CHAPTER 3

PATTERNS OF INDUSTRIALISATION AND INVESTMENT IN MOZAMBIQUE

In the previous chapter, it was argued that the analysis of industrial policy is more adequate if guided by the understanding of the underlying economic and political relationships upon which the process of industrialisation depends, because these relationships govern the specific economic formation that policy targets. This chapter provides the empirical foundation for such an understanding, as its aim is to identify the fundamental economic characteristics, conditions and relationships that govern the process of industrialisation in Mozambique.

By constructing a unique set of long-term time series and cross-section data, it is possible to establish the structural and dynamic patterns of development of the manufacturing sector and investment, and how they are integrated in an economy that is strongly influenced by its relationship with South African capitalism and by dependence upon foreign capital for financing of investment. The chapter argues that manufacturing has not performed the role of engine of growth and economic change; production and exports are narrowly specialised around a few sectors; and import substitution has not taken place in a systematic and significant way.¹ Therefore, intra- and inter-sectoral linkages are limited and narrow, and manufacturing value added (MVA) as a share of GDP is small and has not increased much over the last four decades.

¹ In orthodox literature, import-substitution is defined as a trade regime that protects domestic markets and discourages exports, and its presence is measured by the degree of market protection that domestic producers for the domestic market enjoy (Balassa 1990 and 1988, Krueger 1998, 1990a and 1990b, Lal 1984). This definition is not only simplistic and narrow but also flawed, because: (i) it focuses on exchange and excludes production and the development of productive capabilities from the analysis (Amsden 2001, Ocampo and Taylor 1998); (ii) it does not take into consideration the difficulties in measuring market distortion (Greenaway 1998, Greenaway, Morgan and Wright 1998); and (iii) it organically separates the domestic and world markets and does not consider that capable firms may produce for domestic and world markets as part of a single market expansion strategy (Gore 1996). A more accurate definition of import substitution is the replacement of imports by means of creating domestic capacities to produce what is imported (Hirschman 1981 and 1958, Fine and Rustomjee 1996, Gore 1996, Ocampo and Taylor 1998). Therefore, import substitution is a process by which the productive capacity progresses through linkages usually from a narrow set of final consumer goods to intermediate and capital goods, and diversified and consumer goods of higher quality. This process has not happened in Mozambique.

The output of the manufacturing sector and of individual industries has fluctuated significantly. This instability, with periods of rapid expansion followed by periods of rapid contraction, calls attention to the need to study how the characteristics of the manufacturing sector affect, and are affected by, the performance of the economy as a whole. It is argued that weak linkages make output expansion dependent upon imports particularly as manufacturing production diversifies away from simple, semi-processing of primary products. Given the narrow export base of the sector, and of the economy as a whole, output expansion depends upon inflows of foreign capital – be they aid, external borrowing or FDI – and the general health of the current account. Hence, manufacturing growth tends to be unsustainable and short-lived. Investment expansion, in particular FDI, tend to reinforce the existing characteristics of the manufacturing sector because of the limited industrial capabilities of the economy and the political and economic interests that develop around, and form the basis, of the existing productive conditions.

The data also show that the characteristics identified have remained essentially unchanged over the past four decades despite radical policy changes that have occurred in the period. This calls attention to the fact that policy, by itself, is not sufficient to promote change and to explain economic performance, and is not autonomous from socio-economic pressures – be they linkages or agencies.

The chapter is organised into six sections. The first consists of explanatory notes about the data. The second, a brief periodization of the formation of the manufacturing sector in Mozambique, provides the historical framework for the analysis that follows. The third illustrates the main structural characteristics of the manufacturing sector and its role within the economy by analysing trends in GDP, MVA and exports. The fourth discusses the dynamic link between manufacturing production and macroeconomic conditions by analysing the relationships between investment, growth, the trade balance and financing of investment. The fifth analyses patterns of sectoral and regional allocation of investment over the period 1990-1999 and its current and prospective socio-economic impact. The last section identifies and summarises the main empirical questions that are raised for the analysis of the manufacturing sector in Mozambique and formulation of industrial policy and strategy.

3.1 Notes about the data

The discussion in three of the sections of the chapter is mainly based upon graphical representation of the data, rather than the presentation of the actual raw data. This is due to

three factors: (i) graphics can be clearer with respect to capturing and showing trends, change, dynamics and movement that are present in the data; (ii) graphics allow for the selection, out of large data sets, of the fundamental relationships that are to be considered in the study; and (iii) some of the data sets are large and without careful and close analysis would make little sense for the reader. The actual data and data sources are presented as annexes at the end of the chapter.

The empirical analysis in this chapter involves no formal, econometric techniques. Modelling was considered inappropriate for the following reasons. First, data sets have been constructed and used for descriptive statistical analysis as a basis for clarifying the structure and dynamics of the Mozambican economy and main lines of enquire for the thesis. Second, despite the fact that the data sets constructed may be the best available for long-term and disaggregated analysis, they still suffer from several problems of estimation and accuracy, which are partly illustrated by the description, below, of the process of constructing the data sets. These problems can be summarised in four main points: (i) sample size and methodologies adopted to collect and organize official data vary significantly over short periods of time, and the changes made are not always explained; (ii) it was not possible to make all sets cover the entire period of analysis because of problems of aggregation and presentation of the original data; (iii) many different sources of data, and methods of introducing consistency into fragmented series, had to be used to cover for missing data, inconsistent units and series and confusing classification of industrial activities (e.g., production of batteries is recorded, in different periods, under the chemical industry or electrical machinery; vegetable cooking oils appears under chemicals or food; cement is sometimes under construction or non-metal minerals). Thus, there is some trade-off between long-term consistency and short-term accuracy; and (iv) significant changes in policy regimes during the period of analysis have caused structural breaks in the series (e.g., prices and exchange rates) that have resulted in reduced accuracy of estimates. Despite these shortcomings, the data sets constructed give a solid enough indication of structure, characteristics, trends and dynamics that are the basis of the type of descriptive statistical analysis followed in the thesis.

More generally, modelling was considered inappropriate because of the absence of stable structural equations and parametric values.

For the purpose of this thesis, consistent long-term time series and cross section data sets were constructed. Long-term time series help to identify fundamental qualitative patterns, relationships and trends that in the short run may be difficult to observe or may be distorted by the occasional random or other effects. Thus, the thesis is mainly concerned with long run patterns and trends and how short run variation fits in with the long run.

Time series data sets were constructed out of fragmented and inconsistent information. Preference was always given, whenever possible, to official sources (GOM/Statistics 2001 to 1961-72) as opposed to data used by individual researchers and isolated studies. However, individual studies were also used when the data sets were consistent with official data and trends and/or when they helped to cover holes and build consistency between fragmented periods. Most of the data about the manufacturing sector in the colonial period comes from official statistics yearbooks (GOM/Statistics 1973 and 1961-1972), but the construction of the 1959-1974 economic series was helped by complementary data (consistent price series, data on MVA for years not covered by official series, GDP and MVA series) produced by Pereira Leite (1989) and Pereira de Moura e Amaral (1978).

Data for the period after independence were based upon GOM/Statistics 1975-84 through to 2001, complemented by various joint reports involving the government (GOM, IMF and WB 1988 through to 1999; GOM and UNIDO 1993), and reports by multilateral agencies (UNDP 1995 to 1998a and 2000; UNIDO 1987; World Bank 1995b, 1995c, 1993b, 1992, 1990a and 1990b, and 1985). The analysis of the period of transition from the end of colonialism (1973-1978) was built with the help of Pereira de Moura e Amaral (1978) and Wuyts (1989 and 1984), which provide short series of data on the volume of output, which helped to link series in the absence of information on price series. Data for the period between 1979 and 1985 benefited from the studies by UNIDO (1987) and World Bank (1990a, 1990b and 1985), mainly because of the disaggregation of manufacturing output provided in the UNIDO study and the estimates of GDP and MVA figures made from data on gross material product (GMP) and global social product (GSP).² Additionally, the level of aggregation of official data varied over the periods, such that it was necessary to use specific studies (Pereira Leite 1999 and 1995, Sousa Cruz 1994, and various isolated policy studies from government departments) to fill in the gaps and construct series with the required level of disaggregation. From 1987, there was an attempt to standardise the presentation of official data and avoid constant changes. However, sample coverage and methodologies of measurement continued to change and affect the actual statistics. This leads, for example, to continuous and often inconsistent retrospective revision of the data, so that no two three-year periods are methodologically

 $^{^2}$ GMP and GSP methodologies, used by former COMECON countries, were used in Mozambique from late 1970s to the beginning of neo-liberal economic reforms in 1987. These methodologies are not consistent with GDP. For 1980-1986, GOM/Statistics (1975-1985), UNIDO (1987) and World Bank (1990a and 1990b) produced estimates for GDP by converting GMP and GSP data. However, the results of these publications differ from each other.

consistent. In some cases, such as employment, the official published data became useless. In other cases, such as exports, imports and macroeconomic aggregates, the quality and organisation of the data were significantly improved.

With the exception of Pereira Leite, who analyses 40 years of industrial development in Mozambique under colonialism, most of the other studies analyse relatively short-term and very specific periods. For example, Wuyts (1989 and 1984) focuses mostly upon the period of transition and the rise and collapse of the large investment strategy (1975-78 and 1980-83), and UNIDO and the World Bank present data for the period of the big collapse of the Mozambican economy prior to the introduction of the Economic Recovery Program (PRE) (1981-1986).3 To construct long-term consistent series out of partial, fragmented and inconsistent data sets, it was necessary to find common denominators that overlapped so that the periods could be bridged and consistency maintained. Overlapping price series, output indices and real rates of growth, and isolated information on specific sectors, were used as the main common denominators to introduce consistency into the series. For example, the data on the rate of growth of volume of output found in Pereira de Moura e Amaral (1978) and Wuyts (1989 and 1984) were used to "deflate" GDP and manufacturing output for the period 1975-1983. Once this series was built, it was possible to use price series that overlapped with one or more years of this period to extend data series forward (to 1986) and backward (to 1970). Large inconsistencies were found in official data sets in 1997 relative to 1996 with respect to measurement of output at constant prices, mainly because the methodology and sample coverage were changed. However, using a consistent official real rate of growth it was possible to continue the series until 1999 (the last year with enough data to work with), and then work the series backwards from 1999 to 1959 to test for consistency.

Despite the problems described, it is very likely that the trends and relationships shown by the data are very close to the true trends and relationships, as they are consistent over time and with official data and main historical periods of economic development over the past four decades. A lot more statistical work is required to build completely consistent and more accurate time series data sets for the entire economy at the highest level of disaggregation that is possible and useful. Such a project is, however, far beyond the possibilities, aims and needs of this thesis.

³ PRE is a classical World Bank/IMF program of stabilisation and structural adjustment, introduced in Mozambique in January 1987. Different versions of the program have been adopted in the last 14 years.

Cross-section sets were constructed from the analysis of 1,300 investment projects approved between 1990 and 1999, which are listed in the database of the investment promotion centre (CPI).⁴ This list only includes investment projects that were submitted to CPI in order to benefit from investment incentives. It is likely that the list is biased against small and micro, local projects as these are less likely to have information about the system of incentives and to be able to benefit from it. However, despite the possible bias, the patterns of investment described in this chapter should be very close to the true patterns because: (i) they are consistent with fragmented information from other sources (the central bank, commercial banks, multilateral institutions and financial surveys); (ii) more than two thirds of the projects listed are small or micro, and yet they make little impact upon the analysis of dominant patterns of investment; and (iii) the total sum of the missing small and micro projects may be too small to make a difference.

The analysis of patterns of investment could have been done using panel data in order to discuss changes in allocation of investment over time. The main reasons why panel data analysis was not adopted are: (i) there is an unknown time lag between the approval and implementation of investment projects, which can vary between a few weeks and a few years – this would increase the unreliability of the data analysis had panel data been used; (ii) in the last three year of the period considered, the value of investment approved was more than twice as high as in the previous seven years and 50% of manufacturing investment was allocated to one project. Given the extreme levels of concentration of investment, gains from using panel data to analyse change over time would be minimal.

3.2 Formation of the manufacturing sector – brief periodization

The purpose of this section is to provide a brief historical background of the development of the manufacturing sector in Mozambique that helps to explain its dynamics and structure. The historical process of formation of the manufacturing sector in Mozambique has been described or analysed in several studies or official reports.⁵

Brum (1976) is the first known systematic attempt by a Mozambican economist to describe the fundamental structural weaknesses of the manufacturing sector in Mozambique and their historical origin. He classifies industries into three main categories: (i) export oriented, semi-

⁴ The author would like to thank CPI and its officials for providing the list of projects and facilitating the access to information required for the analysis.

⁵ See Pereira Leite 1989 and Wield 1977a and 1977b for a list and discussion of such studies.

processing of primary inputs (one third of the manufacturing sector and 80% of total exports of goods); (ii) inward oriented, import dependent industries (approximately 40% of the manufacturing sector); and (iii) inward oriented, resource based industries (mainly sugar, cereal milling and vegetable oils). The study identifies two interesting trends in manufacturing. On the one hand, industries that contribute a larger share to manufacturing output tend to have lower value added than the average manufacturing firm. This may be explained by the fact that large, semi-processing, resource-based industries add little value to their output. On the other hand, the MVA share of total manufacturing output tends to decline as manufacturing expands, which may be explained by the gradual diversification of the manufacturing productive structure towards import dependent, inward oriented industries in the later stages of colonialism.

Brum's paper identifies three fundamental structural weaknesses of the manufacturing sector in Mozambique, namely: (i) its narrow specialisation – 85% of total manufacturing output is due to eight industrial branches, and the semi-processing of 10 agricultural products represents 50% of total output; (ii) weak inter-sectoral linkages due to absence of capital and intermediate goods industries; and (iii) concentrated location of the industry in two harbour based cities, Maputo and Beira, mainly because of the import dependence of the manufacturing sector. The paper argues that these characteristics destabilise the rate of industrial accumulation, create macroeconomic constraints to expansion of productive capacities, reinforce the dependence of economic growth upon a narrow set of semi-processed exports and hold back technological progress and the level of productivity.

Despite his interesting contributions to the analysis of the manufacturing sector, Brum failed to understand the historical context in which the manufacturing sector was created and the dynamics of the existing pattern of industrialization. Particularly, he did not pay much attention to the political and economic interest and dynamics that are formed around, and also constitute the basis of, the existing patterns of production and trade. Therefore, his analysis points, wrongly, to simple solutions to problems of industrial accumulation in Mozambique: adequate planning and large capital investment.

Pereira Leite (1989), on the other hand, presents a very detailed study of the manufacturing sector in Mozambique since the late 1920s through to the early 1970s. Her study is remarkable with respect to data sets created, as well as the detailed historical analysis of legislation and policy documents formulated by the colonial government and how they affected the manufacturing sector in Mozambique. Unlike Brum, she identifies the role and influence of political and economic pressures upon the policy regime. However, her study is

so focused on how political and economic pressures in Portugal affected policy regimes and economic developments in Mozambique that she overlooks the importance of the dominant role played by South African and other regional capitalist pressures and interests in shaping the Mozambican economy and manufacturing sector, and the forms of integration of the Mozambican economy within the region.

Wield (1977a and 1977b) and Wuyts (1989, 1984 and 1980a) develop a similar historical periodization and interpretation of the process of economic and industrial development in Mozambique. Wield is more focused on the periodization of industrial development whereas Wuyts is particularly concerned with the periodization of the colonial economy as a whole. The Wield-Wuyts periodization and analysis are summarised in table 3.1.

They identify three major periods in the development of the colonial economy (top half of table 3.1) and five equivalent periods in the development of colonial manufacturing industry (bottom half of table 3.1). In the first period (1885-1926), the colony was rented to foreign (non-Portuguese) capital. Mozambique became an economy of services (providing migrant labour to South African mines and transport services particularly to South Africa and South Rhodesia), and controlled by plantations. Migrant labour generated foreign exchange earnings and fiscal revenue for the Portuguese administration, and became the single most important source of finance for, and engine of differentiation of, the peasantry in the South.⁶ Plantations in the Centre and North of the country held formal political and economic power that was also used to protect them against competition for labour from South African mining capitalism. In this period, manufacturing was mainly limited to a few plantation related semi-processing industries (sugar, copra and sisal) and very small cereal milling units.

The second period (1926-1960) corresponds to the emergence of fascism and economic nationalism in Portugal, which introduced the policy of economic integration and specialisation within the Portuguese economic space, and the policy of financial austerity and autonomy in the colonies that would allow investment to be centred in Portugal. Both policies resulted from attempts to respond to political and economic pressures resulting from fiscal and current account deficits, expansion of emerging Portuguese monopoly capital, as well as from the interests of Portuguese settlers and the political liability that unemployed, proletarian peasants and industrial workers in Portugal represented for the fascist regime. The policy of integration led to Mozambique becoming a provider of raw materials for Portuguese industry

⁶ See, for example, CEA 1979a and 1979b, O'Laughlin 1981 and Wuyts 1981.

(mainly cotton), an importer of manufactures from Portugal (consumer, intermediate and capital goods) and a settlement location for more than 200,000 Portuguese citizens.

Economic integration created new pressures and forced new developments. Settlers became relatively powerful interest groups with ability to invest in industry, and agriculture and trading activities could no longer absorb the entire colonial population. The domestic market for manufactures expanded and so did the supply of labour with industrial experience. The restructuring and modernisation of Portuguese industry created a supply market for second hand industrial equipment. On this basis (availability of finance, markets, industrial labour and equipment), import dependent inward oriented industries, which were not allowed to compete with exporting and inward oriented industries based in Portugal, started to develop.

The policy of financial austerity and autonomy forced the Mozambican economy to find alternative sources of finance and, in the process, to become more dependent upon the "export" of migrant labour and transport services to the Southern African region. Three dynamic effects compounded this process of regional integration. First, the policy of integration in the Portuguese economic space contributed to the deterioration of the Mozambican trade balance vis-à-vis the "escudo area", thus sowing the seeds for the crisis in the 1970s and making the Mozambican economy more dependent upon regional integration in Southern Africa. Second, the development of inward oriented, import dependent industries contributed to make South Africa the second trading partner of Mozambique. Third, pressures to increase investment under financial constraints at the end of the period led to the policy of "open doors" to foreign direct investment, which encouraged expansion for some sectors of capital in South Africa and the region into the Mozambican economy.

Finally, economic integration in the escudo and Rand areas forced the rationalisation, institutionalisation and expansion of forced labour, in order to guarantee supply of cheap labour to small and medium farmers, as well as peasants' participation in cash crop production. The colonial administration mediated between different fractions of capital – mining, plantations, small and medium colonial farmers, large and retail traders involved in rural commercialisation – to guarantee that labour would remain available and cheap despite the increasing pressures put by various processes of accumulation upon labour.⁷

⁷ See Bowen 2000, O'Laughlin 1981 and Wuyts 1989 and 1981 for a detailed analysis of the different forms by which the colonial state, together with different fractions of capital, organised the recruitment of labour in order to keep it available and cheap despite competing labour demand pressures.

The third period (1960-1974) was characterised by four distinct factors. First, political pressures, mainly associated with the national liberation war, forced the colonial state to encourage investment in Mozambique and formally abolish forced labour. Labour became significantly more expensive because of the combined effect of abolition of forced labour and very low labour productivity and skills. Increasing industrial and export market demand for local raw materials and consumer goods also intensified the pressure upon peasants to produce more commercial surplus. As a result, labour demand pressures increased, forcing capital to invest in machinery and equipment. However, the war effort had aggravated the fiscal and balance of payment constraints, and Portuguese monopolies could not, by themselves, assume the financial responsibility for the entire development programme.

This led to the second characteristic of the period: the adoption of the "open door" policy to attract inflows of FDI to Mozambique, on its own or in joint ventures with Portuguese capital, mainly for investment in areas where Portuguese capital could not cope by itself. The more widespread form of foreign participation was foreign technical control (for example, patent and turnkey agreements). Of the 13 industries already existent prior to this period, two were developed through joint ventures and four received foreign technical assistance. Of the 12 new industries created during this period, four were developed through joint ventures and eight benefited from foreign technical assistance. Due to particular economic pressures and the regional economic influence of the minerals and energy complex of South Africa, FDI in Mozambique was mainly concentrated in minerals and energy, transport and transport equipment and smelting of basic metals. The mega projects of the period were the oil refinery and the large hydroelectric dam, Cahora Bassa (HCB), located by the Zambezi River, in Tete. Both projects were joint ventures (the majority shareholders of HCB were the South African and the Portuguese governments).⁸

⁸ Despite its size, Cahora Bassa can only generate about 40% of the energy that can be processed and distributed through Motraco, the power station that feeds the large aluminium smelter in Maputo, Mozal. For details about this project, refer to subsequent sections and chapters of this thesis.

Table 3.1: Wield-Wuyts periodization of colonial economic and industrial development in Mozambique.

| General Periodization of the Colonial Economy in Mozambique | | | | | | |
|--|--|--|--|--|--|--|
| 1885-1926 | 1926-1960 | 1960-1974 | | | | |
| Berlin Conference (Portugal not invited). | Fascism, economic nationalism and the Portuguese space economy – the project of economic integration and specialisation within this space. | Crisis and restructuring of colonial economy – resulting from political pressures (national liberation movement, | | | | |
| Colonies rented to foreign (non- Portuguese) capital. | The economic roles of the Mozambican economy: (i) provision of raw materials to Portuguese industry (particularly cotton) and exports; (ii) market for Portuguese | de-colonization in Africa, neo-colonial pressures by settlers in Mozambique, international pressures against forced labour) Political pressure in South Africa | | | | |
| Migrant labour to South African mines in the South of Mozambique: source of foreign currency, fiscal revenue and finance for agriculture. Development of the Maputo harbour and corridor. | manufactures and development of inward oriented import dependent industry that would not compete with Portuguese exports and import substitution industries in Portugal; (iii) | (Sharpeville) and South Rhodesia (UDI). | | | | |
| | absorption of proletarian peasants and unemployed industrial workers from Portugal. The number of Portuguese settlers quadrupled between 1940 and 1960. Financial austerity imposed in the colonies to promote growth of industrial capital in Portugal led to policy of financial autonomy of the colonies; this reinforced dependence of Mozambican economy upon migrant labour and export of services to the Southern African region, particularly South African mines. Forced labour was rationalised, institutionalised and expanded so that small and medium settler farms could have access to labour despite the dominance of plantations and labour migration to South Africa. | Need to restructure labour relations and organization because: (i) Labour costs rise because of abolishment of forced labour and low productivity; and (ii) Competing labour demand pressures. Need to modernise. Political and economic pressures lead to policy of "open doors" to foreign capital. Portuguese and non- Portuguese large capital start to merge. | | | | |
| | | | Plantations in the Centre of (sugar, sisal, copra, oil seeds): plantations have political and economic power and state organises labour reserves. | | | |

General Periodization of Industrial Development in Mozambique

| Before World War I | Up to 1945 | The 1950s | The 1960s | Early 1970s |
|--|--|---|---|--|
| Growth and consolidation of agro-industries for export | | Expansion and consolidation of inward oriented industries | Modernisation of industrial capital | Crisis of accumulation |
| Semi-processing of sugar, sisal and copra for export associated with plantations. Basic cereal processing (maize). Large trading companies for export of semi-processed commodities and unprocessed maize, rubber, bee wax, ivory, nuts and coconut. Gold mining – short-lived. Railways associated with plantations and migrant labour. | New exporting industries: cotton, tea, wood and vegetable oils. Inward oriented industries start to develop because of expansion of number of settlers: construction (cement, railway sleepers, bricks) and consumer goods (food, beverages, tobacco and soap). | Fast manufacturing output growth in exporting sectors: cashew processing (new), sugar (increases 6 times), tea (3), cotton (6), copra and sisal did not increase significantly. But inward oriented industries diversified and grew much faster than exporting industries: new industries included textiles, paper, chemicals (mainly consumer goods), metals (construction materials and consumer goods) and glass. Composition of manufacturing output changed as the share of exporting industries declined. | Manufacturing output trebled, but MVA share of manufacturing output declined. Large investments in capital (second hand equipment) Role of foreign (non- Portuguese) capital increased: FDI, joint ventures and technical control (minerals, energy, chemicals and banking). | Fiscal and balance of payment pressures, as well as the economic and political costs of the national liberation war, lead to constraints to expansion, modernisation and diversification, and eventually to decline, of manufacturing output. |

Source: Wield 1977a and 1977b, and Wuyts 1989, 1984 and 1980a.

The third characteristic of the period was that manufacturing output trebled. However, the MVA share of GDP remained relatively stable at about 9%, whereas the services share of GDP increased to about 60%. Services contributed 64% of total export revenue, whereas manufacturing represented only 23%. The manufacturing sector remained narrow and unbalanced: 50% of manufacturing output and 57% of manufacturing exports were due to processed cashew kernels, sugar and molasses, tea and copra. The expansion of the manufacturing sector was also accompanied by strong balance of payment pressures: between 1968 and 1971 the current account deficit reached US\$50 million, despite a positive balance of services of over US\$100 million, and import coverage ratio reached a record low (for the period) of 51% (graphs 3.18 and 3.20).

Hence, the fourth characteristic of the period was the crisis of accumulation at the end of the colonial era that affected the economy as a whole and the manufacturing sector in particular because of its narrow specialisation, weak inter- and intra-sectoral linkages and dependence upon imported equipment, parts, technical assistance, fuels and other material inputs. Between 1974 and 1976,⁹ the economy as a whole, and the manufacturing sector in particular, followed a sharp negative trend. This was due to a combination of factors, namely the crisis inherited from the end of Portuguese colonialism, abandonment and sabotage of productive assets by colonial owners, departure of foreign skilled workers, managers and engineers, de-investment by large FDI based projects and the inexperience of the new government.

The Mozambican government established a recovery programme for manufacturing that aimed at reaching in 1981 the production levels of 1973. The program was focused on reorganisation and rationalisation of the industrial structure, re-establishment of management capacities in the abandoned firms, provision of raw materials and parts and profound reorganisation of labour relations through the creation and empowerment of trade unions. Large and strategic firms were nationalised, other abandoned firms were put under state administration, fragmented production lines were specialised and combined, and import and export state owned companies were created. At the same time, the government initiated the formulation of the accelerated industrialisation program.¹⁰ Between 1977 and 1981, manufacturing output increased by 25%, reaching 78% of the level of production in 1973.¹¹

⁹ Mozambique achieved national independence from Portuguese colonialism on the 25th of June, 1975.
¹⁰ See, for example, GOM 1978.

¹¹ See Castel-Branco 1994b and Wuyts 1989 and 1984.

By 1980, the government introduced the prospective indicative plan (PPI), which aimed at eliminating underdevelopment and building the basis for "advanced socialism" in ten years. The plan consisted of three fundamental programmes: collectivisation of the countryside, accelerated industrialisation and education and training. It was rested upon four assumptions: (i) COMECON would provide the huge amount of financial resources required; (ii) peace would be re-established after the liberation of Zimbabwe, such that normal social and economic activity could be resumed, destruction of productive assets stopped and defence expenditure reduced; (iii) the dominant sources of foreign exchange and employment (migrant labour to South African mines and transport services) would be reactivated; and (iv) economic growth would provide the long-term savings and foreign exchange required for investment. Hence, over-optimistic expectations, which are well captured by the planned increase in the size of the economy by 5 times in 10 years, were created. None of these assumptions materialised¹² which, combined with the oil crisis of the early 1980s, put extreme pressures upon Mozambique's ability to develop.

The ten year investment programme, focused upon mega projects, collapsed after only three years because investment resources, in particular foreign exchange and public savings, were exhausted. Industrial mega projects were either started and not completed (such as Mocuba's textile factory and Beira's agricultural equipment factory) or not started at all. Existing industrial firms were squeezed of resources because of economic decline, the cost of war and the priority given to mega projects that never had the opportunity to produce. By 1986, manufacturing output was 42% of the level achieved in 1981. In 1987, the WB/IMF supported economic recovery program (PRE) was introduced.¹³

3.3 Characteristics of the manufacturing sector

This section illustrates, empirically, the main characteristics of the manufacturing sector and its role within the Mozambican economy, by using long-term time series data sets. The section contains two major parts. The first discusses the data at a more aggregate level in order to situate the manufacturing sector within the economy as a whole. The second

¹² See Castel-Branco 1996, 1994a and 1994b, and Wuyts 1989. Fundamentally, (i) COMECON refused to assume the responsibility to sustain the entire Mozambican development programme; (ii) the apartheid regime in South Africa (a) intensified the military aggression against Mozambique directly and by reorganising and using terrorist guerrilla groups, and also (b) imposed unofficial economic sanctions against Mozambique by reducing dramatically the recruitment of migrant labour and the transit of commodities through the port of Maputo, and by revaluing the terms of trade of gold in the payment of deferred migrant workers' wages; (iii) the economy declined.

¹³ See Castel-Branco 1996 and 1994b and Wuyts 1989.

disaggregates manufacturing output and exports in order to provide clearer insights into the process of specialisation internal to the sector, as well as into the sources of growth of manufacturing. It also highlights what might be the potential and limitations of long-term growth of manufacturing, by taking into account current trends and past experience.

GDP, MVA and exports - structures and trends

Graph 3.1 shows that the Mozambican economy has been characterised by frequent booms and busts caused by different factors. Economic expansion in the 1960s was followed by balance of payment pressures that forced economic contraction in the early 1970s and again after 1974. The impact of sharp changes in political and economic conditions discussed in the previous section are also observable: decline during transition from colonialism (1974-1976); economic recovery until 1981 that resulted from economic reorganisation and rationalisation; sharp decline following the collapse of the PPI (1982-1985) and intensification of the war; sharp recovery due to increase in aid flows following the adoption of PRE in 1987; decline due to reduction of multilateral aid during the negotiation of a new ESAF (1990-1992); and economic growth that followed the end of war and the intensification of aid and FDI inflows.



These trends are significantly more pronounced in manufacturing (graph 3.2). Because of its import dependence, this sector is more vulnerable to the performance of the economy as whole, in particular to factors that determine the ability to invest and import. Its simple production processes, concentration around cities and infrastructures and huge under utilised capacity makes easier for manufacturing to recover faster when finance and foreign exchange are available at affordable prices. Hence, between 1987 and 1989 manufacturing grew much

faster than the rest of the economy, which also led to firms building large stocks of final products, particularly in the industries that supplied rural areas.¹⁴



Services constitute the main component of GDP (graph 3.3). Its share declined between 1976 and 1990 mainly because of the impact of the application, by Mozambique, of UN mandated economic sanctions against South Rhodesia (1976-1980) and the impact of the war on rail transport to and from South Africa and Zimbabwe. In the 1990s, after the end of the war, the dominant position of services in GDP was recovered as a result of increase in trade and domestic road transports, and rail transports to and from neighbouring countries.



¹⁴ Castel-Branco 1994b. For a discussion of under-utilisation of productive capacity and output growth see Biggs, Nasir and Fisman 1999, Castel-Branco 1996 and 1994b, and GOM and UNIDO 1993.

Graphs 3.2 and 3.4 show that MVA share of GDP has fluctuated around an average of 9.5% over the last four decades. Graph 3.4 shows this fluctuation more clearly and over a longer period. It is interesting to notice that MVA share of GDP changes dramatically when the economy moves into periods of negative or positive growth, thus confirming that the instability of trends in manufacturing output is stronger than in the economy as a whole. In two occasions, only, has MVA share of GDP been over 10%. One was between 1977 and 1981, because of the combined effect of a fall in the services share of GDP and the impact on manufacturing output of the dramatic increase in the value of exports of (imported) oil and oil products to South Africa. The other was between 1987 and 1989, because manufacturing was the main growth sector of the economy during the first three years of the neo-liberal economic reform programme (due to the impact of the war on the others sectors, the concentration of manufacturing in the cities and the focus of the economic program on the rehabilitation of existing capacities where security conditions allowed). With the introduction of FDI driven mega projects, such as Mozal (a mega aluminium smelter), it is likely that MVA share of GDP will increase significantly.



The dependence of the economy upon services is also demonstrated by the structure of exports. Graph 3.5 shows that, with the exception of the period between 1977 and 1984 (which was influenced by the application of economic sanctions against South Rhodesia and the boom of the value of exports of oil and oil products), services (mainly proceeds from rail transports to and from South Africa and Zimbabwe, but also tourism) have contributed more than 60% of total export revenue despite the war (1976-92).



Graph 3.5: Share of services and goods in total exports (percentage)

Disaggregation of manufacturing output and exports - structures and trends

Over the last four decades, 70% of manufacturing output has been produced by two industries: food, beverages and tobacco, and textiles and clothing. The share of capital goods industries (metal products, machinery and transport equipment) has declined and the contribution of intermediate goods industries (chemical and oil products and non-metallic mineral products) has fluctuated around a stable percentage (the variation in the share of chemicals between mid 1970s and early 1980s is due to the oil boom). The share of other manufacturing industries has remained fairly constant, which shows that manufacturing has not been able to diversify in a significant way. In the last five years of the period under consideration, the structure of manufacturing production has become narrower (graph 3.6).

Graphs 3.7 shows that the composition of output of the food, beverages and tobacco industry has changed over time. The most dramatic change is the rise and total collapse of the cashew processing industry and the gradual disappearance of tea as an important component of the industry. Whereas production of tea was destroyed by the war, cashew processing was eliminated through policy.¹⁵ Sugar output also varied significantly mainly because of the war and disinvestment strategies adopted by plantations in the transition to independence (1974-1976).¹⁶ On the whole, beer, cereal milling, soft drinks and sugar represent 70% of the output of the food and beverages industry, and about 50% of total manufacturing output. Relative to the late 1950s and early 1960s, the specialisation of the food industry has become narrower. Despite the growth of the combined share of vegetable oils, copra, pastries and bakery, it can

¹⁵ See discussion in Chapter 5 and Cramer 1999.

¹⁶ See Chapter 5. On the disinvestments strategy of plantations, see Wuyts 1984 and 1989.

be seen that whereas in 1959 seven industries represented 85% of total output of the sector, in 1999 the share of the main five industries was 95%.





Graph 3.7: Composition of output in the food, beverages and tobacco industry (percentage)



Some degree of diversification has occurred within the textiles, clothing and leather industry, as the share of cloth and clothing increased and the share of cotton fibres declined slightly (graph 3.8). However, it is important to put these changes into context. First, this was one of the last industries to be established prior to independence because of the colonial policy of not allowing the establishment of industries in Mozambique that could compete against exports and import substitution by Portuguese based industries (see section 3.2). Second, over time there has been a significant decline in the industry's share of manufacturing output. The

decline was significantly more pronounced in cotton fibres because of the crisis of the plantation economy at the end of the colonial era and because of the war. After the end of the war (1992), cotton fibres recovered a dominant share of the output of the textile industry. Third, Mozambican officials have acknowledged that a significant share of what is recorded as production of clothing and cloth consists of re-exports, by Mozambican firms, of clothing and cloth imported from India after the labels of origin are changed. This problem, identified in exports of cloths and clothing from Mozambique to South Africa, illustrates that Indian exporters, to avoid protection of Southern African markets that is guaranteed by the rules of origin agreed by SADC, have used Mozambique as a passage into the region.¹⁷



The chemical and oil industry, in addition to being a small and declining share of total manufacturing output, has been strongly dominated by oil and oil products and consumer goods (mainly hygiene products) (graph 3.9). Thus, the contribution of chemicals as material inputs is significantly smaller than it looks from graph 3.6. The oil component of the industry collapsed after the closure of the oil refinery in Matola (outskirts of Maputo). However, Mozambique maintained storage capacity for oil and oil products in transit to South Africa and Zimbabwe, and the value of this transaction continues to be recorded as part of the output of the industry. The share of basic industrial chemicals has doubled over 40 years but is still less than 1% of total manufacturing output. According to GOM and UNIDO (1993) and UNIDO (1987), the Mozambican economy imports 96% of chemical-based material inputs. A significant change in the industry occurred in rubber products, whose composition shifted from simple components for the building industry to car tyres. On the whole, the industry continues to be narrowly specialised and heavily import dependent.

¹⁷ Interview with Luís Sitoe, national director in the Ministry of Industry and Trade (MIC).



Graph 3.10 shows that the composition of output of the metal products, machinery and transport equipment industry is skewed towards transport equipment, which has become even more dominant (75% of the output of the industry) in the last two years. About three quarters of the output of transport equipment consists of repairs of ships, trucks, wagons and rolling stock, as well as production of rail track sleepers. There is one factory that assembles vans, buses and tucks, and a few that produce simple parts. The production of machinery is declining. Non-electric machinery, mainly agricultural equipment, collapsed,¹⁸ and electric machinery became narrowly concentrated on the production of batteries and lamps.



¹⁸ See the debate in Chapter 5 about linkages.

Manufacturing has played an important role in exports, but clearly not a dominant one. Quite apart from the fact that services dominate total export revenue, the structure of exports of goods is indicative of some of the processes of crisis and restructuring that have affected the economy (graph 3.11). Manufacturing was the single largest exporter of goods until the early 1980s, mainly because of cashew processing (from the early 1970s, and cotton before that) and oil derivatives (graph 3.12). The disappearance of cement, sisal, tea and oil derivatives explains the declining share in exports of manufactures, which, by 1987, were strongly dependent upon cashew processing. The share of manufacturing exports increased again from 1993: the two observable peaks (1993 and 1999 in graph 3.11) are due to cotton (ginned and spun) and the return of oil derivatives (graph 3.12). Two crucial characteristics to notice about manufactured exports are: (i) their narrow specialisation that has been maintained over the long run and has became narrower at the end of the period under consideration, as 80% of manufactured exports in 1999 were due to oil derivatives, sugar, cotton fibres and copra; and (ii) the instability concerning the share of each industry in manufacturing exports, which reflects processes of continuous boom and bust that affect each industry. Both characteristics, which had already been noticed with respect to manufacturing output, confirm that no significant import substitution and diversification have taken place.





Unprocessed shrimps and lobsters became the single most important exporting commodity between the mid 1980s and mid 1990s, reaching a peak in 1992 with 50% of exports of goods. The relative decline of its share is mainly associated with the increase in exports of

agricultural and manufacturing goods. The share of agriculture in exports¹⁹ increased significantly from 1994, mainly because of exports of unprocessed cashew nuts that replaced the exports of processed kernels, which collapsed.²⁰



To summarise, the manufacturing sector in Mozambique represents a small share of an economy dominated by its forms of integration within the Southern African region. Thus, not only are services the dominant component of GDP and export revenue but dramatic increases in manufacturing have resulted from processes associated mainly with the South African economy: export revenue, oil and oil derivatives and, most recently, massive inflows of FDI in minerals (aluminium and iron) and energy.

The aggregate growth trend of MVA is very unstable, which is indicative of the lack of sustainability of accelerated expansion of the sector due to different political and economic conditions of which macroeconomic pressures seem to be amongst the most important (the next section discusses this point). This instability is even more pronounced in three other trends: the industry composition of manufacturing output; the composition of output inside each industry; and the industry composition of manufacturing exports. This instability at

¹⁹ All agricultural based products that go through some level of industrial processing prior to export (sisal, tea, sugar and molasses, copra, cashew kernels, cotton ginned and spun) are counted as manufacturing exports. Thus, agricultural exports are exclusively unprocessed goods or those whose level of processing is either unknown or insignificant.

²⁰ See chapter 5 and Cramer 1999 for a discussion of this process.

disaggregated level calls attention to the short cycles of boom-bust faced by industries and firms, which contribute to preventing fast and sustainable industrial growth, investment and diversification for long periods of time. This may be due to macroeconomic pressures caused by import dependent expansion, but also by the inability of industries and firms to acquire solid competitive capabilities that accumulate and enable them to develop.

Over time, manufacturing output has become more narrowly specialised and production of capital and intermediate goods had declined even further, both in absolute and relative terms, to about 3% of total manufacturing output. This trend may prevent further expansion of the manufacturing sector because it is likely to increase macroeconomic pressures particularly associated with the trade deficit. Moreover, this type of specialisation may delay technical change and prevent rapid productivity increase that the manufacturing sector in Mozambique needs. The current form of specialisation may change once Mozal and other mega projects (such as the Maputo Steel and Iron Project) initiate operation at close to full capacity. However, it should be noticed that then manufacturing output would become dominated by two projects specialised in production of primary products, only this time the commodities are aluminium and iron instead of beer, sugar and cotton. Whereas the contribution of mega projects to the economy, through their export potential and higher levels of organization and productivity, should not be underestimated, their development potential should not be overestimated particularly because of the lack of complementarity with the rest of the economy and narrow specialisation.²¹

3.4 Investment, growth, trade balance and finance

This section demonstrates the dynamic link between manufacturing production and macroeconomic conditions by describing empirically and analysing the relationship between investment, growth, the trade balance and the financing of investment.

Investment and economic growth

Graphs 3.13, 3.14 and 3.15 illustrate the symbiotic relationship between investment and economic performance, namely growth of GDP, MVA and manufacturing output, and exports of goods. Investment is affected by the export performance of the economy because of the

²¹ See discussion in Chapter 5.

need to finance imports upon which investment depends (see graphs 3.22 and 3.25). It is also influenced by economic growth particularly if exports grow and confidence increases. In turn, investment affects economic performance in two ways: (i) positively, by expanding and/or modernising productive capacity; (ii) negatively because of the pressures that economic expansion puts upon the balance of payments, given the import dependence of the productive capacity in Mozambique (see graph 3.22).



Graph 3.13: GDP and Investment (1996 prices - US\$ million)

Graph 3.14: Manufacturing output, MVA and investment in manufacturing (1996 prices US\$ million)





Graph 3.15: Investment in Manufacturing and Total Exports of Goods (1996 prices - US\$ million)

The relationship between investment and economic performance was very close up to 1980: GDP, manufacturing output and MVA grew with investment (graphs 3.13 and 3.14); and investment followed the trend in exports in the previous year (graph 3.15). The close relationship between trends in investment and economic growth was broken around two periods. Between 1981 and 1983, investment and economic growth moved in opposite directions. This was the period of the PPI, which is associated with massive increase in investment in large projects. Quite apart from a time lag between investment and output growth, which is more noticeable with large investment programs, the investment plan for manufacturing had three negative effects. First, it crowded-out finance, in particular access to foreign exchange, for existing small and medium firms, which faced strong constraints in the acquisition of material inputs, fuel and parts. Therefore, existing capacity became largely under-utilised as the average rate of capacity utilisation in manufacturing dropped to 20%.²² Second, most large projects were either not completed or did not receive the material inputs to work at close to full capacity. Third, massive investment financed through foreign borrowing quickly resulted in unsustainable debt service that forced the investment programme, and the projects associated with it, to collapse (graphs 3.14 and 3.16). In 1994-96, recovery in the rate of capacity utilisation involving very little investment explains why output and MVA continue to grow and investment fell. The very pronounced increase in investment after 1997 is explained by the large projects: sugar, cement, beer and, above all, Mozal and Motraco

²² See Castel-Branco 1994b, GOM and UNIDO 1993, and UNIDO 1987 for data on under-utilisation of capacity in manufacturing. Dorive and Wuyts 1993 discuss, with respect to Tanzania, under-utilisation of installed capacity that emerges from expansion of capital investment when the economy depends on imports of capital and intermediate goods and faces foreign currency constraints.

(aluminium smelter and its power station). The magnitude of these projects also implies that the time lag between investment and output growth is large.



Graph 3.16: Foreign Borrowing and Debt Repayments



Graph 3.17 provides a clearer idea about the relationship between investment and MVA growth. The general trend shows that the relative capital intensity of output is increasing.²³ For most of the series (with the exception of 1961, 1964-70 and 1997-99) changes in the capital intensity of MVA have nothing to do with changes in factor intensity of the economy or in technology. Instead, they represent either the time lag between investment and output, or huge levels of under-utilisation of capacity due to sudden and very sharp decline in output. In 1961, 1964-1970 and 1997-1999, the low ratio MVA/investment is determined mainly by increase in investment. Some degree of modernisation and structural change occurred in

²³ The ratio indicates MVA per unit of investment; as it becomes smaller, capital intensity increases.

association with the establishment of new industries: oil refinery in 1961; railway wagons, fertilizer and agricultural tools in 1964-70; and aluminium and other post-privatisation large investment projects (such as sugar, beer, cement) in 1997-99. The increase in capital intensity between 1979 and 1983 is the result of the combined effect of large increase in investment (1979-82) and a decline in output (1981-83). In essence, the graph is an indication of under-utilisation of capacity. The collapse of PPI is shown in the reduction of capital intensity of output in 1984-1986, which was followed by the rehabilitation programme in which investment grew faster than output (1987-90); a new collapse of manufacturing output (1991-1994); and a short period of very fast recovery of manufacturing output (1995-1997).

Current account and external trade deficit

Graphs 3.18, 3.19 and 3.20 show the large deficit of the current account that the Mozambican economy runs, as well as the association of this deficit with the size of the trade deficit. The first fundamental feature observable in graph 3.18 is that up to 1976, the current account was balanced by services, associated mainly with rail transport of commodities to and from South Africa and South Rhodesia. This surplus declined and the balance of services started to run a deficit because of the UN mandated sanctions against the UDI regime in South Rhodesia (1976-80), the diversion of the transit of South African commodities from the port of Maputo (1980-92) and the intensification of the war against Mozambique (1981-1992).









The main feature of the dynamics of the current account is the huge increase in the trade deficit since 1978. The size of the trade deficit started to increase from the late 1960s in association with increase in manufacturing investment and the reduction of the relative size of export-oriented, semi-processing of primary products. In the 1970s, the trade deficit was aggravated mainly because of the impact of imports of oil at higher prices and material inputs for both manufacturing and commercial agriculture. Rural commercialisation was seriously affected immediately after national independence so that the dependence of manufacturing upon imports of material inputs and wage goods increased.²⁴

²⁴ See Wuyts 1989, 1984 and 1981.

Investment, trade deficit and external sources of capital

PPI's investment program, 1980-82, had an immediate and short-lived impact on increase in imports (graph 3.19). The import structure became skewed towards capital and intermediate goods, which, by 1982, represented about 80% of total imports (graph 3.21). Between 1983 and 1985 imports declined because the investment programme collapsed and, as a result, the trade deficit became smaller. Imports of capital goods fell, but imports of intermediate goods declined more dramatically. This was partly due to the falling world price of oil, but also to a general decline in imports of material inputs as, under foreign exchange constraints, these had to compete against capital investment and consumer goods. As a result, the level of under-utilised capacity throughout the economy, in particular in manufacturing, reached its peak.



After 1987, the trade deficit increased to its highest level. The main determinant of this process has been the increase in imports, associated with the recovery of capacity utilisation and new investment in manufacturing, as well as luxury, import dependent consumer spending. In 1995-1997, the trade balance improved mainly because imports fell as a result of a decline in investment (graph 3.13) and a slight reduction in imports of consumer goods. On the other hand, exports increased due to cotton, sugar, oil derivatives and shrimps and lobster (graphs 3.11 and 3.12). The impact of large investment projects in the late 1990s is shown in the increase in the trade deficit and in the share of capital goods in total imports.

Graph 3.22 shows the link between investment and trade deficit more clearly. With the exception of the period of the oil boom, reflected in the sudden and short-lived increase in manufacturing exports in 1979-81, expansion in MVA has had little effect in the growth of

manufacturing exports. MVA growth, particularly after the 1987 economic reforms started, has been sustained by inflows of foreign capital (grants, multilateral loans and FDI). Exports of manufactures, which are not very sensitive to expansion of manufacturing output, have played a small role in sustaining growth (graph 3.23). This is because of the narrow export base of the manufacturing sector, as well as the fact that industries that have been driving growth of output are mainly oriented to the domestic market (e.g., sugar, beer, soft drinks, cereal milling and cement). Mozal (an export-oriented, aluminium mega smelter owned by international corporations like Billiton and Mitsubishi) may change this relationship between output and exports. However, unless exports diversify, Mozal's impact will be a one-off change of the general level of exports and a narrowing of the already limited export base.





Graph 3.24 shows that investment in manufacturing has not been significantly influenced by, and has not had a significant impact upon, manufacturing exports. Finally, graph 3.25 shows that investment in manufacturing and imports follow a very similar trend, which is indicative of the import dependence of production and balance of payment pressures that economic expansion, given the current structure of production and trade, creates.





Graph 3.25: Investment in manufacturing and total imports of goods (1996 prices - US\$ million)



The analysis thus far shows that the very large current account deficit is mainly determined by the size of imports of goods, which in turn are strongly related to investment because of the import dependence of productive capacities. Exports, which cover less than 25% of imports (graph 3.20), have had little effect in the trade deficit. Therefore, orthodox macroeconomic stabilisation may either result in output contraction or only be sustained by inflows of

international aid, and any marginal expansion of output within the existent economic structure is destabilising.

As shown in graph 3.22, investment has been sustained by different sources of foreign savings, namely: short-lived foreign borrowing that collapsed into debt service crisis (1980-82); international (bilateral and multilateral) aid in the form of balance of payment and budget support grants; and the more recent emergence of foreign direct investment (FDI) as the fastest growing and single most important source of finance. Periods of investment reduction are associated with contraction of inflows of foreign capital (1983-85, 1993 and 1995). For the last 15 years, aid has kept investment going by financing the current account deficit that is associated with investment-related imports. This dependence upon foreign sources of finance results from the combination of three factors: limited domestic capacity to invest,²⁵ weak export base and import dependence of domestic production.

Mozal almost doubled imports in the last two years of the period under consideration, but may also have a very large impact on exports. If this happens, economic expansion may actually help to balance external trade. However, as shown in subsequent chapters, if the mega project model is adopted as an alternative to a broader development base, it would be necessary to invest the equivalent of twice the current size of GDP for the current account to balance. Such a strategy would address the issue of supply of exports but not the import dependence of production and weak linkages. As discussed in the following section, FDI pursues excessively narrow objectives that affect the long-term development pattern of the economy. Hence, industrialisation would not necessarily develop out of mega projects.

3.5 Patterns of allocation of investment

This section discusses the patterns of sectoral and regional allocation of investment approved in 1990-1999 in Mozambique. The choice of the period is based upon three factors. First, data available for this period are more reliable and complete than for previous periods. Second, significantly more investment was made in the 1990s than in previous decades, even if account is taken of the short-lived investment drive promoted through the implementation of PPI. Third, and more important, it is necessary to analyse whether the current pattern of investment, which emerges with neo-liberal economic reforms, addresses the need to change

²⁵ Refer to discussion of finance and industrial policy in chapter 5.

the narrow specialisation and weak intra- and inter-sectoral linkages that characterise manufacturing production and trade.

Each graph used in this section compares allocation of investment with and without Mozal and Motraco. This is done because these two projects are so dominant that they affect very significantly the perception and interpretation of the relative importance of different sources of investment finance and patterns of resource allocation. This is observable from graph 3.26, which shows the percentage contribution of foreign direct investment (FDI), domestic direct investment (DDI) and loans (domestic and foreign bank loans, as well as loans from multilateral agencies that are utilised to finance investment).²⁶ When Mozal and Motraco are included, FDI represents 57% of manufacturing investment. When they are excluded, FDI percentage contribution falls to a modest 17%, barely higher than the percentage contribution of DDI, whereas loans become the most important source of finance (69%).



When the analysis shifts to investment in the economy as a whole, the impact of Mozal and Motraco continue to be very strong – with these projects, manufacturing absorbs 84% of FDI and 63% of total investment; without these projects, these percentages drop to 49% and 48% respectively (graphs 3.27 and 3.28). In an economy as dependent upon foreign financing, and as small as Mozambique's is, it is interesting to notice that banking is the second sector with respect to allocation of FDI, the fourth in DDI and the sixth in total investment.

²⁶ According to Banco de Moçambique (various annual reports) and KPMG 1999, the domestic banking system only finances 16% of the bank loans. See chapter 5 for a more detailed discussion of this topic.



Graph 3.27: Sectoral share, by source, of investment approved in 1990-1999 (including Mozal & Motraco - percentage)

Graph 3.28: Sectoral share, by source, of investment approved in 1990-1999 (excluding Mozal & Motraco - percentage)



A disaggregated analysis of allocation of investment within the manufacturing sector shows that all sources of investment are highly concentrated around major FDI driven projects, namely Mozal and Motraco, sugar, cement, beer, soft drinks, cereal milling and textiles and clothing (table 3.2 and graphs 3.29 and 3.30).²⁷ This pattern of allocation of investment confirms the power of Mozal and Motraco and, outside this industry, the dominant role of

²⁷ Mozal/Motraco dominate not only in aluminium and basic metals (very close to 100% of production in these industries) but also in manufacturing as a whole. Billiton and Mitsubishi (two very large multinational companies, MNEs), IDC (South African para-statal investment agency) and the government of Mozambique are the shareholders of Mozal. The electricity companies of Mozambique (EDM), South Africa (ESCOM) and Swaziland (SEB) are the shareholders of Motraco. The sugar industry comprises four estates owned by two large MNEs (Ilovo and Tongat Hullet) and one consortium of Mauritius companies. One Portuguese-owned company, Cimentos de Moçambique, controls three quarters of the market and the entire domestic production of cement. Two foreign breweries and a subsidiary of Coca-Cola own the three breweries and all the soft drink bottling plants. Two foreign owned companies dominate cereal milling. Investment in textiles and clothing is centred around two textile plants and a few cotton spinning and ginning factories owned by foreign dominated economic groups.

four branches of the food industry in the structure of production of manufacturing. It is interesting to notice that the soft drink industry seems to be DDI driven. The company that owns the bottling plants was set up in Mozambique by the Coca-Cola subsidiary in South Africa, and most of the recent expansion investment is financed through own profits.

Table 3.2: Share of manufacturing investment approved in 1990-1999, by source, allocated to major FDI driven industries, with and without Mozal and Motraco (percentage)

| | FDI | DDI | Loans | Total |
|---------|-----|-----|-------|-------|
| With | 94 | 74 | 67 | 81 |
| Without | 65 | 63 | 59 | 58 |

Sources: Own estimates based upon a list of 1,300 investment projects provided by CPI.



Graph 3.29: Share of manufacturing investment approved in 1990-1999, by industry and source (including Mozal & Motraco - percentage)

Graph 3.30: Share of manufacturing Investment approved in 1990-1999, by Industry and source (excluding Mozal & Motraco - percentage)



Graph 3.31 shows how investment in each province is financed. In all provinces, except Maputo when Mozal and Motraco are included, loans are the single most important source of finance. This is particularly the case in Tete and Cabo Delgado, whereas DDI is far more important in Niassa (the poorest province in the country) than in any other. A large cashew-processing plant, Mocita, makes FDI particularly important in Gaza. Maputo (province and city) has two very different patterns of financing of investment, depending on whether Mozal and Motraco are included or excluded. If they are excluded, the relative importance of FDI in Maputo is less than in Gaza and Manica (one textile factory), and similar to that in Zambezia (sugar) and Sofala (cement, cereal milling, beer and sugar). If they are included, Maputo becomes the only province where FDI surpasses all other sources of finance.



Graphs 3.32 and 3.33 show how provinces share total investment in the economy, by source. Maputo is dominant, irrespective of whether Mozal and Motraco are included or excluded. It absorbs 88% of total FDI and 60% of non-Mozal FDI. Added together, six provinces receive less investment than Sofala and one seventh of total investment flowing to Maputo.

This section has shown that in 1990-1999 investment has been highly concentrated with respect to sectoral and regional allocation. For most of the period, loans, DDI and isolated cases of FDI have been concentrated around the "traditional" areas of narrow specialisation: four branches in the food industry, textiles and cement. Over the last three years of the period FDI boomed mainly due to Mozal/Motraco, but also to large investment programs in sugar. Although its absolute size increased sharply to the point of eclipsing everything else, FDI continued to be focused on a small, narrowly specialised range of areas of interest. FDI driven

industries have also attracted a very significant share of non-FDI finance. Thus, it is not only FDI, but also the general pattern of investment, that is narrowly focused and has consolidated the "traditional" structures and dynamics of industrialisation (discussed in previous sections).



Graph 3.32: Provincial share of national investment approved in 1990-1999, by source (including Mozal and Motraco - percentage)

Graph 3.33: Provincial share of national investment approved in 1990-1999, by source (excluding Mozal and Motraco - percentage)



3.6 Conclusions

The aim of this chapter has been to identify, empirically, the fundamental economic characteristics and relationships that shape industrialisation in Mozambique, in order to provide the information that helps to put the analysis and debates about industrial policy in their socio-economic context. Three empirical sections, in which original time series and

cross section data sets are presented and discussed, following a brief historical background that explains the process of development of the manufacturing sector in Mozambique.

The analysis of current trends and patterns of industrialisation and investment shows that the essential structures and dynamics of accumulation have not changed fundamentally over the last four decades despite radical policy changes that occurred during the period. This can be illustrated by reference to the narrow pattern of production and exports, weak linkages, dependence upon imports and large inflows of foreign capital, and key political and economic role of mega projects in shaping regional integration. Changes in detail (such as the emergence of a new, dominant product, aluminium) and in some aspects of the dynamics (like the growing role of FDI as opposed to the declining importance of migrant labour) have occurred. However, these changes do not represent "departure" from "traditional" trends, but adjustment to new conditions.

The resilience of the patterns of industrialisation shows that the structures and dynamics of accumulation are not very sensitive to formal radical public policy change, or, in other words, formal public policy is by no means the only or most important factor affecting industrial development. In "traditional" debates, this relative "failure" of policy is explained by reference to either the assumption of superiority of markets over public policy (neo-classical approach), or lack of state autonomy and subsequent deficiency in the quality of policy processes ("developmental state" approach).²⁸

From the linkage-agency analytical framework adopted in this thesis (explained in the previous chapter), it is known that public policy, private interests and markets are closely and dynamically related because the state responds to social and economic pressures and operates through the market. Therefore, the apparent failure of public policy change to deliver fundamental economic change over the last four decades cannot be explained within the "state versus markets" framework, be it on the side of neo-liberal or developmental state economics, because both are flawed in the sense that they do not understand the inevitability of the dynamic link between the state, capital and labour, and markets. This analytical framework also argues that agencies are not independent of economic processes and linkages, such that decisions about strategies and policies are not autonomous from deep-rooted economic processes, and the impact of such decisions is not a foregone conclusion. This does not mean that it is not possible to promote change through policy, but that successful policy, rather than

²⁸ For a neo-classical argument, see Krueger 1998 and 1990a, Krugman 1994, and Young 1995, 1994 and 1992. For a "developmental state" argument, see Chang 1996, Chang and Rowthorn (eds.) 1995, Evans 1995, Evans 1995, Evans 1995, Stein 1994b.

resulting from blueprints, is more likely to be developed from the understanding of the underlying economic and political relationships upon which the process of industrialisation (including agencies and linkages) depends.

Empirically, the chapter demonstrates that the manufacturing sector in Mozambique is part of an economy dominated by its forms of integration within the South African capitalist system. Up to the mid 1980s, rail transport services and migrant labour were the dominant forms of this integration, which had a huge impact on GDP and the finance of the trade deficit, public investment and investment in the rural economy. Therefore, the access of the manufacturing sector to labour, transport infrastructures and foreign currency were dependent upon these forms of integration. From the 1990s, the process of integration was diversified to include significantly more direct investment in productive capacities in Mozambique in line with privatisation policies, priorities and interests resulting from the restructuring of South African capital and corporate strategies. Thus, while services continues to generate the largest share of Mozambique's GDP and export revenue, FDI, mainly associated with South African capitalism, has become the single most important source of foreign inflows of capital.

There is a historical parallel worth mentioning. From the mid 1960s, during the final crisis and restructuring of the colonial economy, financial austerity and the drive for economic expansion made the Mozambican economy more dependent upon its integration in the Rand area and also led to the policy of open doors to foreign investment. In the 1990s, financial austerity associated with the program of stabilisation, combined with constraints to growth of aid inflows, have also made regional integration and FDI the dominant factors in economic growth in Mozambique. In both periods, the shape of economic expansion was mainly determined by the interests of South African capitalism. Therefore, the success of any industrial policy and strategy in Mozambique depends upon its ability to incorporate regional integration and FDI in a process that broadens the development base of the economy, and this requires accurate knowledge of the capabilities, interests, motivations and strategies of the different firms and forms of capital involved.

However, there are strong reasons why a mega project driven economic strategy would not work in promoting industrialisation in Mozambique. These are discussed in more detail in chapters 5 and 6. However, the empirical evidence discussed shows that these projects tend to be narrow based, not to promote linkages and to capture the dynamics of the entire economy, including other sources of finance, into their own orbits. The close association between such projects and a South African economy dominated by the minerals-energy complex essentially determines these characteristics of mega projects in Mozambique.

The chapter also demonstrates that the manufacturing sector's share of GDP is small and has changed little. Import substitution has not happen in a significant way as the productive and export bases of the sector are narrowly specialised and have become more so over the last decade, intra- and inter-sectoral linkages are weak and production capacity is import dependent with respect to capital equipment, technology and parts, material inputs and finance. Trends and growth rates of manufacturing output and MVA are significantly more unstable than GDP trends, because the performance of the sector is particularly vulnerable to small changes in the ability to import and attract foreign sources of finance.

Manufacturing expansion is particularly vulnerable to, and in conflict with, orthodox economic stabilisation. Financial austerity restricts investment options to inflows of foreign capital, which are unreliable, less sensitive to domestic policy and narrowly focused. This influences the pace and direction of industrial development. Under the current structure, expansion of the manufacturing sector creates severe current account pressures, because of the very strong and positive relationship between investment and imports. Long-term sustainability of rapid industrialisation requires that industrial policies and strategies are capable of addressing this problem by promoting gradual import substitution and with it diversification and expansion of the manufacturing export base. This task cannot be understood in isolation from regional integration and dependence upon inflows of foreign capital; the task is how to channel the energy from dominant forces, such as, for example, South African capitalism, to develop a broader and more integrated productive base.

The empirical analysis of current trends and patterns of investment confirms that they are consistent with the dominant characteristics of the process of industrial development in Mozambique and its relationship with the economy as a whole. In essence, investment has grown but has consolidated the current direction of production and trade that is not conducive to broad and sustainable patterns of development. Thus, although the level of investment is important, its allocation seems to be what industrial policy should be more concerned with.

Fundamentally, this chapter identified empirically the underlying economic conditions of industrialisation and industrial policy in Mozambique. How do formal economic and industrial analysis, policies and programs address them? What are the results of the combination of formal policies with the characteristics and dynamics empirically discussed in this chapter? These issues are discussed in the subsequent two chapters.