Meat prices also remained low and meat exports did not increase.

Table 6. Sources of growth in agricultural production

	1991	1992	1993	1994	1995	1996	1997	1990-97	1990-93	1994-97
Export products	-4,1	-0,1	-12,6	11,8	3,9	9,3	2,7	11,9	-16,2	17,1
Coffee	-4,5	7,5	-6,1	5,3	2,1	5,3	0,2	9,7	-3,2	8,0
Cotton	1,1	-4,6	-7,7	0,0	0,3	1,0	-1,0	-10,2	-10,5	0,3
Sesame	-0,9	-0,2	0,4	1,6	0,4	-1,6	-0,5	-1,3	-0,6	-1,9
Sugar cane	0,6	-1,8	-0,4	1,6	2,2	2,5	1,3	6,6	-1,4	6,4
Bananas	0,2	-0,5	-0,3	-0,1	0,2	0,2	0,0	-0,2	-0,6	0,5
Tobacco	-1,1	-0,6	0,0	-0,8	1,1	1,3	1,7	2,3	-1,6	4,4
Soya beans	0,0	0,0	0,6	0,9	0,2	0,1	0,6	2,4	0,5	1,0
Peanuts	-0,1	0,0	0,9	3,4	-2,7	0,5	0,5	2,2	0,7	-1,5
Basic grains	-0,4	1,0	4,3	5,3	-0,9	1,8	4,0	15,4	4,6	5,9
Rice	0,3	0,1	1,9	2,2	0,0	0,4	3,0	8,3	2,1	4,1
Beans	-0,3	-0,1	1,0	2,0	0,0	-0,7	0,3	1,9	0,5	-0,5
Maize	-0,4	0,6	1,1	1,0	0,0	2,0	-0,2	4,1	1,2	1,9
Sorghum	0,1	0,3	0,3	0,1	-0,9	0,1	0,9	1,2	0,7	0,4

Other	-0,5	-1,4	2,1	-0,2	4,2	-0,2	3,0	7,8	0,2	7,6
Total	-5,0	-0,5	-6,2	16,9	7,2	11,0	9,7	35,1	-11,4	30,5

Source: Elaboration of data from Central Bank.

Increases in productivity also played a role in increased production levels in agriculture. Some agricultural crops registered increases in yields. In coffee and sugar, production increases proved to be due to both increases in area and in yields. This can probably be related to special credit programmes for these producers. Although both large and small and medium producers cultivate coffee, only large producers benefited from these programmes.

For some peasants, the liberalisation of agricultural trade within the Central American Common Market was an important factor. This liberalisation has allowed, in particular, exports of beans and cheese to El Salvador. Small farmers, especially in the Central and North-Central region of the country produce these goods. The growth in livestock is mainly due to more production of chicken and eggs. Some increase in milk production can also be observed.

Non-traditional exports in agriculture have increased, but are still at a low level. Soya and peanuts exports are included here, as well as melons. Producers have benefited from credits. But Nicaragua started late with these non-traditional exports (during the 1980s Nicaragua was excluded from the Caribbean Basin Initiative of the US government that implied improved access to US markets for these products) and is much less competitive than, for example, Costa Rica. Since 1993, the Nicaraguan government has conceded *Certificados de Beneficio Tributario (CBT)* to non-traditional export producers. These certificates can be used to pay taxes. In practice, many traditional exports qualified for these CBTs that were in principle not eligible. In addition, many exports proved to be fictitious. The fiscal costs of these CBTs have been extensive, while the benefits are uncertain. In 1998 the CBT have been abolished.

Large export increases are notable for fisheries: prawns, lobster and other fish. Exports of these two goods increased from \$12,8 million in 1991 to \$79,4 million in 1997. The cultivation of prawns, however, is rather damaging to the natural environment, and therefore gives rise to doubts about sustainability. Although there was an increase in agricultural export production, in particular, in coffee, sugar and some non-traditional crops, most of the increase in exports came from manufactured goods. While manufacturing production began to recover only slightly in 1995, manufactured exports registered large increases from 1994 onwards. The real depreciation of the *córdoba*, coupled with stagnating domestic demand, stimulated these exports. Apart from food and tobacco which had always been important export products, some other branches have a large share in these manufactured exports of around \$40m each: electrical machinery, and other professional equipment (Banco Central de Nicaragua, 1998: 127). Furniture exports are also recovering (at \$17m in 1997), but some other historically strong branches, like shoe production or chemical products, lag behind.

Although there are also some large producers in the production of rice and sorghum, the majority of basic grains are cultivated by small peasants. They have therefore benefited from the production increases. In practice, this means that more peasants and peasant families have been able to cultivate land. The production increases in coffee, sugar, soya and peanuts have mainly benefited large producers. Part of the coffee output is also produced by small and medium farmers, but they have not benefited from the credit programmes, and they are cultivating on less accessible plantations with less optimum conditions. In these growing sectors, employment will have increased as well. However, in sugar and coffee, most workers are only employed during a few months a year. Moreover, the western region (around the city of León), that used to be dominated by cotton production has been impoverished, since employment in soya and peanuts does not match earlier employment in cotton.

Large and small farmers hold chickens and other livestock. In general, large farmers sell meat while small farmers produce milk and cheese: once the cows are older they are sold to larger farmers. Therefore, small farmers have benefited from the increased export of beans and cheese to El Salvador. Part of the gains probably also accrued to the traders.

Fishing of prawns, lobster and other fish is a large-scale activity. Prawns are cultivated in mangroves near the western border with Honduras. These activities provide relatively little employment. Production increases in construction and commerce will have benefited mainly people in urban areas.

Employment effects

The employment figures by sector (Table 7) confirm these developments. A first striking fact is that the economically active population (EAP) has increased by a high rate of 4 per cent per year during 1990-1997. Whatever policies would have been carried out, it would be difficult to have employment keep pace with this growth of the labour force. Employment has increased strongly in the primary sector, mainly in agriculture and fisheries, as can be expected. Although employment increases in fisheries are high, they are much lower than the increase in production, pointing to labour extensive production. In manufacturing industry, there have been employment losses and gains. Almost all the gross increase in employment (22,000) can be accounted for by the Free zone, where employment reached 17,000 in 1997 (Central Bank of Nicaragua). The central government registers a severe employment decline, but this is more than compensated for by an increase in employment in private trade. Employment in construction and in "other services" (social, community and personal services) also increased significantly.

On the whole, unemployment increased strongly in the early 1990s but began to decline slightly after 1994 (Table 8). However, less than half of the EAP is occupied full-time or during the whole year ("fully employed"). This figure even shows a declining trend, implying that more and more jobs are seasonal or part-time.² In rural areas, many poor peasants (men and women) did not have year-round employment and/or do not earn enough to maintain themselves. Nevertheless, table 8 shows that total underutilisation of the labour force has declined since 1993, although it is still higher than in 1990.

Table 7. Growth rates in employment by sector, in per cent

	1991	1992	1993	1994	1995	1996	1997	1990-97	1990-93	1994-97
EAP	4,0	4,0	4,0	4,0	4,0	4,1	4,0	31,8	12,5	17,1
Primary sector	-3,9	2,9	-0,5	8,7	5,2	6,8	8,5	30,3	-1,6	32,4
Agriculture and livestock	-4,5	3,2	-0,7	9,1	4,4	6,9	8,5	29,3	-2,1	32,1
Forestry	50,0	-33,3	0,0	50,0	0,0	0,0	0,0	50,0	0,0	50,0
Fishing	20,0	0,0	0,0	16,7	28,6	0,0	11,1	100,0	20,0	66,7
Secondary sector	2,9	-2,8	4,4	4,2	5,4	7,6	5,3	29,9	4,4	24,5
Manufacturing	6,9	-5,6	4,9	0,0	0,9	1,9	3,6	12,9	5,9	6,5
Construction	-6,3	6,7	3,1	18,2	15,4	17,8	9,4	81,3	3,1	75,8
Mining	0,0	33,3	0,0	-25,0	33,3	25,0	40,0	133,3	33,3	75,0
Tertiary sector	1,5	-0,4	-0,9	2,1	3,1	6,1	4,0	16,4	0,2	16,2
Trade	8,3	1,5	-0,5	3,6	1,0	4,9	6,0	27,2	9,4	16,2
Central government	-10,3	-4,2	-8,7	-3,6	-1,2	-7,5	-2,7	-32,7	-21,5	-14,3
Transport, communications	0,0	2,6	-5,0	0,0	5,3	5,0	4,8	12,8	-2,6	15,8
Banking and finance	-6,3	-26,7	0,0	0,0	0,0	18,2	23,1	0,0	-31,3	45,5

² The decrease in the figure for fully employed as of 1990 may paradoxically be due to the increase in basic grains production: since this is assumed to be less than year-round work, it leads by definition to less fully employed persons (I owe this point to Ruud Buitelaar).

Utilities	0,0	0,0	20,0	0,0	0,0	0,0	0,0	20,0	20,0	0,0
Other services	2,7	1,1	2,6	4,1	6,9	11,5	3,7	37,2	6,6	28,7
Total employed	-0,5	0,5	-0,1	4,9	4,2	6,6	6,0	23,5	0,0	23,5

Source: Source: Central Bank of Nicaragua.

According to the 1993 survey, most unemployed persons are found in Managua and in the West and the South of the country (World Bank, 1995). In 1993, poverty was not so much related to open unemployment (these people can afford to be unemployed), but to underemployment. The results of the 1998 survey suggest that this was different for women, and that this is due, in particular, to the situation in rural areas. Over the whole country, female unemployment is much higher (21.3 per cent) among extremely poor women than among poor women (16.4 per cent) or the non-poor (12.8 per cent) (Gobierno de Nicaragua, 1999).

Table 8. Employment, unemployment and underemployment in per cent of EAP

	1990	1991	1992	1993	1994	1995	1996	1997
Employed	92	89	86	82	83	83	85	87
Fully employed	50	47	47	46	46	46	46	47
Open unemployment	8	12	14	18	17	17	15	13
Underemployment ¹	16	15	14	13	12	12	12	13
Total underutilization ²	23	26	28	31	29	29	27	26

¹Computed (by Central Bank/Ministry of Labour) in full-time equivalents.

²Open unemployment plus underemployment.

In 1993, registered female labour market participation was lower among the poor than among the non-poor (World Bank, 1995). Poor women tend to have more children and they have to dedicate more time in other reproductive tasks such as collecting fuel wood and fetching water. But probably it is partly a statistical phenomenon, since participation of women in productive activities in rural areas is often not counted. According to the 1998 survey, unemployment is higher among women than among men, while underemployment is higher among men (Gobierno de Nicaragua, 1999).

A general hindrance for female employment is the reduction in the public provision of childcare services in both urban and rural areas. Women were over-represented in the government sector and have probably suffered disproportionately from the cuts in employment there. On the other hand, women benefited from the expansion in trade and in tourism. In these sectors that have been growing extensively in the 1990s women make up 57 per cent of total employment (Elson & Gideon, 1997). Women suffered from the collapse of textiles and garment industries, but they benefited from employment in the new enterprises in the Free Zone.

Real wages

In 1992, and as of 1994, the price of a basic basket of goods has increased more than the general consumer price index (CPI, see Table 9). After 1995, in particular, average wages have decreased relative to the costs of a basic basket (last line in this table). This means that the increase in employment in the last couple of years has been accompanied by a *decrease* in the real average wage. This is consistent with the earlier conclusion that a real adjustment has taken place as of 1994: real wage reductions have been an important component of domestic cost reductions that have led to the reduction of domestic consumption in favour of exports. It is also consistent with complaints of private sector firms producing consumer goods that local demand is still depressed.

Table 9. Inflation, wages and costs of living, end of year figures

	1990	1991	1992	1993	1994	1995	1996	1997
Inflation, CPI, in per cent	13490	866	4	20	12	11	12	7
Inflation, basic basket, in per cent	10805	293	9	19	13	12	14	17
Average wage ¹	366638	868	983	1099	1246	1427	1536	1664
Costs of basic basket ¹	434575	711	771	914	1031	1149	1307	1477
Average wage/costs basic basket	84	122	127	120	121	124	118	113

¹In *córdoba* oro; for 1990 in “old” *cordoba*’s.

Source: Elaboration of data from Central Bank of Nicaragua.

There is no one-to-one relationship between average real wages and the extent of poverty, or between the level of minimum wages and poverty. Wages determine income levels of the poor, but higher real wages may also increase costs to employers and therefore reduce employment. However, Morley (1998: 64) shows that in Latin American countries in the 1980s and 1990s, there proved to be a close positive relationship between real minimum wages and poverty reduction.

One of the surprising results of the 1993 living standard survey was that income in the informal sector was not lower than in the formal sector in Nicaragua. On the contrary, the average informal sector income was above the poverty line (World Bank, 1995). This proved to have changed in the course of the 1990s. The share of the informal sector in total employment reduced from 70 per cent in 1993 to 64 per cent in 1998. At the same time, average wages in the formal sector now proved to be 30 per cent higher than in the informal sector (Gobierno de Nicaragua, 1999).

6. Direct effects on the distribution of income and assets

Three such direct effects of government policies on poverty reduction are examined here. First, the policies regarding access to land and credit. Secondly, the fiscal and expenditure policies that influence the income distribution. This includes an analysis of the allocation of expenditure for social services, and the extent to which human capital is equally distributed. Thirdly, the operations of the existing Social Investment Fund, FISE (*Fondo de Inversión Social de Emergencia*) are analysed, in order to examine whether it has contributed to improving the targeting of social spending.

Access to land and credit

During the 1980s, about one-third of the total land area had been redistributed. Although most of this went initially to state farms, in the course of the 1980s much state-owned land was redistributed to small peasants. The state farms that remained were returned to former owners, or redistributed to workers, former soldiers or *contras* in the early 1990s. On the whole, the Nicaraguan land ownership was much more equally distributed in the early 1990s than in many other Latin American countries. However, there are signs that the distribution is becoming more unequal again. Many owners of small pieces of land have sold up, mainly to large landowners and at low prices. The reasons for these land sales include (Jonakin, 1996; World Bank, 1995: 39):

- lack of experience in agriculture
- low quality of the land, so that it was impossible to make a living
- acute liquidity problems, such as the need to pay debts
- lack of access to credit or agricultural extension services so that nothing could be done with the land

- the perceived insecurity of ownership, so that it seemed better to sell than to be expropriated later on.

The scale of the land sales is unknown. Jonakin reports that in the region of Rivas, large-scale traditional land-owning families acquired 83 per cent of sold land, “functionaries, politicians and entrepreneurs” 9 per cent, and smaller land-owners another 8 per cent (Jonakin, 1996).

The number of private banks has increased since 1991. Although their share in deposits increased between 1990 and 1995, their share in lending remained limited. Private banks financed less risky activities such as trade and services, sectors that could afford to pay the high real interest rates. The state banks were still extending most loans to production activities in industry and agriculture. However, both the amount lent and the composition of the lending portfolio changed.

In the manufacturing industry, the state banks lent mainly to private enterprises. State firms that were due to be privatised to workers were particularly excluded from credit (Dijkstra, 1996). In agriculture, the credit reduction affected small farmers much more than large farmers. Between 1990 and 1992, the share of large farmers in total agricultural credit increased from 31 to 71 per cent, and decreased somewhat to 67 per cent in 1993 (Jonakin, 1996). More importantly, repayment rates remained low and proved to be higher among small than large farmers. Given the restrictive credit policy that Nicaragua was carrying out, the low repayment by large farmers affected credit availability (and interest rates) for small farmers.

Public income and expenditure, and social indicators

The structure of tax income reveals a shift from direct to indirect taxes. This is usually considered to be regressive. The revenue from income and property taxes has declined, and the contribution of the general sales tax has increased over the years. Most of the increase in indirect taxes, however, is accounted for by an increase in tax income from imports. The higher import prices (in *córdoba's*) and rising import levels have caused these increases in spite of lower tariffs on most imports.

Within public expenditure, current expenditure for social services such as health and education hardly increased during the 1990s as a share of total expenditure (Dijkstra, 1999), although defence took a much smaller share than before. This lack of increase in social expenditure must be seen against the background of greatly deteriorating health and education conditions in the second half of the 1980s. Social spending as a share of GDP already decreased from a peak of 12 per cent in 1985 to a mere 8 per cent in 1989 (Table 10). However, the deterioration is more severe if we compare real per capita social spending in 1987 US dollars. This was at its high point in 1983 with US\$154, and decreased to one-half (\$77) in 1989. In the election year of 1990, public expenditure increased and so did real per capita social expenditure, to US\$ 104. However, over the next few years, there was a new decrease to \$76 in 1995.

Table 10. Social expenditure, as per cent of GDP and in 1987 per capita dollars, 1981-1995.

	1981	1983	1985	1987	1989	1990	1991	1992	1993	1994	1995 ¹
in per cent of GDP	10	11	12	9	8	11	10	10	11	12	9
in 1987 p.c. \$	141	154	150	107	77	104	91	88	89	97	76

¹Preliminary figures. Source: Arana and Rocha (1998), based on Cominetti, Rosella, and Gonzalo Ruiz, “Evolución del gasto público social en América Latina: 1980-1995”, Cuadernos de CEPAL, November 1996.

Per capita expenditure on health and education in 1993 was not lower than in most other Central American countries,³ but this spending was not substantially targeted to the poor (World Bank, 1995: 54). Spending per primary school student is about \$55 per year while the Latin American average is \$100. Although enrolment in primary education is almost 100 per cent (Table 11), it seems to have decreased in recent years and the quality of that education is low, especially in rural areas. Dropout rates and, in particular, repetition rates are high. The 1998 living standard survey shows, for example, that the educational “gap” (the difference between the grade in which the pupil should be according to age, and the actual grade) is 2.7 years on average, but is 4.2 years among the extreme poor in rural areas (Gobierno de Nicaragua, 1999). In 1993, the poor represented only 30 per cent of enrolment in secondary education, and only 2 per cent in higher education. Nevertheless, the government spends about 30 per cent (\$794 per student) of its educational budget on higher education. This is partly due to the Constitution, which states that 6 per cent of tax income must be spent on universities.

Table 11 shows that teacher-student ratios have increased for primary education, while they have decreased in secondary and tertiary education. This means that spending on education has become more regressive. Nevertheless, the 1998 survey shows that illiteracy at the national level has reduced from 23 per cent in 1993 to 19 per cent in 1998, and that average years of schooling also increased slightly, from 4.5 to 4.9 years.

Table 11. Social indicators

	1989	1990	1991	1992	1993	1994	1995	1996	1997
Infant mortality rate		62	50	50	50	50	50	41	41
Gross enrolment:									
Nursery	13	12	13	13	15	17	17	20	22
Primary	95	98	101	102	104	104	101	98	98
Secondary	33	33	37	37	36	38	39	41	42
Tertiary	4	7	9	9	10	10	11	11	13
Teacher/student ratio:									
Nursery	28	33	30	31	27	24	29	28	30
Primary	29	33	33	33	33	33	35	34	35
Secondary	48	36	41	35	27	30	29	33	35
Tertiary	19	17	16	15	15	14	15	14	14

Source: Central Bank of Nicaragua.

Public spending in health proved to be biased towards urban areas in 1993 (World Bank, 1995). Most public health care services are used by the non-poor. In addition, the non-poor also use private health care services. In general, immunisation rates for DPT and polio are at about 82 per cent and are only slightly lower in the countryside. However, vaccination against measles is an exception. Poor children are most likely to be excluded from this vaccination. Prenatal and birth cares are deficient, in particular in rural areas.

According to official figures, infant mortality rates have declined in the 1990s (Table 11). But a case study in one region showed that infant mortality increased between 1991 and 1993, while malnutrition increased by 50 per cent as compared to the 1980s (Evans, 1995: 221-2). The number of visits to a doctor fell from 1.7 per person per year in 1985-1990 to 1.2 in 1991-1992. Other sources point to increased incidence of illnesses such as measles and

³ However, with the exception of Costa Rica, Central American countries are notable for their low government spending in general, and for the lack of access of the majority of the population to basic services.

dengue, especially in rural areas (Jonakin, 1996). The 1998 survey reports that 20 per cent of the children suffers from chronic malnutrition (Gobierno de Nicaragua, 1999). One out of five children proved to have suffered from diarrhoea in the month before the survey, and more poor than non-poor families did not consult a nurse or doctor. The most important reasons for not visiting a health post were the physical distance and insufficient income to pay for the consult.

The social investment fund, FISE

On the initiative of several important donors, a social investment fund was set up in Nicaragua. It was established in 1990 under the name Fondo de Emergencia Social (Social Emergency Fund), but later it changed to Fondo de Inversión Social de Emergencia (FISE). Its general aim was to alleviate the social costs of adjustment. In the early years (1990-1992), creating employment for those who lost their jobs as a result of lay-offs from government and state enterprises was one of the most important objectives. FISE constructed many roads and some schools; many of these early projects were carried out in the capital Managua although poverty was much more severe outside the capital. In those years, FISE was heavily influenced by political factors. Over time, some changes came about in these characteristics.

The first objective now is to construct an infrastructure in poor regions; this has to be done as efficiently as possible. Employment creation has become a secondary by-effect. Tenders are organised for construction activities. These projects often include the construction of schools and health centres, but sometimes also water and sanitation projects, a community centre and roads. The decision on the beneficiaries of the projects to be implemented has become determined more by the extent of poverty in a certain region. The 1993 living standard survey has played an important role in focusing FISE towards alleviating poverty. A “poverty map”, constructed on the basis of the survey, determines the amount of money per capita invested in a certain region. This means that very few projects are carried out in Managua. Political influence has diminished over time, although the President (Alemán) still inaugurates most projects. FISE is an institution formally belonging to the government but has institutional autonomy. Currently, FISE is a well-organised institution receiving a lot of aid and employing qualified technicians. Because of its highly skilled personnel and ample resources, it can work much more efficiently than ministries. It is in charge of 19 per cent of the public investment budget, representing 0,8 per cent of GDP. Clearly, FISE is no longer an “emergency” fund, but has become the most important entity for social investment.

One of the problems with these kinds of separate institutions is the lack of co-ordination with existing institutions, in particular, ministries and local governments. There is some evidence that newly constructed schools stay idle because of lack of teachers, and that health centres constructed by FISE are now used for personal housing. In addition, there is the problem of co-ordination among donors on local projects. Many donors are now concerned about the social situation, and are setting up projects in poor regions. They all want the local population to participate in the selection of projects, and have set up their own structure to organise this. This is not very efficient, and creates a lot of confusion among the local population, especially since the time between these discussions and the final completion of the work is quite long.

According to an evaluation of FISE (IDEAS, 1998), the beneficiaries of the projects were satisfied with their role in the selection of projects. However, they were complaining about the lack of local employment created by the construction. Since tenders are announced in Managua, Managuan firms come to rural areas to carry out the work, and they employ very few local workers. In response, FISE now intends to organise tenders in provincial cities. Another complaint that came out of the evaluation was that the maintenance of projects was badly organised; as a result, the quality deteriorated rapidly. This was probably the result of the lack of co-ordination with local authorities. Recently, FISE set up a “fund for preventive

maintenance”. This fund will spend between US\$6 and US\$8 million per year. It is hoped that this will halt the decay of existing infrastructure works.

Although much of the construction work done by FISE is needed and will contribute to a better infrastructure for health and education services, FISE is not without problems. The establishment of a separate entity tends to weaken existing capacity in ministries, and there has proved to be co-ordination problems with these ministries and with local authorities.

7. Conclusion

Poverty is a very serious problem in Nicaragua. The available evidence suggests that it has increased between the mid-1980s and 1993. But the best comparison in view of available data can be made between 1993 and 1998, when living standard measurement surveys have been held using the same methodology. This is an interesting period, since the economy finally began to register positive growth rates, although growth rates per capita are still modest, at 1.6 per cent per year.

Between 1993 and 1998, the poverty headcount ratio decreased from 50.3 per cent to 47.9 per cent of the population. This is a disappointing result. It points to a poverty reduction elasticity of growth of only -0.5 per cent. This is much lower than the average for Latin America and the Caribbean (-1 per cent). It is especially disappointing given the high level of poverty at the outset, which presumably makes it easier to reduce it. In the same period, the absolute number of the poor has increased by 9.5 percent, in spite of a cumulative increase in income per capita of 9.0 per cent between those years.

The two factors that explain this disappointing result are the high population growth (still at 2.7 per cent annually) and the unequal distribution of income and assets. In fact, looking at the *direct effects* of government policies on poverty reduction, these policies seem to have deteriorated this distribution. Access of the poor to land and credit has been reduced, and the access of the poor to basic education and health care is still very limited. Although countrywide literacy rates appear to have increased, other indicators point to a deterioration of the schooling situation of the poor and a continuing relative neglect of primary education relative to secondary and tertiary education.

The observed reduction in the relative extent of poverty seems to be due to the indirect effects of government policies on poverty reduction, namely via economic growth. The real depreciation of the córdoba since 1993 has stimulated export production. Small peasants in poor regions have benefited from the liberalisation of agricultural trade in Central America. The real exchange rate depreciation has lowered real wages, but this has been accompanied by expanded employment. Relative formal sector employment has also increased as compared to 1993, and formal sector wages are now above informal sector incomes. These developments imply that economic growth has been “pro-poor” to some extent. However, in my view, this has been largely a matter of “luck” and has not been the result of conscious policies.

If the government is serious about poverty reduction, it should devote much more attention to the expansion, and improving the quality, of basic education for the poor. Secondly, it should worry more about the land sales by impoverished peasants and about the lack of access to credit experienced by small peasants. And thirdly, basic health care should be expanded. This should also imply more attention for mother and childcare and so contribute to a lower population growth rate.

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