

CHAPTER TWO

PRESSURES AND CONSTRAINTS ON PRODUCTION

INTRODUCTION

This chapter identifies the main international and domestic factors affecting Nicaraguan manufacturing production from 1980 to 1987. Part One briefly provides background information on the manufacturing sector. Parts Two to Four consider the country's foreign, financial and trade relations, and government economic and industrial policies, as described in the above chapter summary.

PART ONE: MAIN FEATURES OF NICARAGUAN MANUFACTURING PRODUCTION PRIOR TO 1980

Agriculture has traditionally played the leading role in Nicaragua's economic growth. Coffee cultivation for export dates back to the late 19th century. The agro-export sector expanded into cotton production in the 1950s and diversified into sugar and beef exports in the 1960s in response to international market prices. Agro-exports have accounted for the major share of export earnings, thereby providing the foreign exchange for capital goods imports. Prior to 1960, the expansion of the agro-export sector was accompanied by the development of related industrial capacity, although to a very limited degree. Agro-industrial plants such as coffee and cotton mills were established to process export crops. Workshops were set up to repair imported agricultural and transport equipment, thereby contributing to the formation of technical skills. At the same time, several small cottage industries produced consumer goods such as food and beverages, shoes and clothing, and furniture on an artisan basis.¹ Industrial capacity on a somewhat larger scale was limited to sugar mills, cement and beer production and a textile mill.²

The Nicaraguan manufacturing sector developed primarily during the 1960s and 1970s,

following the creation of the Central American Common Market. In 1961, five countries signed the General Treaty of Central American Integration in an attempt to foster import substitution industrialisation at regional level. In Nicaragua, this led to investment in industries producing consumer and intermediate goods, as described below. The Nicaraguan manufacturing sector showed average annual growth rates of 11.2 per cent in the 1960s, thereby increasing its share of GDP from 12 per cent in 1960 to 20 per cent in 1970. Annual growth rates fell to an average of about 6 per cent in the 1970s.³

Ownership of manufacturing firms was divided among foreign investors (representing 25 per cent of total fixed assets in 1980), the Somoza family and local private capital. The former properties of Somoza and his associates represented about 25 per cent of industrial output in 1980. The private sector included both large and medium firms, owned mainly by members of two economic groups, and a small-scale industrial sector. Small-scale industry accounted for about 24 per cent of manufacturing value added in 1980.⁴ The following sections describe the main features of the manufacturing sector which resulted from this incipient industrialisation process and in turn determined the vulnerability of firms to changes in their external environment in the 1980s.

1. Import Dependence

The Nicaraguan industrialisation process was dependent upon stable agro-export earnings resulting from both output increases and favourable terms of trade. This secured the manufacturing sector's import capacity, enabling it to rely on stable supply channels. Manufacturing growth was accompanied by an increase in imports of raw materials, inputs, machinery and equipment, resulting in a more rigid dependence on foreign exchange.⁵ In 1977, raw materials, inputs and capital goods for industry accounted for just over half of Nicaragua's total imports. (Raw materials and inputs accounted for 38 per cent of these imports and capital goods approximately 15 per cent.)⁶

Some branches depended almost entirely upon imported inputs. For example, a 1974 study showed that imports represented 96 per cent of inputs used in the manufacture of rubber parts,

95 per cent in electrical appliances, 88 per cent in printing and publishing, 85 per cent in metal products, and 65 per cent in chemical products.⁷ Nicaragua's manufacturing sector did not include a basic metals industry, spare-parts production capacity or a machinery and machine tools branch. The country did not produce vital inputs such as paper, rubber, glass and synthetic fibres, thereby reinforcing this sector's import dependence.⁸ The United States was the major supplier to the manufacturing sector, while the Central American countries provided 20 per cent of the imported raw materials and inputs.⁹ The manufacturing sector was therefore dependent upon the smooth functioning of both US-Nicaraguan trade relations and the Central American Common Market.

Several manufacturing firms did utilise raw materials and inputs supplied by the domestic agricultural and manufacturing sectors. These links are often overlooked by analysts who emphasise this sector's lack of integration with the domestic economy (see Brundendius 1987; Harris 1985).¹⁰ Intermediate inputs such as chemicals and packaging materials and containers were supplied domestically. Yet this did not change the sector's import dependence because the factories producing these intermediate goods were themselves dependent upon imported materials and equipment. A foreign exchange shortage affecting these factories would in turn result in interruptions in domestic supply channels to other production units. The agricultural and forestry sectors provided raw materials for the manufacture of leather, shoes, furniture and other wood products, as well as some food products such as powdered milk, packaged meat and cottonseed cooking oil. These branches were affected directly by output levels in the primary sector, while also remaining dependent upon foreign exchange for spare parts and often intermediate inputs.

Nicaraguan manufacturing production in the 1970s was not highly dependent upon foreign technical know-how and skills. Multinational subsidiaries introduced foreign technical know-how primarily in the 1960s. Even at that time, many subsidiaries were established on the basis of mature technologies which were already accessible and well-understood on an international level. Licensing agreements were not used extensively by domestic firms. Nicaragua had a well-developed chemical and civil engineering sector by the 1970s.

In contrast, industry's dependence upon imported raw materials, inputs, spare parts, machinery

and equipment would leave it highly vulnerable to changes in the country's foreign sector in the 1980s. Research carried out in the 1980s focused on how this import dependence could be reduced through investments in selected areas, as well as rationalisation measures aimed at reducing the use of imported inputs (see Brundendius 1987; Harris 1985; Nicaragua, Ministry of Economy, Industry and Commerce 1989a, 1989c). Few empirical studies have examined what happened inside production units when the country ran up against severe foreign exchange constraints in the 1980s. Because of its high import content, we would expect the manufacturing sector to be hit severely by foreign exchange constraints, as well as by the US financial and trade embargo.

2. Main Branches and User Sectors

The Nicaraguan manufacturing sector produced basic consumer goods and intermediate inputs for construction, agriculture and industry. Non-durable consumer goods represented 66.5 per cent of value added in 1977 and consisted mainly of food, beverages, tobacco, textiles, clothing and shoes.¹¹ To some extent, these industries replaced the small cottage industries which had traditionally produced these goods. The substitution of formerly imported luxury goods occurred only on a minor scale as the wealthy purchased these items directly from the United States.¹² In the 1970s, Nicaragua did establish firms producing durable consumer goods such as household appliances. Yet these firms represented less than 7.2 per cent of manufacturing value added in 1977. Intermediate goods accounted for 26.3 per cent of manufacturing value added in the same year. This group included agricultural and industrial inputs and construction materials for the domestic and regional markets. The chemicals and metalworking industries were the two main intermediate goods producers and were also among the major exporters to the Central American region.

The creation of a protected regional market did provide the impetus for industrial development in the 1960s.¹³ Manufacturing growth under the Central American Common Market led to an increase in Nicaraguan exports to the region from US \$1 million in 1960 to over US \$100 million in 1977-78.¹⁴ For many products, installed capacity exceeded domestic demand, at the

same time that much of Nicaraguan manufacturing was not internationally competitive. While this did leave industry vulnerable to conditions in the Central American market, the latter did not absorb the major portion of manufacturing output. In 1977, the regional market only represented 13 per cent of Nicaraguan manufacturing production value, as compared to 76 per cent for the domestic market and 12 per cent for the rest of the world.¹⁵ Manufacturing would remain dependent upon conditions in the regional market, particularly as regards its foreign exchange-earning opportunities. Yet changing domestic demand conditions would have a greater influence upon the majority of enterprises in the 1980s. Part One highlighted Nicaraguan industry's import dependence and its integration with the regional and domestic market prior to 1980. Part Two will now look at the changes that occurred in the external environment of manufacturing firms during the following decade.

PART TWO: NICARAGUA'S FOREIGN SECTOR IN THE 1980s

Nicaragua's foreign trade and financial relations determined to a significant degree its ability to operate and maintain existing industrial production capacity, as well as to carry out investments in expansion and modernisation. The Sandinista government set out to transform the country's productive structure so as to reduce the impact of fluctuations in international commodity prices and adverse terms of trade.¹⁶ Yet these efforts were necessarily long-term. In the short-run, the country would continue to rely on agro-exports for foreign exchange earnings.

In light of this, the government aimed to maximise agro-export earnings and rationalise imports, while diversifying its international economic relations.¹⁷ Agro-export earnings fell short of the amount required to finance imports and meet debt payments, leaving Nicaragua dependent on foreign financial flows to make up the difference. Like several small dependent economies, Nicaragua remained vulnerable to changes in world commodity prices, as well as to the availability of external finance and the terms and conditions under which it was extended. The 1980s were characterised by increased instability in commodity and financial markets. At the same time, Nicaragua faced abrupt changes in its international environment associated with the political response of various countries to its revolution. The following sections describe

Nicaragua's trade balance, foreign financial flows, and trade relations.

1. Trade Balance

The current account deficit widened over the 1980s due to declining terms of trade and a fall in export volume. By 1986, export earnings were at 38 per cent of their 1977 levels. The value of imports in nominal terms remained close to 1977 levels despite significant price increases for imported goods. This reflected a decline in import volumes enforced by increasingly severe import restrictions. In 1986, exports were valued at \$271 million, while imports were at \$854 million.

The country's external terms of trade deteriorated severely from 1977 to 1983. Export prices (measured at unit value in US dollars) rose by 11 per cent, while import prices increased by 78 per cent, thereby reducing the terms of trade index by 38 per cent.¹⁸ Nicaragua continued to face unfavourable terms of trade from 1984 to 1987. At the same time, a drop in export volume contributed further to the decline in export earnings. Table 2.1 shows changes in the volume and value of Nicaragua's four major exports between 1978, 1984 and 1986.

Table 2.1: Nicaragua: Main Exports, Volume* and Value, 1978, 1984, 1986

US dollars (millions) at current prices

	1978	1984	1986
Cotton			
Value	140.9	133.9	41.0
Volume	2,804.0	1,809.0	1,062.0
Unit Value	50.2	74.0	38.6
Coffee			
Value	199.6	122.3	106.5
Volume	1,188.0	892.0	667.3
Unit Value	168.0	137.1	159.5
Beef			
Value	67.7	18.4	3.7
Volume	74.9	19.8	5.2
Unit Value	0.9	0.9	0.7
Sugar			
Value	19.6	20.9	8.7
Volume	1,974.0	2,223.0	1,500.0
Unit Value	9.9	9.4	5.8

Note: * Cotton, coffee and sugar figures are in hundredweight; beef figures are in pounds (thousands).

Source: Grigsby (1987), based on figures from ECLAC and the Nicaraguan Planning and Budget Secretariat.

By 1986, the volume of cotton exports was 38 per cent of 1978 levels. Coffee exports had surpassed 1978 levels by 1983, but then fell to below this mark in 1984 and 1986. Coffee and cotton together represented 54 per cent of the country's total export earnings in 1986.¹⁹ After showing an increase in 1984, sugar exports declined in both volume and value in 1986. Finally, beef exports fell dramatically during these years. Earnings from manufactured exports also declined significantly during the same period, causing a greater dependence on agro-exports.²⁰

The decline in export volume stemmed partly from international factors. The agro-export

sector was affected by an insufficient supply of raw materials and inputs due to limitations on the country's import capacity.²¹ Beginning in 1983, this sector was also hit directly by the US-backed contra forces which targeted production units. According to estimates by E.V.K. FitzGerald, damage through direct destruction and production losses from 1983 to 1986 averaged about US \$146 million a year, equivalent to 38 per cent of average exports during this period.²² The 1985 US trade embargo also weakened the agro-export sector. In sum, the country could no longer count on the stable agro-export earnings that formerly had provided the basis for manufacturing growth.

2. Foreign Financial Flows to Nicaragua

Nicaragua was able to cover its trade deficit by obtaining foreign finance from a wide range of countries. Foreign financial flows from 1981 to 1983 reflected government attempts to diversify its international economic relations. The country obtained both multilateral and bilateral finance, the former representing 14 per cent of finance received in those years. Bilateral sources included countries in Latin America, Europe and Canada, as well as Arab and Asian countries. At the same time, the government initiated economic relations with socialist countries, which accounted for 31 per cent of total finance received during the 1981-83 period, as shown in Table 2.2.²³

Table 2.2: Nicaragua: Source of Medium and Long term Concessionary Loans, Credits and Donations*, 1981-1983 and 1984-1987

US dollars (millions) at current prices

	1981-83	%	1984-86	%
Western Europe, Canada and EEC	364.0	19	410.9	23
Multilateral	268.6	14	30.1	2
Socialist	601.3	31	1,188.2	67
Others	723.3	37	139.7	8
Total	1,957.2	100	1,768.9	100

Note: * These figures include multilateral and bilateral sources, as well as non-governmental organisations

Source: FitzGerald (1989), Table 8.14, p. 298, based on figures from Nicaragua, Ministry of Foreign Cooperation

The US administration led a concerted effort to reduce financial flows to Nicaragua by suspending all US bilateral loans after 1981 and pressuring US private banks and multilateral institutions to do the same. The country did not receive loans from the World Bank after 1982 or from the Inter-American Development Bank after 1983. It received only \$12 million in new commercial bank financing (on ninety-day terms) between 1979 and 1983, while paying over \$563 million in debt service to private banks during this period. Debt service payments represented a significant percentage of export earnings in those years, thereby causing a further drain on limited foreign exchange sources.²⁴

From 1984 to 1987, the total amount of loans, credits and donations to Nicaragua fell by 10 per cent as compared with the previous three years. Yet a more fundamental change occurred in the composition of foreign financial sources, as shown in Table 2.2. Multilateral lending fell sharply, representing 2 per cent of the total amount. In contrast, the socialist countries more than doubled their share, accounting for 67 per cent. Finance from Latin America and developing countries declined, while finance from Western Europe and Canada continued to

arrive at roughly the same levels as in the previous period. These changes in financial flows signalled a shift in the form in which finance was received. Loans and credit lines tied to imports of specific goods and services replaced hard currency as the main form of external finance. In 1980, liquid credit accounted for 80 per cent of foreign imports. Six years later, less than 25 per cent of imports were purchased with convertible currency.²⁵ As a result, Nicaragua had far less flexibility in determining the content and source of imports.

3. Trade Relations

The manufacturing sector was forced to adjust to the disruption of trade relations with the United States and Central American countries. The shortage of liquid foreign exchange contributed to a decline in regional trade. From 1980 to 1982, Nicaragua increased its imports from the region and its growing trade deficits with the other Central American countries soon surpassed the limits of the Central American compensation chamber. These deficits were initially covered by financing from the Central American Bank for Economic Integration (CABEI). Yet its access to these loans was closed when Nicaragua fell behind with payments to this bank in November 1982, in the face of an increasingly severe foreign exchange constraint.²⁶ With the breakdown of the Central American payments system, other countries would only supply goods to Nicaragua on condition they received payment in foreign exchange. Likewise, Nicaragua's exports to other Central American countries could only reduce outstanding debts.²⁷ By 1986, regional trade represented only 5 per cent of Nicaragua's total exports and 6 per cent of imports as compared to 21 per cent of exports and 22 per cent of imports in 1977, as shown in Table 2.3.

Table 2.3: Nicaragua: Percentage Distribution of Export and Imports 1977, 1984, 1986Per cent shares^a

	1977	1984	1986
Exports	100	100	100
Central American Common Market	21	17	5
United States	23	12	0
European Community	28	29	55
Socialist countries ^b	1	6	14
Others	27	36	26
Imports	100	100	100
Central American Common Market	22	9	6
United States	29	16	6
European Community	13	12	14
Socialist countries ^b	0	26	51
Others	36	37	23

Notes: a. Calculations are based on US dollars (millions) at current prices.

b. This includes country members of the former socialist trading group (CMEA).

Source: Grigsby (1987), based on figures from ECLAC and the Nicaraguan Planning and Budget Secretariat

The US share in Nicaragua's trade had fallen to 12 per cent in exports and 16 per cent in imports by 1984, the year preceding the US trade embargo. This was due partly to the

Sandinista government's efforts to diversify trade relations, and partly to US measures such as the reduction of the quota for sugar exports from Nicaragua by 90 per cent in 1983.²⁸ In the manufacturing sector, the shortage of hard currency available for import purchases had also led to a shift to alternative markets from 1982. While the above figures reflect a reduction in US-Nicaraguan trade, they mask a continuing reliance on the US market for an important share of raw materials, spare parts, agro-chemicals and agricultural equipment.²⁹ Because of this dependence, the 1985 US trade embargo had a direct impact upon the country's productive structure.

However, the US trade embargo did not lead to a major reduction in overall trade volumes because alternative markets were found to replace the US share in Nicaraguan trade. Western Europe increased its share of Nicaragua's exports from 29 per cent in 1984 to 55 per cent in 1986. The socialist countries replaced the US as the main import source, increasing their share in total Nicaraguan imports from 26 per cent in 1984 to 51 per cent in 1986, as shown in Table 2.3. The nature of external finance reinforced this shift to socialist country suppliers. Imports from socialist countries were usually financed by concessionary credits based on bilateral government arrangements. Interest on these credits ranged from 2.5 per cent to 5 per cent and repayments could be made over an extended period of ten or even up to twenty-five years. However, in most cases, these credit lines were tied to imports of specific goods and services.³⁰

In sum, the manufacturing sector faced a steady decline in the availability of foreign exchange and had to adjust to a complete suspension of some imported items. Yet the disruption of regional and US trade in the 1980s did not lead entirely to forced self-reliance. Rather, firms had to turn abruptly to new import sources according to the type of finance available at any one point in time. Also, social transformation, economic crisis and war abruptly altered the external environment of manufacturing firms from 1980 to 1987. To a large extent, state policies and decisions mediated the impact of these circumstances upon firms. Part Three will outline the general economic measures that influenced the demand conditions facing firms.

PART THREE: GOVERNMENT ECONOMIC POLICY

In 1979, the Sandinista government nationalised banks and foreign trade, the latter by

establishing monopoly control over the marketing of major exports and foreign exchange controls for imports. The properties of Somoza and his associates were expropriated and formed the basis of a new state sector, accounting for 18 per cent of total agricultural production and 30 per cent of manufacturing by the end of 1980.³¹ The government nationalised natural resources (primarily fishing, forestry and mining), although these activities did not represent an important share of GDP in the 1980s.³² The state established control over a significant share of wholesale trade by both competing directly with the private sector and by nationalising wholesale marketing of some products.

By nationalising foreign trade, the state gained control over a major part of foreign exchange entering the country. Agro-exporters were paid in local currency, at the same time that the *córdoba* was rendered non-convertible.³³ The Central Bank administered a multiple exchange rate system and allocated foreign exchange and domestic credit. The government abolished the automatic relation between domestic credit and foreign finance. State credit policy was used to promote investment strategy, strengthen the state sector and redistribute resources to small landowners. The state provided price guarantees to agro-export producers based on cost estimates plus a negotiated mark-up, thereby de-linking domestic prices from world prices.³⁴ Finally, there was a massive increase in government spending which remained unmatched by increases in tax revenue. Government expenditure as a portion of GDP increased from 13.2 per cent in 1978 to over 50 per cent in the 1984-87 period. The fiscal deficit represented 24.5 per cent of GDP in 1984 and 17.6 per cent in 1986.³⁵

The government pursued its development strategy based on this strengthened role in the economy. The main aspects of this strategy were the following:

- 1) basic needs provision, including public social programmes in health, education and housing, as well as subsidies for basic goods and services;
- 2) agrarian reform involving changes in credit and marketing structures, land redistribution, and the organisation of cooperatives;
- 3) state investment in agro-industry and geothermal energy aimed at improving

Nicaragua's position within the international economy; and

- 4) diversification of international economic relations.³⁶

This strategy called for the restructuring and development of the manufacturing sector to strengthen its role as supplier of basic consumer goods and inputs for priority sectors, particularly agriculture and construction. Likewise, the manufacturing sector was to play a key role in the processing of domestic agricultural products.³⁷

The state influenced the demand conditions facing the manufacturing sector both as one of its main customers and as regulator of the financial conditions under which other productive sectors carried out their operations.³⁸ Massive government spending, plus the combined effect of foreign exchange, credit and price policy on productive sectors, significantly influenced the demand for locally-produced manufactured goods. Due to its direct ownership of productive assets and control over a part of wholesale trade, the state could also potentially influence the demand conditions facing the manufacturing sector through its purchasing decisions. The following sections will look further at the role of the state in these areas.

1. The State as Customer

The central government became one of the main buyers of domestic manufactured goods in the 1980s. Its increased role in providing for social needs placed it among the main customers of firms producing basic consumer goods, as well as construction materials and educational and medical supplies. The Ministry of Domestic Commerce (*Ministerio de Comercio Interior*: MICOIN) purchased a set of basic consumer goods directly from

manufacturing firms at controlled prices and supplied them to neighbourhood shops according to minimum quotas per capita. Social spending as a percentage of GDP increased from 2.5 per cent in 1978 to 19 per cent in 1984.³⁹ From 1979 to 1982, some 1,200 primary schools, 200 secondary schools, 10 hospitals and 200 health care centres were built or repaired, thereby

generating a demand for construction materials.⁴⁰ The extension of education and health services implied a demand for locally-produced paper products, medicines and other supplies to these sectors.

The government's investment programme generated a sustained demand for metal products and construction materials which exceeded domestic production capacity in the 1983-86 period. From 1979 to 1982, public sector investment was primarily geared to reconstruction and the extension of the social and economic infrastructure. A large investment project in the development of geothermal energy was also initiated in this period. The average share of investment in GDP between 1979 and 1982 was just over 20 per cent, with the state accounting for 80 to 85 per cent of the total. Large-scale, capital-intensive, agro-industrial projects were implemented from 1983 to 1987. While these investment projects counted on external funding for capital equipment imports, construction materials were provided locally. These projects relied upon long-term credit in local currency from the National Investment Fund (*Fondo Nacional de Inversiones*: FNI), which in turn was financed mainly by the Central Bank. There were attempts to cut back the investment rate in the face of a growing fiscal deficit financed increasingly by recourse to the Central Bank. Despite these efforts, investment represented nearly 24 per cent of GDP in 1986.⁴¹

Defence spending came to represent 21 per cent of GDP and over half the central government budget by 1987. Nicaragua did not produce armaments or purely military supplies. These items were supplied by foreign countries and were not included in defence-spending figures. Domestic purchases for the defence sector included basic consumer goods required to support the mobilisation of infantry, materials for military construction, and other items such as water and petrol transport tanks.⁴² By 1985, production in the manufacturing sector was geared to support the war effort. For example, FitzGerald estimates that 45 per cent of production capacity in the shoe industry and 24 per cent in the textile and clothing industry were required to supply the armed forces.⁴³

As a result of defence requirements, the implementation of large-scale investment projects and efforts to meet the population's basic needs, government spending continued to generate a significant demand for manufactured products, despite the deteriorating situation in Nicaragua's

foreign sector. In addition, purchasing decisions in state-owned agricultural and manufacturing units influenced the demand for intermediate inputs produced by Nicaraguan industry. Likewise, the nationalised fishing, forestry and mining sectors required parts, auxiliary equipment and building installations which could be produced locally. Yet the government did not issue any specific policy to guide the purchasing decisions of state-owned production units. The general financial conditions facing these firms influenced their decisions regarding whether to import or purchase locally, as discussed further below.

2. The State as Regulator of Economic Activity

By regulating the financial conditions under which other productive sectors carried out their operations, the state indirectly influenced demand conditions facing manufacturing firms. This can be seen in state policy towards the agro-export sector. Due to foreign exchange, price and credit policy, agro-exporters had ample access to local currency and limited access to foreign exchange. Foreign exchange was allocated centrally first by the Central Bank and later by a small planning team attached to the presidency. The planning team decided upon foreign exchange allocations each week based on currently-available earnings from export, loans and donations. This control over foreign trade allowed the state to transfer surplus from the agro-export private sector to state accumulation and subsidised programmes. It also enabled the government to determine import content and to subsidise indirectly those sectors purchasing imports at the official exchange rate, which remained far below the parallel exchange rate during the period under study.⁴⁴

Price and credit policies guaranteed agro-exporters access to finance in local currency. Until 1985, bank credit advances represented 100 per cent of the production costs for cotton and roughly 80 per cent for coffee, sugar cane and sesame.⁴⁵ The system of guaranteed prices for agro-export producers shielded them from fluctuating international prices and meant that a downward trend did not reduce liquidity in local currency. As a result of this price policy, the Central Bank incurred foreign exchange conversion losses, representing 10 per cent of GDP in 1984. Despite two devaluations in the 1985-86 period, foreign exchange losses continued to

be a major cause of inflation.⁴⁶ At the same time, these policies strengthened agro-exporters' demand for domestic manufactured goods such as agricultural implements, equipment and trailers.

The supply of domestic credit was not determined by the availability of foreign finance; rather the increase in credit supply was associated with the government policy of stimulating production by providing access to credit at low interest rates. For example, standard interest rates were 17 per cent throughout the early 1980s whereas the inflation rate averaged 43 per cent between 1981 and 1984. Interest rates continued to be negative in the context of high inflation rates from 1985 to 1987.⁴⁷ The government used credit policy to further social transformation objectives such as agrarian reform, state-sector strengthening and the implementation of a mixed economy.

The state sector represented a disproportionate share of bank credit. For example, in 1984, state producers received 41 per cent of agricultural credit, while controlling only 19.2 per cent of the land.⁴⁸ The rural credit programme constituted a key aspect of agrarian reform and transferred considerable resources from the banking system to small landowners. The number of families enrolled in the rural credit programme increased from 28,000 in 1978 to 100,000 in 1980. Credit was granted at preferential interest rates, ranging from 8 to 13 per cent. Recuperation rates were low for both state and small-scale farming sectors.⁴⁹ The availability of credit for small-scale agriculture stimulated the demand for agricultural implements and tools as well as basic consumer goods.

Part Three has outlined government economic measures which contributed to the demand for domestic manufactured goods. Through government spending and price, credit and foreign exchange policies, the state influenced the volume of demand for domestic manufactured goods, as well as the nature of this demand. Furthermore, the same policies that generated the demand for manufactured goods also contributed to soaring inflation rates as export earnings and external financial flows declined. Inflation measured by the Consumer Price Index was 220 per cent in 1985, 657 per cent in 1986 and 1,800 per cent in 1987. Government industrial policies mediated the impact of these economic measures and hyperinflation rates on

manufacturing production and investment, as discussed in Part Four.

PART FOUR: GOVERNMENT INDUSTRIAL POLICY

As industrial planner and policy maker, the government further shaped the conditions facing state-owned manufacturing firms. Part Four outlines its industrial development strategy, prior to focusing upon specific policies and planning procedures.

1. Industrial Development Strategy

In 1982, the Ministry of Industry outlined its development strategy for the manufacturing sector.⁵⁰ This document established priorities between different branches within the sector based on two main objectives: 1) the production of basic consumer goods; and 2) the production of inputs for priority areas within agriculture, agro-industry, construction, manufacturing and transport, as defined in the country's general economic development strategy. Priority branches included:

food, beverages, footwear, clothing, chemicals (medicines) and paper and printing for their role in supplying basic consumer goods;

metalworking and construction materials for their role in providing intermediate goods and spare parts for agriculture, agro-industry, construction and transport;

textiles, leather and other branches that provide inputs to the above priority areas of manufacturing.

This strategy also aimed to strengthen intersectoral linkages by promoting those industries listed above that processed domestic raw materials. It stated that export product lines should be

promoted in cases where they generate net foreign exchange earnings.

In 1985, the government gave first priority to the production of defence goods and also called upon the manufacturing sector to produce the spare parts, inputs and equipment that were vital to maintaining the country's existing productive apparatus.⁵¹ This constituted part of the shift to a survival economy in the face of the escalating war, the US trade embargo and reduction in foreign financial flows. The objectives set out in the industrial plans of 1986 and 1987 also reflect this shift to a survival economy.⁵² The production of basic consumer goods remained a priority, but objectives were trimmed down to meet the specific requirements of the defence forces and to provide products included in the basic goods basket. The production of intermediate inputs was included among the objectives, but now the plan focused on those specific items that were required to operate and maintain existing production capacity. Plan objectives also included the production of construction materials, reflecting the demand generated by military construction and work-in-progress on state investment projects.

Throughout the period under study, the recovery of export levels was included among the objectives of the manufacturing sector, but this did not receive top priority until 1987. Previously, exports could not provide access to either convertible currency or imports from the region because of Nicaragua's outstanding debts with the other Central American countries. This situation changed somewhat after 1986 when Central American firms began to introduce barter trade. Given foreign exchange constraints and the increasing demand for domestic manufactured goods, how did the government gear limited production capacity towards meeting these priorities? This will become evident in the section below, which considers the state's role as industrial planner and policy maker.

2. The State as Industrial Planner and Policy Maker

This section looks at the government's role in implementing policies and planning procedures that influenced state-owned firms' current production and investment capacity. While this study considers only the state sector, similar policies were applied to private firms. Private industry, including small-scale enterprises, accounted for about two-thirds of manufacturing output in

1981.⁵³ By 1987, the state sector represented 42 per cent of manufacturing production value, while medium- and large-scale firms accounted for 43 per cent. Private small-scale industry's share fell to 15 per cent. The state sector was predominant in textiles, construction materials and metalworking, whereas the private sector was strong in chemicals, tobacco, food, beverages, footwear and printing.⁵⁴ This division was due to the political nature of expropriations, rather than to any other criteria stipulating which branches should comprise the state sector.

The People's Industrial Corporation (*Corporación Industrial del Pueblo*: COIP) oversaw the operation of state-owned manufacturing units. The corporation included both planning and administrative offices, and was divided into divisions according to areas of productive activity. It formed part of the Ministry of Industry and its director served as Vice-Minister. It hired state managers and also had the authority to fire them. State managers were held accountable to the director of their division.

The corporation had the legal authority to decide on the allocation of after-tax profits registered by state enterprises. Firms contributed a percentage of profits to finance central office operations (and productive investment in some cases) according to norms set by the corporation. Beyond this, each firm utilised profits to finance its own current production and investments.⁵⁵ The corporation influenced firm-level expenditure primarily through its control over foreign exchange, rather than dictating directly the allocation of after-tax profits, as discussed further below.

2.a. Availability of Finance for Current Production

The manufacturing sector faced an increasingly severe foreign exchange constraint during the period under study. By 1987, the amount of foreign exchange allocated to this sector for the purchase of imported raw material and inputs had fallen to 60 per cent of 1980 levels, as shown in Table 2.4.

Table 2.4: Nicaragua: Manufacturing Sector: Annual Foreign Exchange Allocation for Current Production 1980-1987

US dollars (millions) at current prices

	1980	1981	1982	1983	1984	1985	1986	1987
US dollars	160.8	119.9	159.6	146.8	145.4	139.8	128.9	96.2
Index (1980=100)	100	75	99	91	90	87	80	60

Source: Dijkstra (1988), p.234, based on Nicaraguan Ministry of Industry figures for 1980-1983; and Nicaragua, Ministry of Industry (1985a, 1985b, 1987b, 1988)

Under these circumstances, the allocation of scarce foreign exchange became the government's main planning instrument.⁵⁶ Each firm's access to imported raw materials and inputs depended to a significant degree on the priority assigned to its products in the industrial development strategy. Yet this was also contingent upon the type of finance

available to Nicaragua in any one period.

The share of convertible currency in total foreign exchange allocation for manufacturing current production dropped from 41 per cent in 1984 to 11 per cent in 1987.⁵⁷ During this period, there was a shift to supplier credit lines as the main form of financing manufacturing production. Foreign supplier credit lines and foreign aid together represented more than three-quarters of total foreign exchange allocation for current production in 1987, while direct barter trade provided the remaining share.⁵⁸ This dependence upon tied credit and aid limited the scope within which policymakers could use foreign exchange allocations to implement

development strategy. Foreign supplier credit lines were often extended to individual firms through the Ministry of Industry. Yet the latter had to adjust its import decisions and, thus, production plans to the type of inputs available through these channels. Among priority firms, access to imported resources depended increasingly upon their ability to shift to the new suppliers who were extending credit lines to Nicaragua.⁵⁹

The government allocated both convertible currency and credit lines as part of annual planning procedure. To initiate this process, each firm set output targets and estimated corresponding import requirements based upon input-output coefficients or past production experience. Drawing upon these estimates, each branch division of the state corporation outlined its preliminary plan, which was sent to the Ministry of Industry's Planning Department. The Ministry then proposed an overall plan for the manufacturing sector to the Planning and Budget Secretariat (*Secretaría de Planificación y Presupuesto: SPP*). Based on the availability of foreign finance, the Planning Secretariat cut back the proposed plans and established foreign exchange ceilings for each Ministry. Each branch division then adjusted its enterprise plans accordingly and held a series of meetings with state managers to discuss their implementation. By allocating foreign exchange according to output targets for specific product lines, central planners could potentially influence decisions regarding output composition, as well as raw material and input usage.

The government did not utilise its control over state bank credit to influence manufacturing production decisions. After the initial reactivation period, manufacturing firms generally did not use bank credit to provide working capital. However, the government did have some influence over enterprise finances in local currency through its price policies, as discussed below.

2.b. Input and Product Prices

Under conditions of hyperinflation, government exchange rate and price policies had a major impact on the production costs of domestic manufactured goods. Due to exchange rate policy, the price of imported inputs was low throughout the period under study. From 1980 to

February 1985, the official exchange rates for imports ranged from ten to twenty-eight *córdobas* to the dollar, while the average annual inflation rate was registered at 43 per cent. Although there were two devaluations (in February 1985 and February 1986), the local currency continued to be over-valued. The government introduced an official parallel market in 1981, which was abolished in 1983 and then reintroduced again in 1985 at a floating rate. At the same time, there continued to be an illegal market, and the gap between the official and illegal exchange rate widened, as shown in Table 2.5. While firms could often acquire imported goods through the parallel and illegal markets, these were purchased at much higher prices.

The state set prices for some domestically-produced raw materials and intermediate inputs at below market prices. Its ability to enforce these prices was enhanced by its direct ownership of several firms producing these items. The state also attempted to intercede in the distribution of key agricultural inputs for manufacturing production, such as cotton seed for cooking oil production.⁶⁰ Two other factors also held down production costs artificially in the inflationary period. There was centralised wage fixing, in which wage increases remained far behind the inflation rate. Also, the government decided not to revalue equipment in the inflationary period. This meant that the real depreciation of machinery was not included in prices.

The government applied controlled product prices below the market price to manufacturing firms producing priority goods, such as those comprising the basic goods basket and intermediate inputs. Yet these same manufacturing firms had access to inputs through official channels. Likewise, their product prices were based on costs plus a guaranteed profit margin. Therefore, we would not expect government-controlled prices to pose a constraint on the efforts of these firms to increase production.⁶¹ The government also regulated prices for other basic consumer goods and intermediate inputs. The People's Industrial Corporation reviewed prices for these products on a quarterly basis, and firms had to justify price increases.

Table 2.5: Nicaragua: Foreign Exchange Rates, 1979-1987Nicaraguan currency (*córdoba*) / US dollar

	Official Debt	official imports ^a	official exports ^b	legal "parallel" market	illegal market
Feb. 1979	7	7	7	n.a.	8
Apr. 1979	10	10	10	n.a.	10
Jun. 1980	10	10	10	n.a.	21
Mar. 1981	10	10/15	10-14.5	n.a.	26
Sep. 1981	10	10/15	10-14.5	28	33
Feb. 1982	10	10/15	10-17.2	28	38
Jul. 1982	10	10/15	10-17.2	28	50
Feb. 1983	10	10-28	12.7-21	28	55
Jun. 1983	10	10-28	12.7-21	n.a.	77
Feb. 1984	10	10-28	12.7-21	n.a.	140
Sep. 1984	10	10-28	21-60	n.a.	250
Feb. 1985	28	20-50	28-60	n.a.	250
Jun. 1985	28	20-50	28-60	650	700
Feb. 1986	70	20/70	70-188	770	1,150
Jun. 1986	70	20/70	685 ^c	1,300	2,200
Mar. 1987	70	20/70	1,680 ^c	3,300	4,700
Jun. 1987	70	70/170/370	2,785 ^c	5,500	---
Nov. 1987	70	70/170/370	5,035 ^c	20,000	55,000

Notes: a. Between February 1981 and November 1987, there were different exchange rates for imports
b. After July 1979, there were multiple implicit exchange rates for exports, varying per product and per year; figures are estimates.
c. An estimated average, based on the rate for non-traditional agricultural exports (changing 50 percent at official rate and 50 percent at parallel rate; see INIES 1987. *Boletín Socioeconómico* 5 (August-September): 2
n.a. signifies not applicable.

Source: Compiled by Dijkstra (1992) from various sources, p.121, Table 5.7.

The Ministry of Domestic Commerce set up state marketing channels for basic consumer goods. Likewise, the government established marketing channels for agricultural equipment and implements. As a result, the state was in a position to enforce government-controlled and regulated prices on a number of items. Other product prices were set directly between the firm

and its customers. The extent to which the producer could pass input price increases on to the customer depended on direct negotiations between the two sides. As a main customer of manufacturing firms, the state influenced product prices through its purchasing decisions. Under these circumstances, profit margins reflected state pricing policies more than production performance.

Manufacturing firms received a percentage of export income at the official rate and a percentage at a higher rate, as part of an export promotion scheme. In 1983, the government introduced a policy enabling exporting enterprises to maintain 40 per cent of exported value in foreign exchange certificates, which were held by the Central Bank. Enterprises had to apply for the use of these dollars and applications were often turned down because dollars were not available. According to this policy, 40 per cent of exported value could also be changed at the higher rate of 28 to 1 as compared to the official rate of 10 to 1.⁶²

The government attempted to exercise some control over input and product prices in the context of hyperinflation. These policies did manage to hold down the prices of some manufactured goods, particularly basic consumer goods; yet they could not mitigate the effects of hyperinflation on company accounts. Financial indicators became increasingly meaningless as annual inflation rates continued to climb. Inflation had an uneven impact on different cost items. Due to government policies, the costs of labour, imported raw materials and inputs remained low, as did those of some items purchased through domestic state channels. Other locally-purchased items were subject to erratic price jumps. Changes in production costs over time, as well as variations in the cost structure of individual products, reflected primarily the effect of inflation on different cost items. High inflation rates and the distortion in relative prices made it virtually impossible for either planners or managers to evaluate performance or make production decisions based on financial indicators.

2.c. Investment Capacity

This section considers investment in existing firms as distinct from state investment in the establishment of new production units. The latter were generally carried out by government ministries and were included in the public investment programme that constituted part of the annual plan. Both the availability of foreign finance and domestic credit supply influenced the public investment programme. In contrast, investment in existing firms generally occurred outside this framework.

The investment capacity of existing firms was determined first by their access to machinery and equipment imports. Government control over foreign finance became the main planning instrument for determining the investment decisions of state-owned enterprises. Investments were generally not financed from a central budget; rather firms invested according to their own internal financial resources and bank credit. Yet by controlling foreign finance for machinery and equipment imports, as well as other forms of technology transfer, the government had an effective say over firms' investment decisions. Through their control of foreign finance, planners at the branch level could potentially determine which firms would carry out investments, how much capacity would be created, and in what product lines, and technology choice and import sourcing.

In deciding the above factors, central planners had to work within the constraints determined by the nature of external finance available to Nicaragua at any one point in time. This in turn depended upon their ability to research and seek out opportunities for finance within the framework of bilateral cooperation agreements between Nicaragua and other countries. The terms and conditions of international technical relations were negotiated by branch-level officials and firm managers. Firms had access to imported machinery and equipment if they were included in government investment objectives, and supplier credit lines could be found to match their import requirements.

Once a firm had access to foreign finance, what domestic factors affected its investment capacity? Due to the overvalued exchange rate, imported machinery and equipment were available at low cost. Domestic credit was available from the state banking system at negative interest rates, thereby further enhancing its investment capacity. A shortage of skilled workers and construction materials affected the execution of investment projects on an economy-wide

level. These scarcities were particularly acute in the 1983-87 period when military construction and major state investment projects were carried out.

The government did not include profit maximisation among the main objectives of investment policy. Firms were expected to carry out pre-investment studies. Yet efforts to calculate the present value of an investment became virtually meaningless in a period of hyperinflation and distortions in relative prices. Due to the low cost of imports and negative interest rates, we could expect firms to invest when given the opportunity. We would not expect profitability criteria to play a major role in determining their investment decisions.

In sum, the government promoted priority branches and product lines, as defined in the industrial development strategy, through its control over the allocation of scarce foreign exchange. Its foreign exchange rate, price and wage policies curbed production costs and thus product prices of domestic manufactured goods, particularly in priority product lines. Yet the central government faced external limits on its own ability to plan production and investment effectively. Central planners had to adjust import purchases for the manufacturing sector and thus production and investment plans according to the availability of foreign finance in each period. Furthermore, the government exercised only limited control over input and product prices in the inflationary period. Given hyperinflation and its uneven effect on different cost items, central planners could not rely upon financial indicators or criteria either to guide their decisions or to enforce enterprise efficiency.

SUMMARY AND CONCLUSION

This chapter has identified the main international and domestic factors affecting Nicaraguan manufacturing production from 1980 to 1987. Nicaraguan industry was highly import-dependent and relied upon agro-export earnings to finance its expansion in the 1960s and early 1970s. Consequently, manufacturing production and investment decisions in the 1980s were circumscribed by conditions in the international environment, including changes in world commodity prices, trade relations and the availability of external finance. The absence of multilateral and commercial bank lending, combined with the fall in export earnings, generated

an acute shortage of foreign exchange in the 1984-87 period. The disruption of regional and US trade, which had been pivotal for Nicaragua prior to 1980, led to further constraints upon the country's import capacity and to the complete suspension of some imported items. Nicaragua could still obtain vital imports because of its access to tied loans and credit lines, mainly from socialist countries. Yet it enjoyed far less flexibility in determining the content and source of imports.

State expenditure, plus the combined impact of government economic policies upon productive sectors, resulted in significant demand for domestic manufactured products. This continued unabated throughout the 1980-87 period, despite the deteriorating situation in Nicaragua's foreign sector. Foreign exchange, credit and price policies provided ample access to finance in local currency and often limited access to foreign exchange, thereby sustaining the demand for domestic manufactured goods. The central government remained one of the main customers of the manufacturing sector through its social programmes, defence spending and public investment projects. These same policies contributed to high inflation rates as export earnings and foreign finance declined in the 1985-87 period.

As industrial planner and policymaker, the state further shaped the external environment facing individual firms. The government influenced production and investment decisions primarily through its control over foreign resources. Government exchange rate, credit and price policies provided sufficient conditions to create a soft budget constraint on manufacturing enterprises in local currency. The government did exercise some control over input and product prices in the context of hyperinflation, thereby holding down the prices of some manufactured goods. However, the uneven effect of hyperinflation on different cost items prevented central planners from relying upon financial indicators to enforce enterprise efficiency.

Under these external conditions, the following two forms of productive adaptation could be expected to characterise manufacturing production: 1) adaptation given foreign exchange considerations, and 2) adaptation to resource constraints. The first includes adjustments carried out in light of a strict foreign exchange budget and the availability of supplier credit lines. The second refers to adjustments brought about by immediate resource constraints. Through its control over foreign resources, the state was likely to influence these adjustment processes.

Further research is required into the extent and nature of demand-oriented adaptation. This needs to be interpreted in the light of government's role as customer and regulator of economic activity. Price-enforced adaptation was unlikely to constitute a predominant form of adaptation in manufacturing firms given the soft budget constraint in local currency.

NOTES

- ¹ See Laenen (1987), p.79-85.
- ² See Castillo (1989), p.12.
- ³ See Weeks (1985), p. 283-284; and Dijkstra (1988), p. 112-115, on the decline in manufacturing growth after 1967 when terms of trade deteriorated. This experience in incipient industrialisation under a protected regional market has received wide attention in both policy making and academic circles. See Dijkstra (1988), p.101-118 for summary and evaluation of neoclassical, structuralist and Marxist/dependency critique. Also see ECLAC (1982).
- ⁴ See Brundendius (1987) p.95 on former Somoza holdings, and p.99 on small-scale industry based on a 1980 survey by the Ministry of Industry.
- ⁵ In this respect, Nicaragua's industrialisation process prior to 1980 resembled that which had occurred in other Latin American countries since the 1930s. One of the main critiques of this type of import substitution industrialisation is that it resulted in high import dependence. See Little, Scitovsky and Scott (1970). Also see ECLAC (1982), on Central America.
- ⁶ Central Bank of Nicaragua (1977).
- ⁷ Harris (1985), p.39 based on Weeks (1981).
- ⁸ Harris (1985), p.60.
- ⁹ Central Bank of Nicaragua (1977).
- ¹⁰ Brundendius (1987) and Harris (1985) tend to overlook these links. Dijkstra (1988) draws attention to them, but then does not emphasise that domestic suppliers are also heavily import dependent.
- ¹¹ Brundendius (1987), p.93, Table 4, based on Nicaragua, Ministry of Planning figures.
- ¹² In the textiles and clothing industry, installed capacity in some product lines could be used to produce either luxury goods or basic consumer goods.
- ¹³ See Brundendius (1987), p.85-86.
- ¹⁴ Weeks (1985), p.282.
- ¹⁵ Dijkstra (1988), p. 106, Table 4.07, based on Central Bank of Nicaragua (1979). Harris (1985) emphasises the manufacturing sector's lack of integration with the domestic economy and particularly the agricultural sector. However, this overlooks the substantial links that did exist and shaped the nature of demand pressures in the 1980s.
- ¹⁶ See Wheelock (1983) for statement of Sandinista agro-industrial investment policy; and Irvin and Croes (1988) for critical discussion of public sector investment.
- ¹⁷ See Nicaragua, Ministry of Planning (1980), p.40; and Goldin and Pizarro (1988), p.24-25.
- ¹⁸ FitzGerald (1989), p.269.
- ¹⁹ Nicaraguan exports were valued at US\$271 million in 1986.

- ²⁰ The decline in manufacturing exports will be discussed in Chapter Four.
- ²¹ See Goldin and Pizarro (1988); Grigsby (1987); and Núñez (1987), on domestic factors affecting export performance. Also see Evans (1988), on the cotton sector.
- ²² FitzGerald (1989), p.274. See also FitzGerald (1987a).
- ²³ FitzGerald (1989), p.275.
- ²⁴ See Stahler-Sholk (1987a), p.159-60.
- ²⁵ See Goldin and Pizarro (1988), p.26.
- ²⁶ Stahler-Sholk (1987a), p.164 based on interviews with the Central Bank of Nicaragua and the Central American Bank for Economic Integration (CABEI).
- ²⁷ See Dijkstra (1988), p.243.
- ²⁸ See Maxfield and Stahler-Sholk (1985), p.246-247, for list of US measures aimed at disrupting commercial relations with Nicaragua prior to the 1985 trade embargo.
- ²⁹ In 1982, the United States supplied 42 per cent of imported chemicals, 64 per cent of imported raw materials and 44 per cent of imported spare parts. (Comparable figures were not available for 1984). Maxfield and Stahler-Sholk (1985), p.248.
- ³⁰ Berrios (1985), p.116.
- ³¹ Ruccio (1987), p.66.
- ³² Fishing, forestry and mining together represented 1.5 per cent of GDP in 1977. In the 1980s, these activities declined due primarily to their location in war zones. Central Bank of Nicaragua (1979).
- ³³ The *córdoba* is Nicaragua's national currency.
- ³⁴ See FitzGerald (1989), p.268-269; Gibson (1987), p.32-38; Grigsby (1987), p.8-10; and Weeks (1987), p.51-54.
- ³⁵ There are considerable discrepancies between sources concerning the fiscal deficit.
- ³⁶ See Nicaragua, Ministry of Planning (1980); Spalding, ed. (1987); and White and Young eds. (1988). The latter two references include articles on different aspects of this strategy as it evolved over the 1980-1987 period.
- ³⁷ See Nicaragua, Ministry of Planning (1980), p.47. Also see Dijkstra (1988), p.221-280 on industrial development strategy from 1979 to 1985.
- ³⁸ The state also influenced demand pressures on enterprises by setting output targets. This is discussed in Part Four on the state as industrial planner.
- ³⁹ Grigsby (1987), p.17.
- ⁴⁰ Irvin and Croes (1988), p.35.

- ⁴¹ See Irvin and Croes (1988) on Nicaraguan public sector investment program from 1979 to 1986.
- ⁴² FitzGerald (1989), p.275. See FitzGerald (1987a), p.203 on relation between defence spending and inflation.
- ⁴³ FitzGerald (1987a), p.207.
- ⁴⁴ See Conroy (1987), p.179-180; and Goldin and Pizarro (1988), p.24-25.
- ⁴⁵ Enríquez and Spalding (1987), p. 119.
- ⁴⁶ FitzGerald (1989), p.278, writes, "The implicit exchange rate (that is, support price divided by the world price) thus rose from 14 *córdobas* to the dollar in 1983 to 159 in 1986, while the official exchange rate had only moved from 10 to 70, and the implicit import rate (allowing for surcharges) from 11 to 90." See also Goldin and Pizarro (1988), p.29.
- ⁴⁷ Enríquez and Spalding (1987), p.119 for interest rates and Grigsby (1987), p.16 for figure on average inflation rate. The latter is based on World Bank (1986) "Nicaragua: Mission Report".
- ⁴⁸ Enríquez and Spalding (1987), p.120.
- ⁴⁹ See Ibid. p.113-121 on both the rural credit program and credit to state enterprises.
- ⁵⁰ Nicaragua, Ministry of Economy, Industry and Commerce (1989c), p.2-3.
- ⁵¹ Nicaragua, Planning and Budget Secretariat (1985), p.2; Nicaragua, Ministry of Industry (1986a), p.2. Also see Nicaragua, Ministry of Industry (1986a) on spare parts production program.
- ⁵² Nicaragua, Planning and Budget Secretariat (1986a), p.18-19; and Nicaragua, Planning and Budget Secretariat (1986b) p.53.
- ⁵³ The state sector represented about one third of value added in 1981. Brundendius (1987), p.96 based on 1981 survey of manufacturing industries. This includes mixed enterprises where the state has majority shares. 100 per cent state-owned firms represented 19 per cent of manufacturing value added in 1981.
- ⁵⁴ Ibid.; and Castillo (1989), p.20.
- ⁵⁵ Dijkstra (1988), p.161-162
- ⁵⁶ Nicaragua, Ministry of Economy, Industry and Commerce (1989a), p.4. Also see Dijkstra (1988), p.167-171 for results of sample survey of manufacturing firms.
- ⁵⁷ Nicaragua, Ministry of Industry (1988), statistical appendix.
- ⁵⁸ There is some discrepancy between figures on foreign exchange allocation for current production included in distinct government documents. However, these differences do not call into question the main points argued here. We have selected those figures that understate our argument.
- ⁵⁹ Nicaragua, Ministry of Economy, Industry and Commerce (1989a), p.4.
- ⁶⁰ See Dijkstra (1988), p.173-175.
- ⁶¹ This coincides with the results of the Dijkstra sample survey of manufacturing firms. See Ibid.

⁶² See Dijkstra (1988), p. 244; also see *Ibid*, p.198-201, for more detailed account of adjustments in the system of multiple exchange rates from 1982 to 1986.