

# **Mozambique - a sub-Saharan African NIC?**

Hildegunn Kyvik Nordås  
with Leon Pretorius

**WP 2000: 10**



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## **Indexing terms**

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# 1 Introduction\*

Mozambique entered the new millennium as the fastest growing country in the world.<sup>1</sup> After a devastating civil war, peace and reforms set the stage for recovery, and the economy has grown by 6 percent annually on average during the 1990s. This has brought visible improvements to the performance of the economy and to social indicators, which in turn contribute to investor confidence and maintain the momentum for growth and investment.<sup>2</sup>

Mozambique gained its independence from Portugal in 1975. The independence movement, Frelimo, introduced a socialist system and very ambitious development objectives shortly thereafter. A ten-year perspective plan was introduced in 1977 with the objective to end underdevelopment. The proposed policy measures were rapid industrialization based on the agricultural surplus that would emerge from rapid modernization. The state would allocate resources and coordinate the modernization process (Abrahamsen and Nilsson 1995). Initially the program was met with considerable success as far as social indicators were concerned and modest success in economic development; achieving strong export growth and moderate economic growth.<sup>3</sup>

However, the country was soon plunged into a devastating civil war that was fuelled by both local conflicts and the cold war. In particular, South Africa supported the rebel Renamo forces and led a policy aiming at destabilizing the country economically and politically.<sup>4</sup> The war lasted for about two decades and left the country the poorest in the world when the war came to an end in 1992. Social, economic and physical infrastructure was devastated and the economy had largely resorted to subsistence production and barter trade.

In spite of the war, Mozambique introduced an Economic Recovery Program (ERP) supported by the IMF in 1987. The basic elements of the program were stabilization of the economy and reforms, notably liberalization of external and internal trade and privatization.

The first free elections were held in 1994, and the newly elected president and government soon embarked on a comprehensive recovery program, which can be seen as a continuation of the 1987 ERP. The program contained market liberalization, trade liberalization, public sector reform, investments in infrastructure rehabilitation and social sector programs focused on primary education and primary health care; and privatization of state-owned enterprises. The recovery program has been remarkably successful and the country has seen an annual average economic growth rate of about 8 percent since 1994, substantial improvements in social indicators and an investment

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<sup>1</sup> The Economist Intelligence Unit's forecast for the year 2000 at the beginning of the year.

<sup>2</sup> The country experienced a serious setback in early 2000 due to devastating floods and tropical storms.

<sup>3</sup> The annual average growth rate was about 2.8 percent during the period 1977-81, while exports grew by 15 percent annually during the same period. The number of teachers doubled, the illiteracy rate declined from 93 to 70 percent and health indicators improved substantially.

<sup>4</sup> Renamo was initially formed as a counter-revolutionary force by the then Rhodesian intelligence service.

boom involving both local and foreign investors. The recovery program is even seen as a model for post-war rehabilitation and economic reform.

The vigorous recovery has, however, aggravated serious macroeconomic imbalances in the economy. The country has always had a current account deficit, and the government budget has also been in deficit for extended periods of time. During the 1990s both these deficits have widened to about 20 percent of GDP. The country is extremely aid dependent, with development aid accounting for between 30 and 40 percent of GDP during the first half of the 1990s, declining to around 10 percent of GDP thereafter. When such large inflows of aid are used for investment and later complemented by foreign direct investment, the observed boom in economic activity is not surprising. In the absence of a local capital goods industry, an import boom should also be expected. Recent growth rates will, however, only be sustainable if the investments generate output for exports or replacing imports in the future.

This paper presents an analysis of the foreign direct investment flows to Mozambique during the 1990s. Section 2 provides an overview of economic development during the 1990s including industrial structure, the balance of payment and economic policy. Foreign direct investment flows are analyzed in detail in section 3. We report data from the IMF, local sources and the Business Map database. The data analysis constitutes the foundation for identifying the key determinants of FDI in Mozambique and the theoretical framework for analyzing the impact of FDI on the economy. The determinants of FDI are further discussed in section 4, while the impact of FDI on the economy is discussed in section 5. Section 6 summarizes and concludes.

## **2 Economic development**

### **2.1 Resources and economic structure**

Mozambique has a population of about 17 mill. and a GDP per capita of about USD 100.<sup>5</sup> Compared to the least developed countries, Mozambique used to have a relatively large industrial base. Industrialization started in the 1960s, and was largely based on local raw materials from agriculture and forestry. By 1973 manufacturing had reached a level accounting for 40 percent of GDP, but since independence the sector has declined sharply both in relative and absolute terms (Abrahamson and Nelson 1995). Thus, in 1996 industry accounted for about 20 percent of GDP of which manufacturing accounted for about half, agriculture accounted for about 35 percent and services 45 percent (World Bank 1999).

Mozambique's location makes it a natural regional service center. During the colonial period exports of services to the region accounted for 50 percent of foreign exchange earnings. Of these, half came from migrant workers to the South African mines, while the other half came from railway and port charges. South Africa had agreed to utilize the railway between Transvaal and Maputo in return for having access to a pool of Mozambican labor (Abrahamsson and Nilsson 1995). The second half of foreign exchange earnings came from exports of raw materials from the agricultural sector. The raw materials were mostly exported to Portuguese manufacturing industries, while some of the earnings from migrant labor went directly

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<sup>5</sup> World Bank estimate using the Atlas method of converting income data from local currency to a common (dollar) currency. The Atlas method uses a three year average nominal exchange rate adjusted for inflation differences between the country in question and the G5 countries (France, Germany, Japan, UK, US).

to Portugal in the form of gold. The practice of paying the country for mine workers in gold came to an end shortly after independence, while transit trade was sabotaged by South Africa and the rebel movement. After new governments had taken office in both Mozambique and South Africa, transit trade was revitalized, while migrant labor declined, at least the legal part of it. As will be seen below, the economic links between the two countries have strengthened substantially over the past few years.

Mozambique is rich in natural resources. Among the resources that are at present underutilized are arable land, natural gas, mineral resources and the country has a great potential for hydropower, and thus cheap energy.<sup>6</sup> The country is, however, very poor in other crucial inputs in the production of goods and services, such as infrastructure and skilled labor. This is largely a legacy from the colonial era when Portuguese settlers controlled most formal sector economic activity with very little involvement of the local population. Moreover, not only did 185 000 of a total of 200 000 settlers leave the country during the transition to an independent country, they also sabotaged property and productive infrastructure. This dealt a heavy blow to the manufacturing sector, which was built around Portuguese management and workers. Table 2.1 below gives an indication of the resource base in the country in the mid 1990s.

Table 2.1: Resource endowments

Indicator	Mozambique	Sub-Saharan Africa	South Africa
School enrolment ratios			
Primary	60	77	131
Secondary	7	27	94
Tertiary	1	3	19
Adult illiteracy rate (male)	47	34	18
Average years of schooling (male)	4	na	12
Life expectancy at birth (male)	44	51	62
Population density	20	25	30
Infrastructure			
Paved roads (percentage of total)	18.7	17	41.5
Normalized road index*	141	107.1	300
Telephone lines per 1000 people	3	16	107
Cost of local call \$ per 3 minutes	0.04	0.09	0.07
Electric power consumption per capita (kwh)	76	439	3719

Average years of schooling data are from 1992. All other data are from 1996.

\* Normalized road index is the total length of roads in a country compared with the expected length of roads, where the expectation is conditioned on population, population density, per capita income, urbanization, and region-specific dummy variables. A value of 100 is "normal." If the index is more than 100, the country's stock of roads exceeds the average.

Source: World Bank (1999)

This composition of resource endowments suggests that Mozambique has a comparative advantage relative to both South Africa and the sub-Saharan African region in industries that use land intensively, as the country has the lowest population density in the sample. Not only is the land area per person larger in Mozambique, land is also fertile and rich in minerals. Mozambique also has a long coastline with unspoiled beaches and coral reefs, ideal for tourism and rich fisheries. The country is

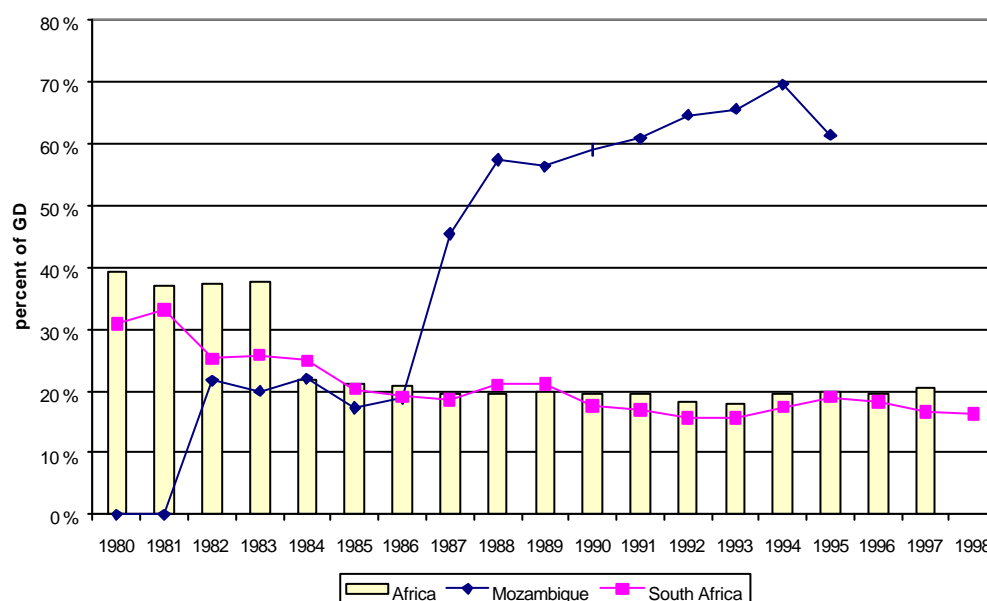
<sup>6</sup> There are about 36 mill. hectares of arable land of which only a third is utilized (SADC/World Economic Forum 1999).

fairly well off in terms of transport infrastructure compared to the region, although the country lags far behind South Africa. In spite of very scarce telecommunications networks, prices of telecommunication services are relatively low, indicating that consumers are heavily subsidized. Finally, the country is very poor in human capital both relative to the region and to South Africa.

The comparably low consumption of electric power in Mozambique does not reflect the country's power generation capacity, but is instead an expression of the low level of per capita income. Mozambique has in fact ample electricity generation capacity, but the transmission lines go to South Africa who used to be the major customer of the power sector. The transmission lines were damaged during the war, but in spite of recent rehabilitation, exports have not resumed due to disagreement over prices.<sup>7</sup> Electricity consumption is, however, expected to increase dramatically when an aluminium smelter plant under construction becomes operational (see section 3.1). Furthermore, several other energy-intensive investment projects are in the pipeline, attracted by Mozambique's ample and relatively cheap electricity.

The figures presented in table 2.1 indicate that Mozambique probably has a comparative advantage in agriculture and energy-intensive industries, but a huge comparative disadvantage in skill-intensive industries, both compared to South Africa and to the region as a whole. We do not have data on capital stock per worker for Mozambique, but it can be safely assumed that it is significantly lower than in South Africa, and thus a comparative disadvantage relative to South Africa for capital-intensive industries. Estimates of investment expenditure differ widely depending on the sources of data. We have chosen to use the IMF International Financial Statistics data. Gross fixed capital formation, as a share of GDP compared to South Africa and Africa as a whole is depicted in figure 2.1.

Figure 2.1 Gross fixed capital formation as share of GDP



Source: IMF (1999)

<sup>7</sup> The South African electricity company, Eskom, is one of the world's lowest cost producers of electricity and is not willing to pay more than the cost of its own electricity. Besides Eskom has excess capacity.



The figure first illustrates one of Africa's development problems; a low rate of gross fixed capital formation. For comparison, the newly industrialized countries in Asia had gross fixed capital formation to GDP ratios between 30 and 45 percent during the period from the late 1980s to 1997.<sup>8</sup> South Africa suffers from the same problem as the average African country in this respect. Mozambique, in contrast, exhibits a very high investment rate. Not only is it way above the average for Africa, it is also much higher than the Asian newly industrialized countries. In fact, Mozambique had a rate of gross fixed capital formation about 1.75 times higher than Asian NICs such as Malaysia and Korea during the 1990s. If investments were equally effective in terms of generating income, they should also lead to increases in income about 1.75 times the increases in the NICs.<sup>9</sup> Mozambique's growth rate was, however, lower than Malaysia and Korea on average during the period 1990-97.<sup>10</sup> This does not necessarily mean that investments are much less effective in Mozambique. Since a large share of gross fixed capital formation has been in infrastructure and large-scale projects with a long gestation period (see section 3 below), growth may well pick up to two-digit figures as the new projects come on stream.

On the basis of Mozambique's level of income, its resource base and its geography, the country should have great potential for future growth. First, the country starts from a very low base and merely moving to the production possibility frontier given its present resources, would probably imply a significant improvement in income per capita. Second, the recent investment boom has increased production capacity substantially. Finally, recent investments in large-scale projects promise significant export earnings once the plants become operative, easing foreign exchange constraints on future investments.

## **2.2 International trade and non-investment financial flows**

The reforms introduced after the elections in 1994 envisaged a rapid transformation from a planned economy to a market economy. The transition was strongly supported by the international donor community. A rapid recovery followed, but it has aggravated an already chronic external and internal macroeconomic imbalance.<sup>11</sup> Twin deficits on the government budget and the current account to the tune of 20 percent of GDP have emerged. Figure 2.2 depicts the current account deficit in terms of USD since 1980.

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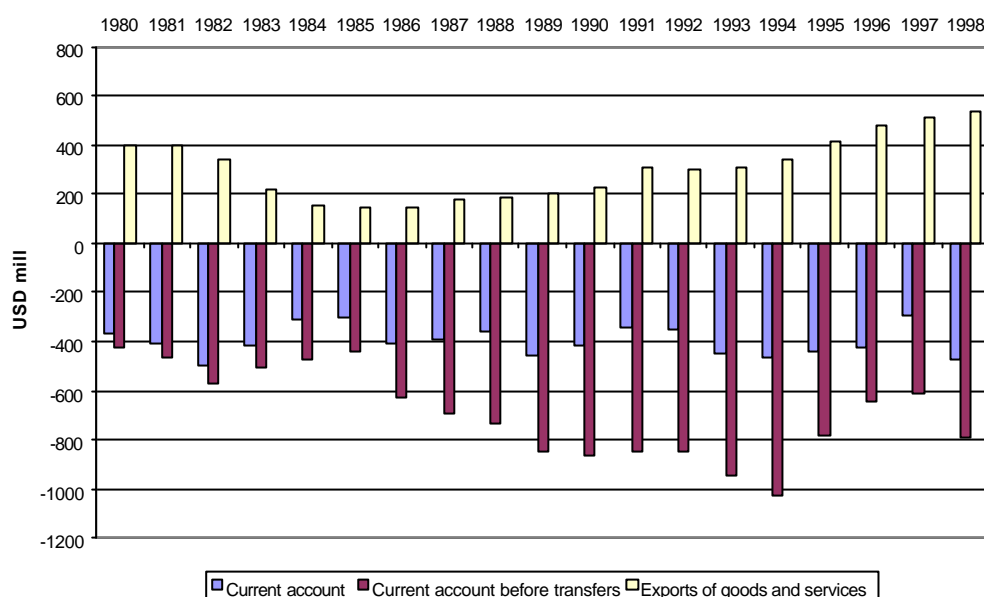
<sup>8</sup> Investments fell sharply during the Asian financial crisis in 1998.

<sup>9</sup> Taking the logarithms and time derivatives of a standard Cobb Douglas production function, we get that increases in aggregate income equal the weighted average of increases in capital and labor where the weights are each factor's share in national income, plus the change in total factor productivity. If the countries included in the comparison have the same factor shares in GDP and the same rate of total factor productivity growth, the changes in income should reflect the weighted average of changes in employment and investment. It is one of Kaldor's stylized facts that factor shares are constant over time and between countries. Total factor productivity does, however, vary widely among countries.

<sup>10</sup> Mozambique's growth rate was about 6 percent per annum on average during the period 1990-97, while the corresponding figures for Malaysia and Korea were 8.7 and 7.3 respectively.

<sup>11</sup> The country never had a current account surplus during the period 1958-74 (Abrahamsen and Nilsson 1995) and during the period 1980- 1996 (IMF 1999). Data for the period 1975-79 is not available)

Figure 2.2: Current account deficit and exports of goods and services



Source: IMF (1999)

As can be seen from the figure, the current account deficit before grants is higher than total exports of goods and services during the entire period. However, the current account deficit after grants has narrowed somewhat between 1994 and 1997 as exports picked up, only to widen again in 1998, mainly due to imports of capital goods for large-scale investment projects. Table 2.2 shows the composition of exports and imports in 1997.

Table 2.2 International trade, 1997, USD mill.

	Exports	Imports
Consumer goods	124.99	148.70
Food	115.43	80.02
Other	9.56	68.68
Intermediate goods	93.97	270.42
Basic	46.81	70.22
Processed	47.16	200.20
Equipment	9.70	252.68
Transport material	2.73	118.49
Other	6.97	134.19
Fuel and electricity	1.32	88.36
Others	0.09	0.04
<b>Total</b>	<b>230.07</b>	<b>760.20</b>

Source: National Institute of Statistics

The most important single exports are prawns, cashew, cotton, sugar, maize and wood. It is first worth noticing that the trade patterns largely reflects the comparative advantage derived from the country's resource endowments presented in table 2.1. Second, export earnings account for less than a third of the import bill. A final important point is that Mozambique's exports of services are actually larger than its merchandise exports. According to IMF (2000) statistics, exports of services

amounted to USD 278.7 in 1997 and USD 286.2 in 1998.<sup>12</sup> Service trade is better balanced than merchandise trade, and reflects Mozambique's position as a transit route, source of migrant labor and a tourist destination. Merchandise exports in nominal dollar terms grew by about 9.5 percent annually on average during the period 1992-98, significantly faster than GDP.

Turning to the direction of trade, Asia was the most important destination of exports in 1991, accounting for 57 percent of the total. Within Asia, Hong Kong, Singapore and China were the most important export destinations. During the 1990s the relative importance of Asia and developing countries as a group has declined. This reflects an absolute decline in export value to developing countries while exports to the OECD countries have been stable in dollar terms. By 1997 the OECD countries received about 60 percent of Mozambique's exports. Within the group of developing countries there has been a remarkable shift in the direction of exports towards Africa. During the 1990s, exports to Africa have tripled in dollar terms and exports to neighboring South Africa have increased 7-fold. Exports to South Africa accounted for about 13 percent of Mozambique's total exports in 1997 (IMF 1999).

When it comes to sources of imports, the relative importance of developing countries has increased from 41 percent in 1991 to 75 percent in 1997. Industrial countries have lost market shares mainly to South Africa which has tripled its exports to Mozambique in dollar terms and increased its market share from 22 percent to 50 percent (IMF 1999).<sup>13</sup> Recent changes in the direction of trade are probably a result of the reintegration of South Africa into the world economy. South Africa became a member of Southern African Development Community (SADC) in 1994 and thus enjoys privileged access to the Mozambican market in addition to its natural comparative advantage as a neighboring country.

Due to substantial capital inflows in addition to the transfers depicted in figure 2.2, the local currency appreciated sharply in real terms during the early 1990s, particularly towards the South African rand. Figure 2.3 depicts the real exchange rate towards the US dollar and the South African rand during the 1990s.<sup>14</sup>

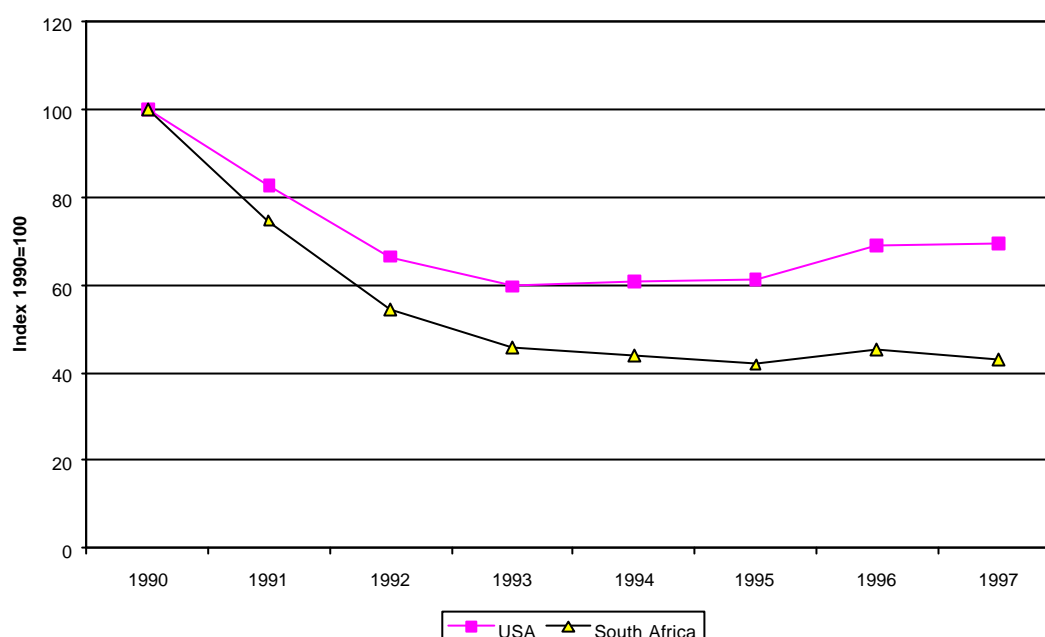
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<sup>12</sup> Imports of services amounted to 328.6 and 401.2 mill. USD in 1997 and 1998 respectively.

<sup>13</sup> According to local statistics, the South African share of total imports was about 40 percent in 1997 (National Institute of Statistics, 2000).

<sup>14</sup> Estimates using Laspeyres formula.

Figure 2.3: Real exchange rate index



Source: IMF (2000)

The local currency, the Meticaís, appreciated sharply towards both dollars and rand during the period 1990-92, reflecting increases in foreign aid, FDI, and “exceptional financing.”<sup>15</sup> The exchange rate has, however, been stable in real terms towards the rand and depreciated towards the dollar in recent years. We find a positive correlation between the current account deficit and the real exchange rate (when the exchange rate depreciates, the current account deficit narrows), indicating that the external balance is sensitive to movements in the exchange rate, and that this may partly explain the widening external imbalance during the economic recovery.<sup>16</sup> The major explanation for the widening current account balance is, however, imports of capital goods related to the investment boom.

The recent development of the Mozambique economy in general and the FDI flows in particular can not be fully understood without assessing the role of the so-called development corridors. We therefore discuss them at some length and detail in the next section.

### 2.3 The three Development corridors

As mentioned above, transit trade was one of Mozambique’s most important sources of foreign exchange earnings during the colonial era. About 40 percent of Gauteng’s industrial exports went through the Maputo corridor before 1975 (Driver and De Barros 1999). The route was, however, more or less closed from the mid 1970s to the early 1990s, and the South African ports of Durban and Richards Bay took over as the

<sup>15</sup> “Exceptional financing” is an item below the overall balance line on the balance of payment account that captures debt rescheduling, debt forgiveness and arrears related to foreign debt servicing.

<sup>16</sup> We find a correlation coefficient of 0.57 between the real exchange rate towards USD and the current account balance, the corresponding figure against the rand is 0.5 both with the current account lagged one year. This result is only tentative since we have a short and not terribly reliable time series data.

major trading ports both for Gauteng and landlocked neighboring countries. In addition to the Maputo corridor, there were two other major transit routes, the Beira corridor between Harare and Beira; and the Nacala corridor between Lilongwe, Lusaka and Nacala.

Revitalizing these transit routes has been an important part of Mozambique's development strategy. However, the objectives have been more ambitious than just to reestablish transit routes. Rather it has been envisaged that the provision of efficient infrastructure would "crowd in" productive investments and trigger a process of agglomeration of industries and supply networks. This development policy coincided with South Africa's strategy of spatial development initiatives (SDIs), which aimed at boosting economic activities in less developed regions of the country.<sup>17</sup> Three of these SDIs have a regional dimension, and the Maputo corridor is the flagship among them (Driver and de Barros 1999).

South Africa and Mozambique struck an agreement in 1995 to re-establish the Maputo corridor. The infrastructure in the corridor consists of a toll road, a railway link, telecommunication networks, a border post and the port of Maputo. All this infrastructure existed before the project was initiated, but needed substantial rehabilitation and upgrading. The telecommunication network, for example, is being upgraded by a digital microwave system. The border post is planned as a 24-hour one-stop post. When operational, it will reduce processing time at the border from 2-6 hours at present to less than an hour.

The Maputo corridor project entails a first experiment with public-private partnerships. The toll-road between Witbank and Maputo is thus a build-operate-transfer (BOT) scheme on a 30-year concession awarded to a private international consortium.<sup>18</sup> Construction started on the South African side in 1997. The road will have five plazas, three on the South African side and two on the Mozambican side. It is the first in Southern Africa that is designed to cover the full cost of investment and maintenance from toll payments. The South African stretch was opened in 1998, while the Mozambican leg is planned finalized in 2001.

The Maputo port project includes several specialized terminals for different cargo. They have been privatized or partly privatized, and this has been an important source of foreign direct investment. Thus, the terminals handling exports from landlocked neighboring countries are run by companies from those countries, while South African/ multinational companies such as the Rennies Group and P&O have participated in the development of the container terminal.

The Maputo Corridor Company was formed in order to oversee the implementation of the Maputo corridor project. Its ownership structure is 65 percent private ownership and the remaining 35 percent shared between 5 governments (Mozambique, South Africa, Swaziland, Botswana and Zimbabwe). Hence, not only is the project a cooperation between the private and public sectors, it also has a regional inter-government dimension.

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<sup>17</sup> See also Nordås (2000b).

<sup>18</sup> The consortium is Trans Africa Concessions (Mitchell 1998).

The Maputo corridor project has not been without problems, however. The toll fees on the South African side of the road appear to be so high that transporters avoid the route and choose other alternatives. Thus, since the toll plazas opened, heavy vehicle traffic has declined by close to 50 percent (Driver and de Barros 1999). A related problem is that freight is largely going in one direction, from Gauteng to Maputo, with small opportunities for backhaul. Returning empty of course increases the cost of transport tremendously compared to the more crowded routes to Durban or other ports.

Recent developments in the shipping industry towards larger vessels and fewer calls on ports limit the development of Maputo harbor as an export-import port. For this, it is too close to Durban, which already has the necessary facilities and an established position as a hub port. Maputo can therefore realistically only expect to become a prominent feeder port for Durban as far as container transport is concerned. It can, however expand its capacity as a bulk port.

Upgrading of the railway link grinded to a halt as negotiations between the bidder for the project (the South African railway parastatal Spoornet) broke down in 1999. Finally, privatization of general port services ran into difficulties, because the preferred bidder wants to see an agreement on the railway link before making a commitment, underscoring how interrelated these projects are and the need for coordination.

So far, the three development corridors have not attracted the freight that was hoped for. Hence, much transit transportation from landlocked neighboring countries continues to go through South Africa in spite of shorter routes through Mozambique. This is probably due to the fact that the road and port facilities are still under rehabilitation, and due to lack of efficient and integrated transportation services such as road vehicle workshops along the route, which can take care of technical problems and vehicle brake down quickly and effectively. The experience of the Maputo corridor so far also raises the question of scale efficiency in BOT infrastructure investment projects, both for the BOT investors and the users of the toll-road.

Initial problems notwithstanding, the Maputo corridor has attracted substantial interest from private investors. Private investment in the corridors have been further stimulated by the establishment of industrial development zones along the route, offering a package of investment incentives on the condition that the investor exports at least 85 percent of output. A number of large-scale investment projects has been suggested, and some of them have materialized and are under construction in early 2000. These are discussed further in section 3.

## **2.4 Unbalanced growth**

Mozambique is rich in natural resources, which hitherto have been largely unexploited. The rapid growth during the post-war period has been driven by aid-funded recovery of physical, economic and social infrastructure. Nevertheless, medium-term growth is based on large-scale natural resource-intensive investments that create few jobs and few backward and forward linkages, but substantial foreign exchange earnings.<sup>19</sup> The latter is yet to materialize and meanwhile substantial

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<sup>19</sup> The industrialization pattern is similar to Norway's in the early 20<sup>th</sup> century with the establishment of large-scale aluminum smelter plants based on access to cheap hydropower, while importing the raw

macroeconomic imbalances have been sustained and even widened during the 1990s. The current account imbalance will most likely narrow as exports come on stream, but the government budget balance will remain a problem in the face of ambitious development programs and very low taxes on the most important income-generating sectors of the economy (see section 3 below). In addition, the development path Mozambique has embarked on entails the danger of running into Dutch disease type problems.<sup>20</sup> The problem arises when exports of natural resource-based goods lead to an appreciation of the exchange rate and thereby renders labor-intensive manufacturing uncompetitive.

As the discussion on the development corridors demonstrates, Mozambique's economic development is closely linked to that of South Africa. It may be sustained due to relocation of energy- and labor-intensive South African industries partly servicing the South African market and partly South African multinational companies' demand for raw materials and other intermediate inputs. In that sense, Mozambique is in a similar position as Mexico after the formation of NAFTA, although the income gap between Mozambique and South Africa is larger than the income gap between Mexico and the US.<sup>21</sup> However, while Mexico integrated with a booming neighboring economy, South Africa is still struggling to get growth and development off the ground, and will probably continue to do so for some time to come.<sup>22</sup>

### **3 Foreign direct investment flows**

The Mozambican government has encouraged foreign investment since 1985 when the first law on foreign investment was introduced. It was replaced in 1993 by a new law that applies to local and foreign investment alike and ensures national and equal treatment of local and foreign investors in most areas. In addition, the investment law grants foreign investors protection of property rights and repatriation of profits. Mozambique is a member of MIGA, OPIC, and ICSID.<sup>23</sup> Finally, a one-stop agency, the Investment Promotion Centre, has been established in order to undertake timely assistance and authorization of investment projects (Mozambique Government 2000).

A number of investment incentives have been introduced. Among them are tax holidays; duty free imports of intermediates (or significant rebates on duties); a liberal regime related to repatriation of profits and employment of expatriates. Expenses on training of local employees can be deducted from profits before tax. Fiscal incentives are more favorable in remote regions in order to compensate investors for higher costs in areas with inadequate infrastructure and supply chains. Finally, as mentioned above, the government introduced export processing zones (industrial free zones, IFZ)

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materials and exporting raw aluminium. Moreover, fisheries and tourism were other important pillars in the development of the Norwegian economy.

<sup>20</sup> The impact of large inflows of foreign exchange is discussed in Auty and Mikesell (1998) and Rodriguez and Sachs (1999), both in the context of exports of minerals. Nordås and Gergis (2000) argue that these analyses are highly relevant to large inflows of development aid as well.

<sup>21</sup> Income per capita in Mexico was about 13 percent of that in the US in 1996, while Mozambique's income per capita was only about 2 percent of South Africa's.

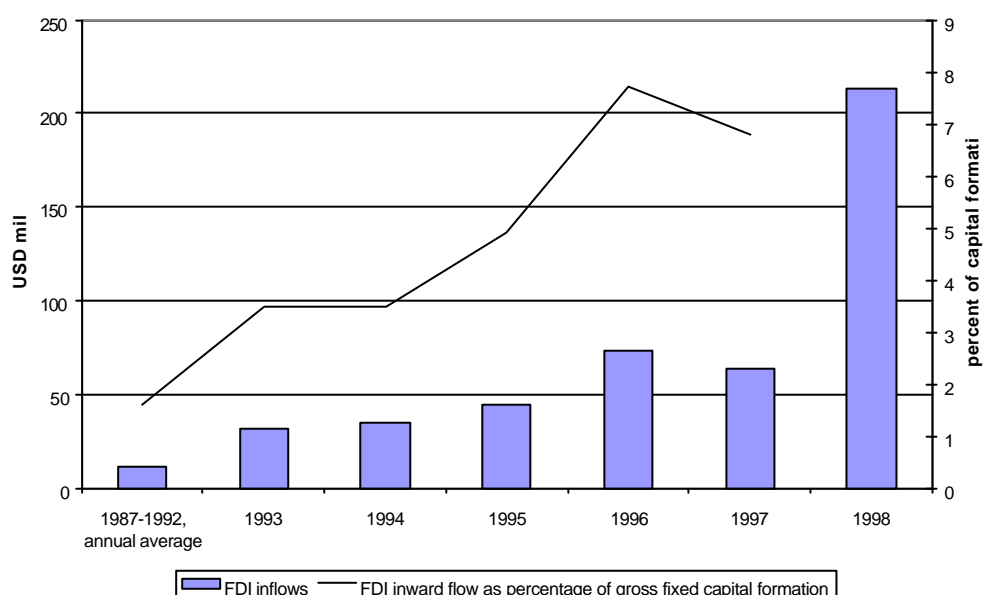
<sup>22</sup> See Nordås (2000b). Here it is argued that optimism as far as South Africa's growth potential is concerned underestimates the damage the apartheid system did to the country. This damage can simply not be undone in a few years, no matter how good policies the country adopts.

<sup>23</sup> MIGA: Multilateral Investment Guarantee Agency, OPIC: Insurers against non-commercial risk International Convention and ICSID: International Centre for Settlement of Investment Disputes

in relation to three development corridors. Inside these zones there are full exemption from customs duties, consumption and circulation taxes and customs handling fees for investment and intermediate goods, and only a very small tax on income (Government of Mozambique 2000). To qualify for IFZ status, a company must export at least 85 percent of its output and a minimum investment of USD 50 000 is required. An additional advantage for foreign investors exporting products manufactured in Mozambique to third countries is that Mozambique is eligible for duty-free export quotas to the European Union, the US and other developed countries under the General System of Preferences (GSP). Mozambique also enjoys preferential low-duty export quotas to the Eastern and Southern African markets under COMESA, and has a special trade agreement with South Africa. In spite of the liberal investment policy, there are still investment barriers such as excessive red tape, de facto local partnership requirements, import controls and corruption (IDC 1997).

Figure 3.1 depicts the flow of foreign direct investment during the period 1987 to 1998 in USD (left hand scale) and as a percentage of gross fixed capital formation (right hand scale).

Figure 3.1: Foreign direct investment



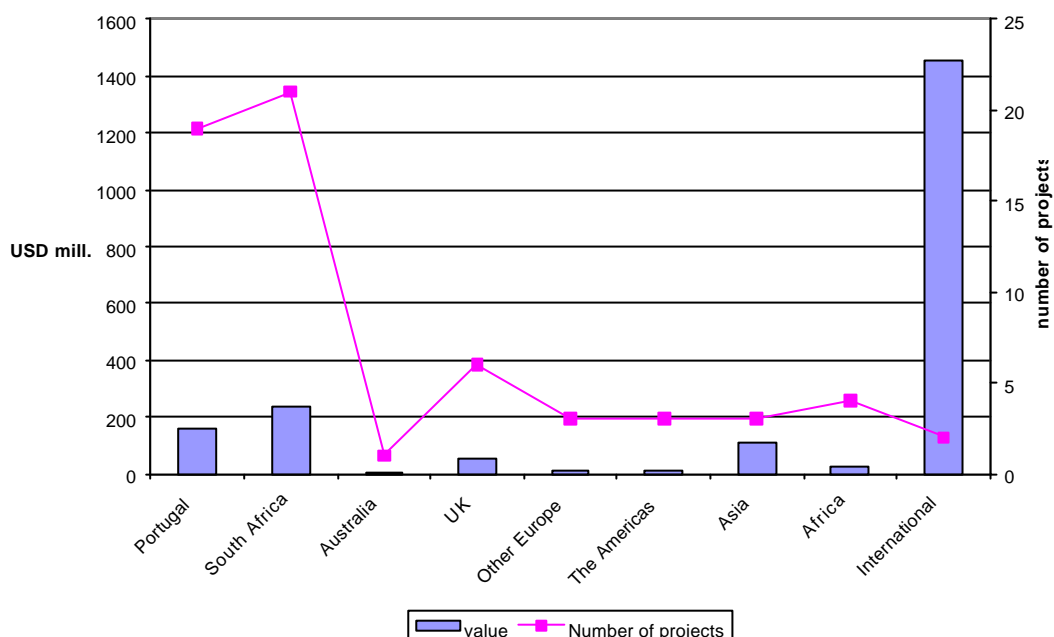
Source: UNCTAD (1999)

We note that the FDI that has actually materialized is modest compared to total fixed capital formation, which in turn is largely financed through development aid. Thus, the period between 1994 and 1998 has been characterized by public investment in the recovery of infrastructure, privatization of state-owned enterprises, and planning and negotiations with multinational companies on the implementation of large-scale investment projects. These investment projects have materialized only recently, as the quadrupling of FDI in 1998 indicates.



Turning to a more detailed break down of FDI, we use data from Business Map.<sup>24</sup> They provide investment data by projects, where country of origin of the investor, the receiving sector, the year of investment and the type of investment are reported. In addition, the investing company and its local partner are identified. Let us start by analyzing the country of origin of the investors. The most significant investor countries are reported in figure 3.2, while smaller investor countries are aggregated into regions. The value of investments is reported at current USD (the left hand axis) and the number of projects is shown on the right hand axis.

Figure 3.2: Foreign direct investment by country of origin



Source: Business Map

The largest investor is “International,” representing two large-scale projects. The first is the major project in the Maputo corridor, namely the Mozal aluminium smelter plant with investment of about 1.3 bill. USD. The participants are Billiton, a London-listed South African mineral company, and Mitsubishi, a Japanese conglomerate. In addition, the South African Industrial Development Corporation (IDC), a state-owned development finance institution, participates with equity financing. Construction started in 1998 and is expected to be completed by the end of year 2000. The second international project is a cooperation by Eskom, the South-African state-owned electricity-company, and Swaziland Electricity Board. This investment is in electricity generation mainly for exports to Swaziland and South Africa. When the South African share of these projects is included, reckoning Billiton as a South African company, South Africa accounts for about 60 percent of total accumulated investments.

The second largest investor in Mozambique is its former colonial power, Portugal. Even though Portugal is an insignificant foreign investor on a global scale, it has a

<sup>24</sup> Business Map is a private company which compiles a comprehensive database for FDI flows in the SADC area. Its data are based on company annual reports, central banks statistics, newspaper articles and interviews.

prominent presence in Mozambique, indicating that familiarity with the country and cultural ties matter. Thus, a common language and knowledge of culture, customs, and knowledge of the economic geography of the country probably reduces the costs of acquiring reliable information and other transaction costs. This argument applies to neighboring South Africa as well, perhaps even more so than Portugal. Portuguese investments are probably also driven by returning businesses after the exodus at independence.

Turning to sectoral composition of FDI, figure 3.3 shows that the dominant industries hosting FDI are energy-and land-intensive industries. These produce mainly for exports, and reflect Mozambique’s comparative advantage in these sectors, as also indicated by trade flows.

Table 3.1: FDI by sector

	Value of projects, USD mill.	Number of projects
Agriculture, forestry and fishing	150.1	10
Chemicals, Plastics and Rubber products	2.0	1
Construction Building materials and engineering	12.5	5
Energy and oil	135.5	2
Financial services	36.0	6
Food, beverages and Tobacco	290.8	14
Hotel, leisure and gaming	39.9	10
Media, Print and publishing	2.4	2
Metal products and mineral beneficiation	1320.8	2
Mining and quarrying	6.9	3
Motor and Components	2.7	2
Other Manufacturing	35.0	1
Retail and Wholesale	23.6	4
Transport and Transport Equipment	9.1	1
Total	2067.3	63

Source: *Business Map*

Investments in sectors such as financial services and construction are largely investments supporting the resource-intensive industries and are dominated by South Africa and Portugal. In the financial sector 4 out of 6 projects are Portuguese. FDI in retail and wholesale trade represents a regional expansion of South African retail chain stores.

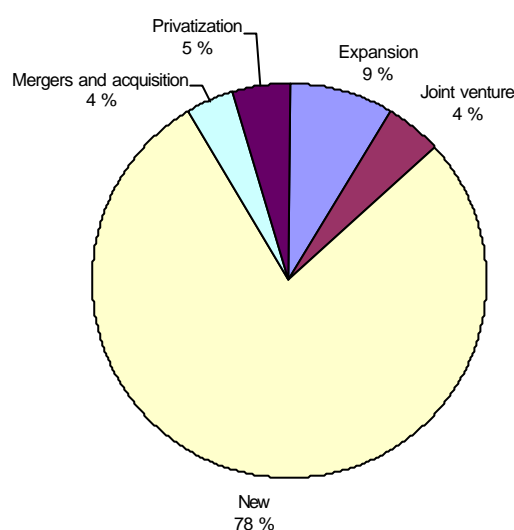
The second largest sector in terms of number of projects is “Hotels, leisure and gaming.” This is, according to SADC/World Economic Forum (1999), one of the most promising sectors in Mozambique. The country has a 2 500 km coast line with unspoiled beaches, islands and coral reefs. In addition there is great scope for gaming.

The two largest investors, South Africa and Portugal differ in their sectoral profile of investments. South Africa dominates the metal products (including its part in the international projects), agriculture, retail sales and hotels sectors, while Portugal has a leading role in financial services and food processing. Portugal’s leading role in financial services is perhaps surprising, given that South Africa has internationally

competitive financial enterprises with a substantial international branch network, and South Africa is believed to have an advantage in African banking services due to its long-standing experience from doing business in Africa (Nordås 2000b).<sup>25</sup>

Finally, we look at different categories of investment as classified by the Business Map database. It distinguishes between, green-field investments, joint ventures, privatization and mergers and acquisitions (M&A).<sup>26</sup> As one would expect in a capital-poor and war-torn country such as Mozambique, green-field investments dominate. The structure of FDI along the type dimension does, however, stand in sharp contrast to global trends in FDI where M&A dominates (UNCTAD 1999, OECD 1999). FDI by category is depicted in figure 3.3, which shows the value of investments.

Figure 3.3: Investment by type



Source: Business Map

To summarize the trends in FDI, we see, first, that recent and planned inflows of FDI are large compared to Mozambique's total economy. Second, the FDI is largely concentrated in natural resource intensive industries. Fourth, South Africa and Portugal dominate as foreign investors, South Africa concentrating on mineral resource-intensive industries while Portugal concentrates on land-intensive industries. Both are, however, involved in the service industries. Finally, most investments are new investments or extensions of existing ones, meaning that FDI leads to additional production capacity and jobs.

Before we go on to discuss determinants of FDI, it is useful to take a closer look at the largest FDI project undertaken in Mozambique to date, the Mozal project. The project accounts for almost 65 percent of total accumulated FDI up to the year 2000,

<sup>25</sup> South African banks have developed technology for servicing poor individuals with credit and payments services at reasonable costs and South African insurance companies have developed insurance for poor and even HIV-infected individuals. In both cases the customers had previously no access to such services.

<sup>26</sup> Some of these are not mutually exclusive.

and the value of investments is equal to about 80 percent of 1997 GDP, both measured in nominal dollar terms. It is also worth mentioning that an even bigger smelter plant project is under planning. This is an iron and steel production plant where the investing company is the American energy and communication multinational Enron. Enron has already secured the rights to develop the Pande gas field. It plans to develop the field and pipe the gas to Maputo for fuelling the iron and steel plant, the Mozal smelter and other customers in South Africa (through the power grid from Maputo to South Africa). This project will amount to more than USD 2 bill. if implemented (Business Map 2000). So far, however, the project has been delayed, among other things because of disputes over electricity market regulations.

### **3.1 The Mozal project**

In March 1998 the government of Mozambique passed a decree legislating the creation of an IFZ in Beloluane in the Maputo Corridor, near the Maputo harbor. The Mozal project is the first project inside the Beloluane IFZ, it is located about 17 km from Maputo and is the anchor project in the Maputo Corridor SDI. The production capacity of the plant will be 250 000 tons when the first phase of the project is completed, increasing to 500 000 tons after a planned second phase. At the 1999 world market price of aluminium, the first phase capacity output will generate export earnings around USD 430 mill. annually. Compared to total merchandise export earnings in 1998 of USD 248 mill., the Mozal project will more than double export earnings. The smelter plant will employ 800 persons, of which 700 will be Mozambicans, while 9000 persons are employed during the peak of the construction phase.

Equity is distributed among the investors as follows: Billiton, the world's fourth largest producer of aluminium, holds 49 percent, Mitsubishi holds 26 percent and IDC 25 percent. The Mozal project builds on Billiton's technology, which is ranked second in the world in terms of cost effectiveness. The company has a similar smelter plant in Richards Bay, South Africa (the Hillside smelter plant), and Mozal is built over the same concept as the Hillside smelter.<sup>27</sup>

The Mozal project enjoys all the investment incentives offered investors in general and investors in IFZs in particular. Because of this, and the fact that the investors already command state of the art technology, the Mozal plant is expected to become one of the lowest-cost aluminium smelter plants in the world. The Mozal plant becomes part of Billiton's global sales and supply chain network and will benefit from Billiton's R&D results and its access to international financial markets through its London listing. There are also synergies from operating both the Hillside and the Mozal smelters. Billiton will for example purchase inputs (alumina and petroleum coke) for both plants simultaneously, ship them to Hillside and load off for the Hillside plant while shipping the rest to Maputo. The ship is by then half-loaded and can get into Maputo harbor. In this way transport costs are reduced significantly for the Mozal plant, and possibly also for the Hillside plant since larger vessels can be used. Nonetheless, the second phase of the project depends strongly on that the planned dredging of the Maputo harbor is actually implemented. Trade in alumina is intra-firm trade as the mineral is bought from Billiton's mine in Australia.

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<sup>27</sup> It is even built by the same team (Financial Mail 3 December 1999).

The most crucial input in an aluminium smelter plant besides alumina is of course electricity. Electricity to Mozal comes from the Cahora Bassa hydroelectric project (in Mozambique), but it is routed through Swaziland and South Africa through the South African parastatal company Eskom's grid.<sup>28</sup> Billiton buys electricity on a long term contract where the price is linked to the world market price of aluminium. This may well entail hidden subsidies to the plant, particularly during commodity price slumps. Furthermore, due to excess capacity in Eskom, Billiton benefits from very low electricity prices during the first six years of operations.

Although the MOZAL smelter plant is capital intensive with a capital labor ratio of about USD 1.6 mill. per worker, labor costs are still a significant part of operating costs. The average monthly wage in the manufacturing sector in South Africa was R 3823 for all workers and R 2307 for black workers in December 1997 (Statistics South Africa 1999). For comparison, the statutory monthly minimum wage in Mozambique was 301 600 Meticaís in 1997 (National Institute of Statistics, 2000), which corresponds to about R 120. Mozal pays more than the monthly minimum wage since it employs workers with at least some industrial skills, but labor costs are still very much lower in Mozambique than in South Africa. It should, however, be noticed that in order to ensure a core of employees with the necessary skills to operate the plant in an effective manner, 200 workers were employed in late 1999 and introduced to a training program of 35 000 man days at a cost of USD 5 mill. (Financial Mail 3 December 1999).

To summarize this section, the Mozal plant is the largest investment in Mozambique to date. It is attracted by low-cost supply of electricity and reasonably good infrastructure for transport of inputs and outputs. The synergies with the investor's plant in South Africa and the regional approach to developing infrastructure are, however, crucial for the investment decision.

### **3.2 FDI - Summary**

Foreign direct investment in Mozambique is concentrated in the three development corridors. The most important motive for locating in Mozambique appears to be access to natural resources, including a scenic coastline and wildlife attractive to tourists. Investments outside the resource-intensive sectors appear to be mostly in enterprises supporting anchor projects in the development corridors, or supplying the consumers employed in these projects. Furthermore, FDI in Mozambique, particularly South African investments in the country, contribute to a closer integration of the South African and the Mozambican markets, including the markets for consumer goods and services.

The Mozal project is a good example of projects integrating Mozambican and South African markets. It entails an integrated infrastructure servicing Billiton's plants on both sides of the border and an integrated supply and marketing network. The training costs undertaken by Billiton in order to operate a state of the art smelting plant in Mozambique underscores how crucial human capital is for international competitiveness. Few foreign investors are willing to take on such training costs, and large-scale plants enjoying resource rents are probably one of the few sectors that can afford to do so.

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<sup>28</sup> Eskom has significant excess capacity, which is why there has been difficulties related to the agreement on exports of electricity from the Cahora Bassa project to South Africa.

#### **4 Determinants of Foreign direct investment**

The modern theory of international production is complex and draws on a number of areas of economic research, including trade theory, economic geography, the theory of the firm, industrial organization and the theory of innovation.<sup>29</sup> The many approaches are synthesized in John Dunning's "eclectic paradigm of international production." This is a framework for analysis rather than a theory per se, and we find it a useful framework for identifying the determinants of FDI in Mozambique and for choosing the most relevant theoretical framework for an in depth analysis. Let us therefore briefly sketch the framework:

There are three sets of conditions that determine the extent, form and pattern of international production. First, firms own assets that give them an advantage vis-a-vis other firms in servicing a particular market. These assets are of such a nature that firms can not easily reap the full benefit by selling them in a market. Examples of so-called owner-specific assets are technology, managerial capacity, organization, a marketing network, a supply chain or other similar assets that other companies can not replicate at the same cost in a particular location. Another dimension to ownership advantages is whether they give the owner an advantage in terms of production costs or whether they give the owner an advantage in the area of transaction costs. Second, in order for FDI to take place, firms that possess ownership advantages must consider it their best option to utilize these advantages themselves by establishing production activities within their own organization across international boundaries rather than selling or licensing the advantages to foreign firms. This second condition is referred to as the internalization advantage. Given that a firm has ownership advantages and internalization advantages, it will choose to invest in a certain location if it is profitable to transfer some of the firm's assets to a foreign location and combine them with that location's immobile factors of production or intermediate inputs.

We will analyze FDI in Mozambique in this context. But since we do not have detailed information on the investing companies' owner-specific assets, we will emphasize Mozambique's location-specific assets and the assets that we can infer that investing firms may have.

Mozambique's location-specific assets are clearly its rich natural resources, including minerals, energy (hydropower, coal, gas and perhaps oil), arable land, fisheries, and potential for tourism. The Mozal plant, for example is attracted by access to low-cost energy as it imports its raw materials and exports its output.<sup>30</sup> In addition, the country has a relatively well-developed infrastructure in the east-west direction, linking the country to the main industrial area in South Africa (Gauteng with Johannesburg and Pretoria) and facilitating transit trade to the landlocked neighboring countries. North-south infrastructure is, however, poor and has prevented a more integrated domestic market. Furthermore, the poor condition of local infrastructure has probably held back potential development in the agricultural sector in the north of the country. Natural resources combined with access to cheap energy and easy transport of inputs and outputs to world markets are probably the package that attracts foreign investors.

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<sup>29</sup> See Tolentino (1993) for an extensive discussion.

<sup>30</sup> The plant in other words exports embodied energy from hydropower resources.

Lack of skilled labor and crucial infrastructure such as telecommunications does, however, imply adjustment costs to foreign investors who have to incur significant training costs and investment in infrastructure, as the Mozal case study clearly shows. In addition, inefficient bureaucracy, corruption and the small local market may deter foreign investors.

Resource-seeking FDI typically used to be vertical investments in upstream resource extraction in order to secure access to essential inputs in downstream activities (Dunning 1993). Recent developments have changed that somewhat, as resource-based multinationals increasingly focus on their core, upstream activities while diversifying geographically. In Mozambique, resource-seeking investments are typically horizontal in the sense that the investor operates similar plants in Mozambique as he does elsewhere. The motive appears to be cost-minimization rather than securing scarce resources.

Turning to owner-specific assets, we largely confine the discussion to the Mozal project where we have some details on the investor's assets. As already mentioned Billiton is one of the world's leading aluminum producers, commanding state of the art technology. Its Mozal plant replicates its other smelter plants, particularly the Hillside smelter, which is located across the border at Richards Bay, South Africa. Compared to other multinational aluminium producers, Billiton probably has an advantage related to its experience with doing business in Africa. Other studies have found that third world multinationals typically possess the ability to transform first world technology to the smaller scale and different circumstances found in developing countries (Tolentino 1993). Compared to potential local firms, Billiton has access to international financial markets, marketing networks and an organization that coordinates its global production system.

As always in studies on FDI, the most intriguing question relates to why the investing company chooses to locate production in the host country rather than purchasing the raw materials from local firms (resource-seeking investments), exporting to the market (market-seeking FDI) or licensing production. For resource-seeking investment the answer is relatively easy in the Mozambican case. There are few local firms that have access to the necessary technology and capital to exploit the natural resources in a cost-effective manner. Resources would therefore probably lie unexploited in the absence of multinational firms. Furthermore, the natural resource sectors typically extract resource rent, which of course attracts investment as long as the expected return to such investments is higher than in alternative uses. Investments in tourism, particularly in hotels, are dominated by international hotel chains for whom brand names are important. Licensing is not uncommon in the sector, but in a country with a weak human capital base and service infrastructure, it is probably seen as better to maintain control over operations through FDI in order to keep up the quality customers associate with the brand name.

To conclude this section, it appears that FDI in Mozambique is largely resource-seeking and companies establish similar plants and activities in Mozambique as they have established elsewhere. The foreign affiliates appear to exploit Mozambique's comparative advantages and export most of their output. The multinationals bring financial resources, technology and organizational capabilities to Mozambique and their Mozambican activities are integrated into the multinational companies' regional

or global supply chains and marketing networks. This is particularly the case for South African investments in Mozambique. To what extent the assets the foreign investors bring spill over to local companies and individuals, depends on the extent to which foreign investments are integrated into the local economy. This question is discussed in the next section.

## **5 Impact of foreign direct investment**

The pattern of FDI in Mozambique is similar to the global pattern of FDI in the early 20<sup>th</sup> century. At that time developing countries received 2/3 of total FDI, while the investors were companies from the colonial powers. In 1914 the primary sector received 55 percent of total FDI, railways 20 percent, manufacturing 15 percent and trade and distribution services, public utilities and banking 10 percent (Dunning 1983). The driving force for FDI then was backward integration in order to secure access to raw materials while investments in secondary and tertiary sectors were largely made in order to supply the primary sector projects with necessary inputs and the workers involved with necessary consumer goods.

Empirical evidence suggests that growth and development from natural resource-led investments tend to be more problematic than investments motivated by access to cheap labor, see for example Rodriguez and Sachs (1999) and Nordås (2000a). This is due to the fact that the capital stock and the level of national income increase faster than institutional capacity, human capital and social indicators. Development easily becomes uneven unless the country has a redistribution strategy in place that does not foster corruption and distort incentives. Resource-led growth also typically leads to an appreciation of the exchange rate. Together with rising income this increases the cost level in the economy and limits the market opportunities for those outside the booming sectors. Problems related to exchange rate appreciation stemming from a booming export sector are referred to as the Dutch disease, and there are signs of a looming Dutch disease in Mozambique.

Large-scale, resource-intensive industries could in theory generate sufficient income and hence domestic demand to support clusters of industries which constitute markets for each other, as envisaged in the big push theories of development (Vernon 1966, Murphy, Schleifer and Vishny 1989). There are, however, few examples that this has actually happened. The impact of FDI in Mozambique is therefore most likely related to the potential linkages to the rest of the economy from resource-seeking investments and externalities. Such linkages are local supply networks, access to infrastructure that had probably not been built in the absence of such investments, and learning externalities or technology transfers. In addition exports from the resource-seeking investments may contribute to lifting foreign exchange constraints to local capital investments. We discuss the impact of these aspects of FDI in Mozambique below.

### **5.1 Technology transfer**

In large-scale, mature, natural resource-based industries such as aluminium and steel smelters, technology is largely embodied in the machinery. The technology is also highly sector-specific, such that technology-spillovers to other sectors are not very likely (Nordås 2000a). The most significant potential technology spillovers from these industries are therefore learning externalities related to work organization, project administration and exposure to international business practices, not least accessing modern supply networks.



Resource-seeking investments in agriculture, forestry, fisheries and tourism apply more flexible technologies that can more easily spill over to local firms in the same sector and to other sectors in the economy. There is for example scope for using more labor-intensive technologies in these industries in labor-abundant developing countries than the same industry uses in developed countries. Third world multinationals often have a comparative advantage compared to first world multinationals in applying suitable technology to third world conditions (Tolentino 1993). There is also more scope for moving up the value added chain in businesses based on agricultural raw materials and fisheries.

## **5.2 Marketing networks**

Raw materials are sold on competitive world markets, often on commodity exchanges or bourses. The largest investments in the Mozambique economy (the aluminium smelter plant and other heavy industry projects) are therefore not dependent on marketing networks, although they do benefit from access to supply networks for intermediate inputs.

The story is, however, completely different for light consumer goods such as textiles and garment. Increasingly these industries are dominated by global production and marketing networks led by the retailers (Gereffin 1998). Unfortunately, Mozambique has received very little foreign investments in such sectors. In fact, there are no investments in the textile, clothing and garment sectors registered in the Business Map data base. This probably indicates that although nominal labor costs are low in Mozambique, unit labor costs may still be high due to low productivity. Productivity in turn depends on smooth production operations and few delays or stops because of power cuts, telephones not working, intermediate inputs not arriving in time and so on. Access to infrastructure built in the development corridors will ease these constraints and could crowd in “light” consumer goods industries if the Dutch disease problems are contained.

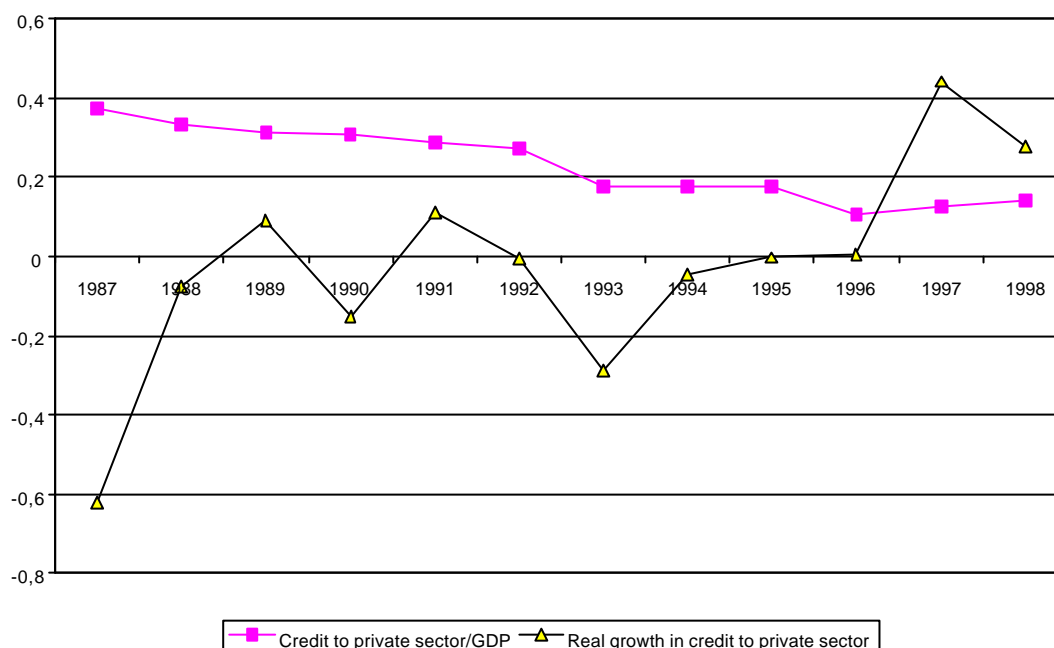
## **5.3 Access to credit**

Highly indebted poor countries such as Mozambique do not have access to international capital markets because of their governments’ default on foreign borrowing. This in turn means that the country and its companies have no investment ratings by the leading international credit rating companies. They can therefore not issue bonds abroad or borrow from foreign banks. Multinational companies’ subsidiaries in Mozambique, in contrast, enjoy the same credit rating as their parent company, and can therefore raise capital in international markets on favorable terms.

Local firms can of course raise capital from the local financial market but the domestic credit market has hitherto been shallow. Between 1978 and 1996 there was only one commercial bank in Mozambique. It was state-owned and credit allocation was determined by the state planning system. As indicated by figure 3.3, the period after 1996 has seen a number of entries of foreign banks, often in cooperation with local investors (Business Map 2000). This has led to a substantial credit expansion to the private sector, increasing in real terms by 44 percent in 1997 and 28 percent in 1998 and from 10.5 percent of GDP in 1996 to 14.2 percent of GDP in 1998 (IMF 2000). This is still low in international comparison, but it appears that foreign

investment in the financial sector has reversed a declining trend, as indicated in figure 5.1 below.

Figure 5.1: Credit to private sector



Source: IMF

Credit was distributed (percentage shares) among sectors as follows in 1998: Agriculture 22, manufacturing 27, trade 25, transport 6, construction 5 and others 15 percent. Note the large share of total credit going to domestic trade. Most of this (93 percent) was working capital, which also accounted for almost 70 percent of total credit in 1998, while the remaining 30 percent went to investment capital (National Institute of Statistics 2000). This means that domestic credit for investment purposes was less than 5 percent of GDP in 1998. Thus, although the decline in credit for private investment was reversed after new financial institutions entered the market, access to credit is probably still a constraint to local entrepreneurs. Yet, we may conclude that not only has FDI brought financial resources to the FDI projects, FDI in the financial sector has also improved access to credit to local entrepreneurs.

#### 5.4 Export processing zones and development

Experience with export processing zones is mixed. The costs and benefits to the host country largely depend on what policy regime the EPZ is compared to, and whether one assumes that intermediate inputs are tradable or not. If they are not tradable, Din (1994) finds that EPZs in most cases increase the host country's income through creating a market for a local supply industry. Johansson and Nilsson (1997) find a positive relation between exporting processing zones and total exports in some countries while the effect is insignificant or negative in others. They argue that EPZs are more likely to be successful if located close to a city, have good infrastructure and is part of a liberal overall trade regime. These results beg the question why the country should establish EPZs instead of liberalizing trade across the board, however.

South Korea, who did just that, did not exhibit any significant impact of EPZ on export performance. The countries in which EPZs had an estimated negative impact on exports (Mexico and the Dominican Republic) ran an inward looking import substitution policy outside the EPZs. This study only addresses the impact of EPZs on export performance. A study on Sri Lankan EPZs (Jayanthakumaran and Weiss 1997) applies social cost-benefit analysis to estimate the overall benefit of the EPZ and find that there is a significant net benefit. The EPZs studied entail mainly textile and clothing firms and the net benefits largely stem from wage earnings above the shadow price of unskilled (female) labor.

In all studies referred to, the potential benefits from EPZs arise from linkages to the local economy, increasing demand for locally produced intermediates, employing workers at wages above their shadow wages and creating learning externalities and access to world marketing networks. If, on the other hand the EPZ remains an enclave in the economy, the benefits are likely to be limited, if any. If it in addition uses local resources at a price below their shadow prices, the impact may well be negative.

The Maputo corridor EPZ, with the Mozal project as the anchor, has hitherto created few linkages to the rest of the economy. Experience from similar initiatives in South Africa indicates that large-scale, capital-intensive anchor projects do not generate much linkages in the long run either, even in a relative advanced country. The Richards Bay SDI is a case in point. This SDI is based around a modern harbor and its anchor projects are 5 large-scale and capital-intensive mineral beneficiation plants. The plants have performed well and are among South Africa's largest exporters. They have created a number of supporting industries, but mainly in the form of branches of firms established elsewhere in South Africa. The hoped for forward linkages in the form of the establishment of downstream processing plants have not materialized at all (Aniruth and Barnes 1998). Thus, if the Maputo corridor follows a similar pattern, much of the backward linkages may accrue to South African companies exporting from the South African side of the border, while lack of comparative advantage in more sophisticated downstream industries may prove to prevent the establishment of forward linkages in Mozambique.

### **5.5 Infrastructure and development**

Several studies have found a positive relation between investment in infrastructure and economic growth. Not only is infrastructure part of the aggregate capital stock which increases domestic output, there are also significant externalities related to infrastructure investments, which call for government interventions (Dasgupta 1999, Rioja 1999). Externalities are related to the fact that infrastructure has properties of a public good. There is, however the possibility of over-investment in infrastructure as shown for example by Barro (1990).<sup>31</sup> Hulten (1996), for example, argues that it is not only how much infrastructure a country has that counts, but even more how well infrastructure is used. Wheeler and Mody (1993) find that the quality of infrastructure is the most important explanatory factor of US FDI flows to developing countries.

Mozambique has made substantial investment in infrastructure largely related to the development corridors where foreign companies are attracted by generous investment

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<sup>31</sup> If the services flowing from government expenditure in Barro's model is interpreted as services from infrastructure stocks, which it is in Dasgupta (1999).

incentive packages and good infrastructure. This will give foreign investors access to expensive infrastructure without paying any taxes. This strategy of course begs the question whether it fosters an efficient allocation of resources, in a situation where rural feeder roads and north-south transport routes are in such a condition that the substantial potential for agricultural development is underutilized because of prohibitive transport costs.

## **6 Summary and conclusions**

Mozambique is one of the fastest growing countries in the world. Growth appears to be driven by the following three factors:

- Growth takes place from a very low base, meaning that a few investments in medium and large scale companies have a significant impact on national income;
- Foreign funds to the tune of 36 percent of GDP on average during the period 1994-98 have flown into the country;
- Liberalization of markets and regional integration.

Foreign direct investment has followed these positive developments with a lag, indicating that FDI is attracted by growth and low costs of inputs rather than driving the growth process. In particular, access to vast natural resources, generous investment incentives and a reasonably well developed infrastructure at least in the location where investment is encouraged, have attracted large-scale mineral processing plants and investments exploiting renewable resources such as arable land, fisheries and eco-tourism.

The major challenge facing Mozambique as a recipient of substantial capital inflows and large-scale capital investment are macroeconomic management, and a distribution policy that ensures that the benefits from foreign capital inflows accrues to Mozambique's population. This requires an industrial policy that ensure economic development outside the IPZs; and social investments that keep social development in pace with economic development. Mozambique has a good record as far as social development is concerned, but the country needs a much stronger economic and institutional infrastructure in order to ensure that the development corridors will not remain enclaves in the economy, and that a fair share of the resource rent is retained in the country.

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# Summary

This paper analyzes and explains foreign direct investment (FDI) in Mozambique. The country was one of the fastest growing countries in the world during the second half of the 1990s, and FDI has followed growth with a lag. FDI is dominated by South African and Portuguese companies, it is concentrated in the Maputo corridor, and one major project, an aluminium smelter plant, accounts for more than 60 per cent of total accumulated FDI. The driving forces for FDI appear to be access to natural resources, particularly cheap energy, a reasonably well developed infrastructure and regional economic integration. The most important direct impact of FDI in Mozambique is export earnings, easing the foreign exchange constraint on investments. Since the foreign investments are concentrated in mature, capital-intensive industries, job creation is limited and depends on the development of backward linkages to the local economy.