

An Enterprise Map of **Mozambique**



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Sutton

IGC International
Growth Centre

John Sutton

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with the assistance of *Adelino Jeque Pimpão,*
Félix Simione, Qi Zhang and Samuel Zita

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John Sutton is the Sir John Hicks Professor of Economics at the London School of Economics.

The International Growth Centre (www.theigc.org) promotes sustainable growth in developing countries by providing demand-led policy advice based on frontier research. The IGC is directed and organized from hubs at the London School of Economics and the University of Oxford and comprises country offices across the developing world. The IGC was initiated and is funded by the Department for International Development (DFID).

John Sutton's Enterprise Map Project aims to provide a standardized descriptive account of the industrial capabilities of selected countries in sub-Saharan Africa. This is the fifth volume to appear, following volumes on Ethiopia (2010), Ghana (2011), Tanzania (2012) and Zambia (2013).

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While we have made every effort to ensure the accuracy of the descriptions in this volume, in some instances we have had to reconcile conflicting accounts and data from alternative sources. All errors and omissions are the responsibility of the author.

ACRONYMS AND ABBREVIATIONS

AIMO	Associação Industrial de Moçambique
ANEMM	Associação Nacional das Empresas Metalúrgicas e Metalomecânicas
BAT	British American Tobacco
CDM	Cervejas de Moçambique
CEO	Chief Executive Officer
CETA	Construção e Serviços
CIM	Companhia Industrial Da Matola
CIMPOR	Cimentos de Portugal
CINAC	Cimentos de Nacala
EMOCHA	Empresa de Cha de Moçambique
EOZ	Empresa Orizicola de Zambezia
FDI	Foreign Direct Investment
FOB	Free on board
GDP	Gross Domestic Product
HACCP	Hazard Analysis & Critical Control Point
INCAJU	Instituto Nacional do Cajú
MAP	Moloque Agro-Processing
MIA	Moçfer Industrias Alimentares SA
NGO	Non-governmental organization
PET	Polyethylene terephthalate
PVC	Polyvinyl chloride
SADC	Southern Africa Development Community
SEMOC	Sementes de Moçambique Lda
SMEs	Small and medium-sized enterprises
SMM	Sociedade Moçambicana de Medicamentos
SODAN	Sociedade Algodoeira de Namialo
UK	United Kingdom
US	United States
VAT	Value added tax

AN ENTERPRISE MAP OF MOZAMBIQUE

Chapter 1

INTRODUCTION

Mozambique's economy grew rapidly in the first decade of the millennium. Real gross domestic product (GDP) more than doubled, and this growth was widely spread across sectors: manufacturing output grew even faster than GDP, rising by a factor of 2.3 over the decade. Real output also more than doubled in both agriculture and mining.

The key economic question for Mozambique is whether this rate of growth can be sustained for another decade. Achieving this will require, among other things, a substantial advance in the country's industrial sector. It is timely, therefore, to ask some questions about Mozambican industry.

- What are Mozambique's current industrial capabilities?
- Where did these capabilities originate?
- And in what industries can we reasonably expect to see a substantial advance in capabilities?

An Export Map

This book provides an overview of Mozambique's industrial sector (agri-business, manufacturing and construction). Within each industry we identify the various clusters of firms ('sub-markets') and the leading firms within each cluster. We present detailed profiles of 40 firms, chosen to represent the leading firms in each cluster, thereby providing a full description of the country's current level of industrial capability.

It is helpful to begin by looking at Mozambique's main export industries.¹ Some 63% of the country's exports come from four primary industries: aluminium, electricity, ores and gas. In each of these four industries, a single firm accounts for over half of total exports (Mozal, Hidro, Kenmore Resources and Sasol Petrol Mozambique, respectively).

¹ A similar picture would emerge if we looked at production rather than exports, but data on firms' production is hard to obtain at the necessary level of detail.

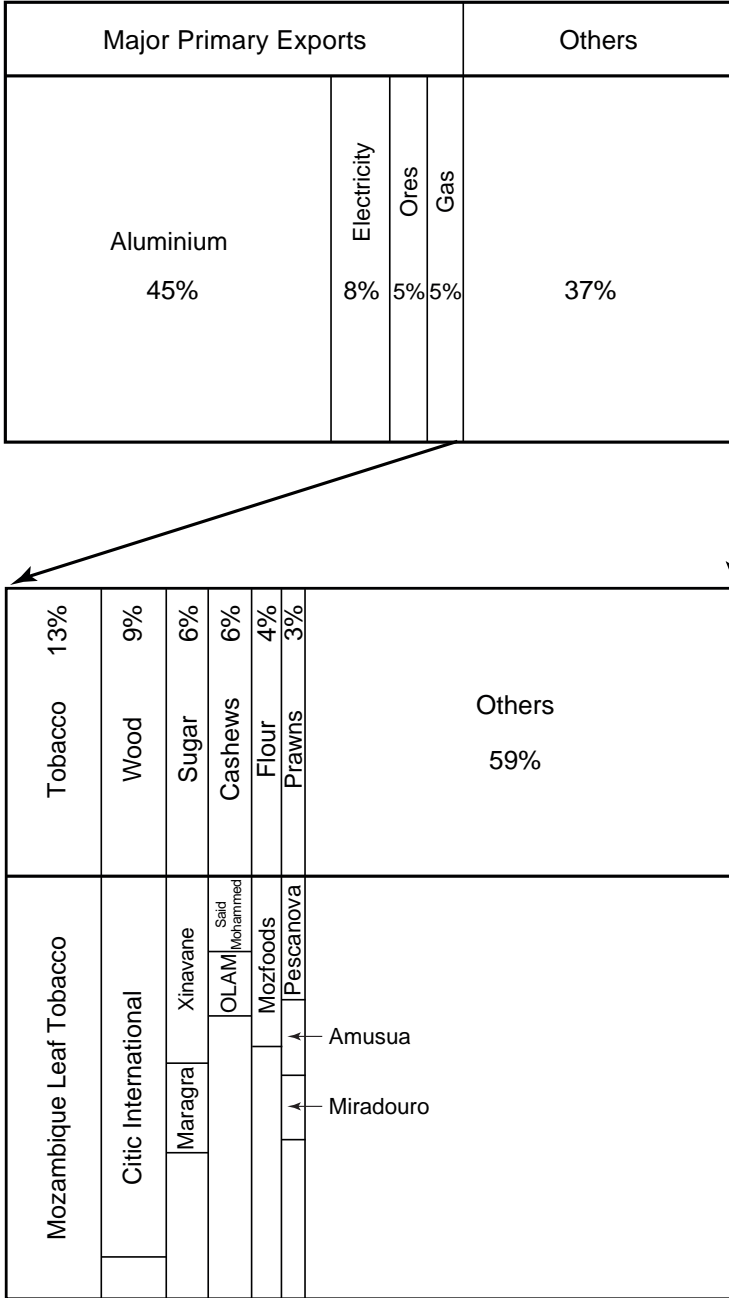


FIGURE 1.1. An export map.

The remaining third of Mozambique's exports come from a wide range of industries, but 40% of this remaining third comes from just six industries: tobacco, wood, sugar, cashews, flour and prawns.

A mere nine firms dominate exports in five of these six industries.² Said Mohammed and OLAM together account for one-third of cashew exports. Mozfoods alone accounts for 40% of flour exports. In prawns, Pescanova, Krustamoz and Miradouro together account for 57% of exports. Two firms, Xinavane and Maragra, account for two-thirds of sugar exports. Tobacco exports all come from a single firm.

Overall, a mere 13 firms account for three-quarters of the country's export earnings. The dominant role played by this small group of firms puts in perspective our focus on 40 leading industrial companies: by looking in depth at this modest number of leading firms, we can obtain a good picture of the range of capabilities in Mozambican industry, and by tracing the origin of these firms' capabilities we can learn a great deal about where the country's industrial capabilities come from.

The Origin of Mozambique's Current Industrial Capabilities

Where did Mozambique's current leading industrial companies originate? A useful point of reference is provided by looking to Ethiopia, Ghana, Tanzania and Zambia, whose leading industrial companies are profiled in companion volumes. In all these countries a similar breakdown of leading industrial companies by origin is evident. About half of the firms have their origin in the domestic private sector, about a quarter are of foreign origin, and about a quarter began as public-sector firms.

But in Mozambique the pattern is different. During the nineteenth and early twentieth centuries the colonial authorities discouraged industrial activities in Mozambique, in order to eliminate competition with Portuguese manufacturing firms and safeguard Portugal's ambitions for industrialization. By the mid 1950s the colonial authorities had changed this policy, allowing a growing number of manufacturing firms to emerge in Mozambique, so as to accommodate a growing Portuguese settler population, reduce export costs and absorb the surplus second-hand industrial

² The case of the sixth industry, wood (timber), is complicated, as a high proportion of timber is exported illegally and is unreported (see Chapter 12). Some 90% of officially recorded exports of timber go to China, via purchases by the Chinese state-owned China International Trust and Investment Corporation.

equipment that was increasingly available in Portugal.³ The most common type of history in the case of Mozambique (applying to most older firms) is one in which the firm began as a privately owned firm, set up by one or more individuals of foreign nationality (in many cases, Portuguese); then, following Mozambican independence, the firm was nationalized, and possibly merged with other similar firms; and finally, in the 1990s, it was privatized.⁴ In many cases, the original Mozambican firm had been set up not by an individual resident in Mozambique but as a subsidiary of a Portuguese (or other foreign) company.⁵ In a small number of cases, the nationalized company had been formed by bringing together several small privately owned firms. This pattern of events applies to almost one-third of Mozambique's leading industrial companies.⁶

The second-largest group of leading industrial firms are young firms that were set up *ab initio* as industrial firms in the post-independence period; such firms account for 11 of the 40 leading industrial firms analysed here.

In Figure 1.2 we represent all the firms that had their origin in the domestic private sector on the left-hand side of the figure, distinguishing them as two distinct sets of 'industrial start-ups'. One further firm that originated in the domestic private sector began its activities as a trading company before later developing a manufacturing business.⁷

The right-hand side of Figure 1.2 represents those firms that did not have their origin in the domestic private sector. Of these 15 firms, 11 are of foreign origin while the rest originated in the public sector or as a joint venture between the public sector and a foreign firm.

The Sources of Growth

Over the period 2000–2010, real GDP rose by a factor of 2.19. A breakdown by sector is shown in Figure 1.3. Manufacturing output increased in real terms by a factor of 2.32, agricultural output rose by a factor of 2.07, and the output of mining and utilities rose by a factor of 2.60.

³ Hedges, D. (ed.). 1999. Moçambique no auge do colonialismo 1930–1961. In *História de Moçambique*, Volume 2. Maputo: Livraria Universitária.

⁴ Usually retaining its identity, but possibly with its assets being melded with assets from other companies that were nationalized at the same time.

⁵ These latter firms are classified as 'Foreign' in Figure 1.2, while those set up by Mozambicans or foreign individuals resident in Mozambique are classified as industrial start-ups.

⁶ These cases are all grouped together in the classification scheme of Figure 1.2 in the class labelled 'Industrial Start-ups (pre-independence)'.

⁷ This pattern of 'trader turned manufacturer' plays an important role in many sub-Saharan countries, but appears to be very unusual in Mozambique.

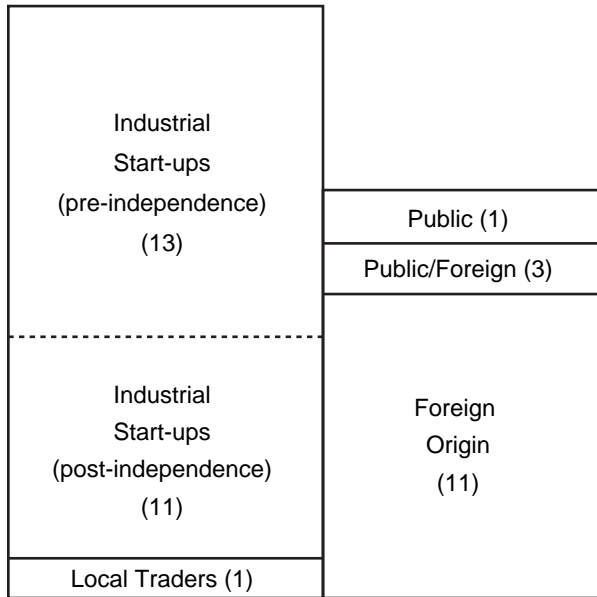


FIGURE 1.2. Origins of Mozambique's leading industrial companies.

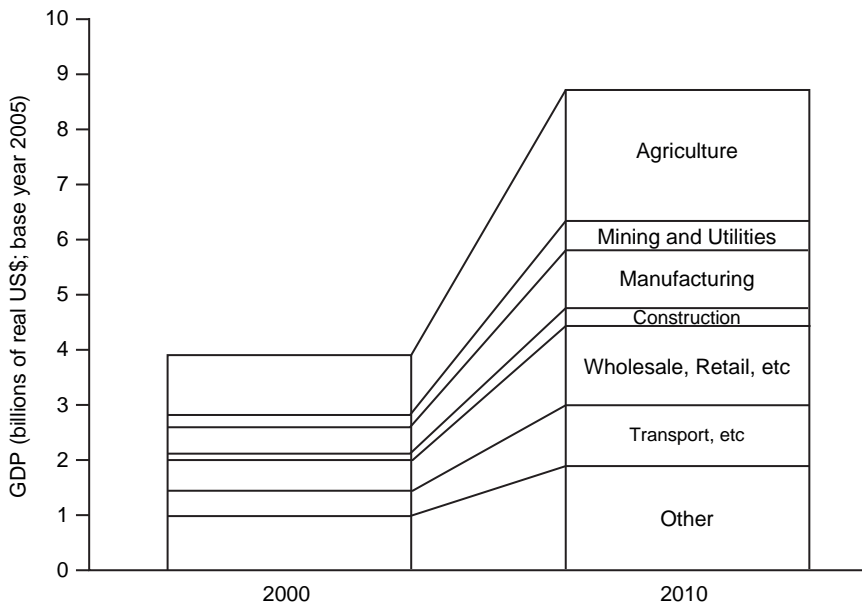


FIGURE 1.3. The change in size and composition of Mozambique's GDP in real US dollars 2000–2010.

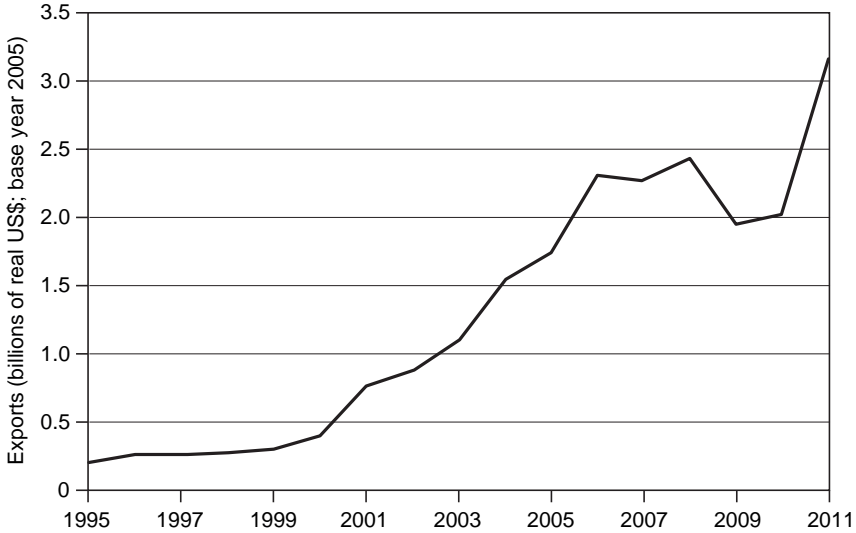


FIGURE 1.4. Total exports, 1995–2011.

TABLE 1.1. Exports in manufacturing and agribusiness 2000–2011.

	Exports in 2000 (millions of real US\$)	Exports in 2011 (millions of real US\$)
Tobacco	8.79	159.99
Wood	1.73	108.87
Sugar	4.86	78.01
Cashews	22.43	76.13
Flour	0.20	46.74
Prawns	104.66	38.47
Total	142.67	508.20

The growth of exports is shown in Figure 1.4. Between 1995 and 2011, the real value of exports in US dollars rose more than tenfold. By far the largest contributor to this growth was the aluminium sector (Figure 1.5). Major contributions also came from electricity, gas and ores. Exports in manufacturing and agribusiness were dominated by six industries: tobacco, wood, sugar, cashews, flour and prawns. Total exports from these six industries rose by 1205% between 1995 and 2011 (Table 1.1).

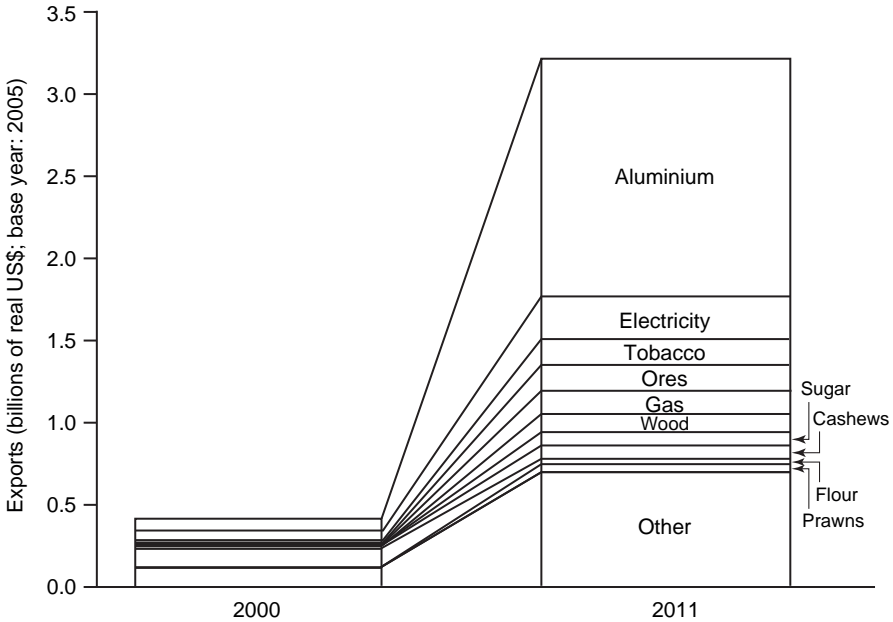


FIGURE 1.5. The changing size and composition of Mozambique's exports in real US dollars 2000–2011.

The Decline of the Textiles and Clothing Sector

Despite having a sizable cotton industry (Chapter 11), Mozambique's clothing and textile sector has experienced a long-term decline. In the 1990s there were 19 textile factories and 26 clothing factories in operation. The decline in output, and in firm numbers, since then has been sharp (Figure 1.6). The causes of decline include the elimination of quotas as of 2005, and the huge inflow of imported second-hand clothing.⁸

Over the past decade some moves have been made to reestablish production in plants that closed down during the 1990s. The Texmoque factory, which closed in 1994, was acquired by METL (Mohammed Enterprises Tanzania Ltd) in 2006 and subsequently reopened as Nova Texmoque. Following substantial investment in new equipment, it began production of dyed and printed fabrics; it currently employs 135 people.⁹

⁸ Nathan Associates. 2005. Strategies for Mozambique's textile and apparel sector. Technical Report.

⁹ USAID Trade Hub Southern Africa. 2012. Mozambique textile and apparel brief. Report (www.satradehub.org).

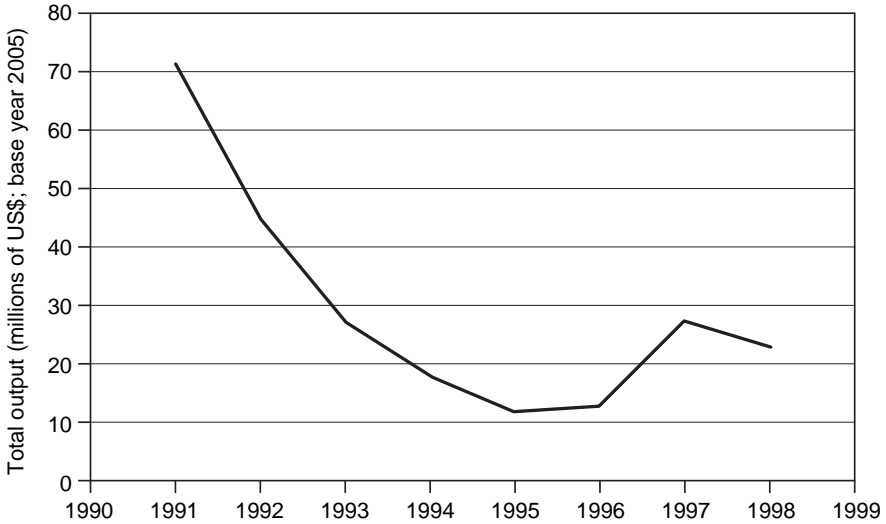


FIGURE 1.6. Mozambique's output of clothing and textiles.

There are currently four main clothing firms in operation. Maputo Clothing, produces uniforms for export to South Africa. Moztex, founded in 2010 by the Aga Khan Foundation, produces school shirts and knitted children's wear. Ninita produces woven products. Faumil's main product line is military uniforms. These four firms now account for about two-thirds of total production of clothing.¹⁰

Foreign Direct Investment

Flows of foreign direct investment (FDI) have increased very rapidly since 2005, rising tenfold in the six years to 2011 (see Figure 1.7 and Table 1.2), 90% of this inflow has gone to extractive industries. Four sectors account for almost all the rest of FDI inflows: finance, agriculture, transport and construction (Table 1.3). What is notable is that FDI inflows to manufacturing are extremely small, constituting less than 1% of the total in 2011.

The largest country of origin for FDI inflows to Mozambique is Brazil, which accounted for over 40% of the 2010 inflow (Table 1.4). In that year,

¹⁰ USAID Trade Hub Southern Africa (2012).

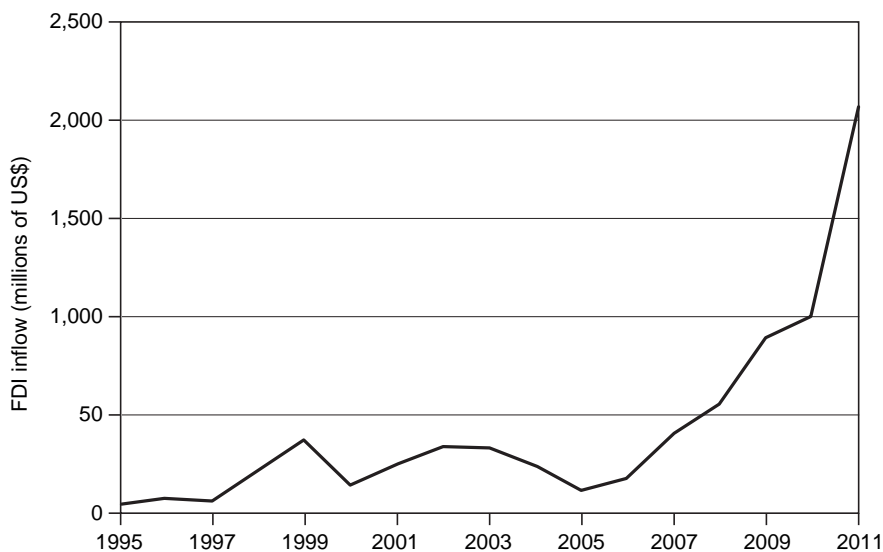


FIGURE 1.7. FDI inflow to Mozambique, in millions of US dollars, 1995–2011.

TABLE 1.2. FDI flows and FDI stock for Mozambique (three-year averages).

	2003–5	2006–8	2009–11
FDI flow (millions of US\$)	235	387	1,327
$\frac{\text{FDI flow}}{\text{Gross fixed capital formation}}$	21.12%	28.34%	53.85%
$\frac{\text{FDI stock}}{\text{GDP}}$	42.85%	39.23%	54.41%
$\frac{\text{FDI flow}}{\text{GDP}}$	4.15%	4.64%	12.56%

Source: United Nations and International Trade Centre.

some 95% of inflows came from eight countries. The three biggest contributors (Brazil, Mauritius and Portugal) together accounted for three-quarters of the 2010 inflow (Table 1.4).

One of the most important challenges for Mozambique over the next decade is to broaden and deepen the industrial sector of the economy; and if this is to be achieved, a substantial rise in FDI in manufacturing will be necessary.

TABLE 1.3. FDI inflows in 2010 by sector.

Sector	Inflow (millions of US\$)	Percentage of inflow
Mining and quarrying	730.3	92.6%
Finance	47.9	6.1%
Agriculture and hunting	29.2	3.7%
Transportation, storage and communication	15.1	1.9%
Construction	8	1.0%
Other	-41.7	-5.3%
Total	788.9	—

TABLE 1.4. FDI inflows in 2010 by country of origin.

Country	Inflow (millions of US\$)	Percentage of inflow
Brazil	335.3	42.5%
Mauritius	174.3	22.1%
Portugal	89.9	11.4%
Switzerland	38.7	4.9%
South Africa	37.1	4.7%
Ireland	29.2	3.7%
Netherlands	25.2	3.2%
UK	24.5	3.1%
Others	34.7	4.4%
Total	788.9	—

Offshore Gas and Industrial Development

The offshore gas industry offers Mozambique a unique opportunity to build up the country's industrial capability by integrating local companies into the supply chain of the multinational gas firms. If this integration is effective, it will hugely strengthen the number of medium-sized industrial companies in the country and their levels of capability. It will also hugely increase the number of new jobs created by the offshore gas industry.

Bringing about an effective integration of local companies into the supply chain involves many challenges. Simple policy approaches based on some required percentage of domestic content are too blunt an instrument to be effective. Only active intervention via a well-designed and resourced Local

Content Unit can bring about the level of integration that is desirable. The task of such a Local Content Unit, set up within the appropriate government ministry, is to lead and manage the process in a continuing dialogue with the multinational gas companies.

Perhaps the greatest pitfall in this area lies in the common misperception that the bulk of opportunities for local companies lies in the metals, engineering and assembly area. While these companies are indeed key beneficiaries, potentially, they represent only one of many industries that can be brought into the picture. The first and most obvious group of firms to benefit are those in the construction area. These tend to be brought into the process ahead of any other local companies, and one of the dangers that needs to be anticipated is that bottlenecks and supply problems in the local construction industry can lead to cost and price increases, while the expansion of activity and job creation falls short of what is desirable.

The next set of firms that will potentially benefit from integration and supply chains is those providing general services, including the domestic food and drink (and food service) sector, but also the provision of new kinds of services that are not currently available from domestic companies, such as helicopter leasing.

That said, it is the group of firms in the metals, engineering and assembly area that stand to gain most from this process in the medium term. As we see in Chapter 16, Mozambique has a fairly limited number of medium-sized companies operating in this sector. Increasing the number and capabilities of this group of companies will hugely advance the country's prospects in terms of industrial development.

One of the central tasks of a well-functioning Local Content Unit is to initiate the establishment of training centres, both for general business capabilities and for specialized technical capabilities, and to provide both in-centre and on-site training, in both these areas, to a large number of qualified medium-sized local companies. The key aim of such training is to bring these local companies to a level where they can achieve Approved Vendor Status, thus qualifying them to bid for supply contracts with the multinational companies. What is special to the Mozambican position, in contrast to other countries in the region, is that a major programme is already in place that incorporates local small and medium-sized enterprises (SMEs) into a major supply chain: the MozLink programme, which is described in Chapter 16. This provides a model and a template for the institutional arrangements that are now urgently needed, and indeed it may well prove to be the case that the MozLink programme itself may play a role in this area.

A Caveat

The descriptive statistics presented above, in relation to the 40 leading industrial companies profiled in later chapters, must be treated with caution. These 40 firms are not Mozambique's largest 40 industrial companies; nor are they a random sample. Rather, they have been chosen as a non-random, 'stratified' sample, designed to provide the reader with a fair and complete picture of the country's industrial capabilities, taken across all relevant sub-markets, i.e. clusters of firms engaged in each area of activity within an industry.

Chapter 2

SHRIMP FISHERIES

2.1 Sector Profile

Background and overview. The fishery sector comprises industrial and semi-industrial operators, as well as small-scale artisanal activities. Over 70% of the fishing fleet is employed in catching shrimp.

Shrimp fisheries comprise shallow-water fisheries that are fished by industrial, semi-industrial and artisanal fishers, and deep-water fisheries that are fished only by industrial operators.

Industrial and semi-industrial vessels operate trawlers with one or two pens on each side, while artisans use trawling or mosquito nets. Artisanal fishing has grown in recent years as a result of substantial investment in the sector.

Fishing extends all along the coast but is most developed in Nampula, Zambezia, Sofala, Inhambane and Maputo. The Bank of Sofala is the most important area for shallow-water shrimp fishing. The Bank of Boa Paz (south of the bank of Sofala) offers line fishing and prawn (deep-water shrimp) fishing. The main fishing ports for industrial boats include Quelimane, Beira and Maputo.

There are approximately 1,550 people employed in industrial and semi-industrial fishing, and a further 50,000 or so in the artisanal sector. Fishing activities provide livelihoods to large numbers of women, both at ports and in markets.

Total production of shrimp has been in sharp decline over the past decade. The shallow-water catch has been particularly affected, falling from 9,140 tonnes in 2000 to 2,507 tonnes in 2012 (Figure 2.1).

Commercial shrimp fishing began in the 1960s, at which time it was dominated by foreign fleets from southern Europe, Russia and Japan, together with a Mozambique state-owned fleet of some 100 semi-industrial vessels. In 1977 the government formed a parastatal firm, Emopesca, with which

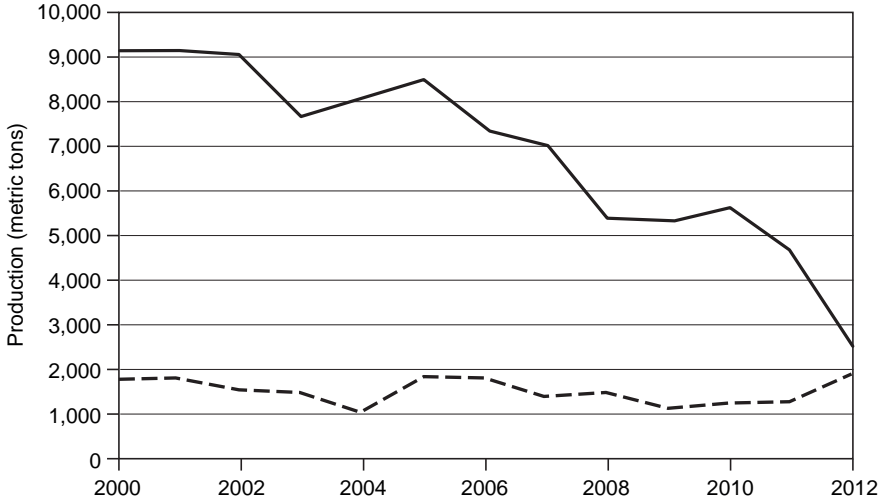


FIGURE 2.1. Shrimp production 2000–2012
(solid line, shallow water; dashed line, deep water).

foreign operators were required to set up joint venture arrangements.¹ It was as part of this process that the industry's leading company, Pescamar, was established in 1980 as a joint venture between the Spanish Pescanova group (with a 70% stake) and Emopesca (with 30%).² The Pescamar company is profiled in the next section.

Industrial and semi-industrial firms. Shrimp fishing involves 77 vessels equipped with modern technology including on-board cooling systems (freezer boats) and 63 semi-industrial vessels using preservation with ice. The main operators are as follows.

The Pescamar Group, which is profiled in the next section, accounts for about two-thirds of the total industrial shrimp quotas, and catch.

Krustamoz, a subsidiary of the Chinese group, CNFC, in which the government of Mozambique holds a minority stake, accounts for about one-tenth of the shallow-water shrimp quota.

Sociedad Industria de Pesca is a joint venture company in which the government holds a 30% stake, with the remainder owned by Portuguese shareholders.

¹ During the 2000s Emopesca went into liquidation and was restructured and reorganized; private-sector partners in the joint ventures were able to acquire some of the state's shares.

² Coalition for Fair Fisheries Arrangements. 2014. Mozambique's commercial shrimp sector. (See <http://transparentsea.co/>.)

The remaining shrimp companies comprise two groups, involving 47 companies:

- (a) a group of 27 companies, 21 of whom are involved in an integrated industrial fishing operation, and 6 of whom operate at a semi-industrial level with fishing boats equipped with freezers; and
- (b) a group of 20 semi-industrial fishing companies using boats with ice on board.

These 47 companies have fleets that range in size from one or two ships per company (the most common case) up to as many as four. The first group is subject to quotas that are mostly just over 100 tonnes per company and never exceed 300 tonnes. This group of companies accounts for a 53% share of the shrimp catch. The second group is free of the quota system and accounts for a total of only 450 tonnes per year.

Artisanal fishing. Artisanal fishing, which is not subject to quotas, has contributed in an important way to food security and nutrition. The overall catch, including all forms of fishing, was estimated to be 129,000 tonnes in 2009, which included about 6,200 tonnes of shrimp. Little of this catch is processed by the formal sector; the vast bulk of the catch is sold on the domestic market, either in fresh or dried form. A substantial level of wastage occurs due to a lack of facilities for preservation.

Aquaculture. The aquaculture sector is relatively new, having started in the mid 1990s with the emergence of large shrimp farming companies.³

The sector currently produces marine shrimp (*Penaeus monodon* and *Feneropenaeus indicus*) and fish (*Oreochromis mossambicus*, *O. niloticus* and *Cyprinus carpio*), occupying over 3000 hectares of land in a semi-intensive production system, with an average annual production of about 1000 tonnes. Aquaculture now employs about 2,000 workers across the country.

There are currently three operators dedicated to the industrial culture of marine shrimp: Aquapesca (based in Quelimane), Sol & Mar (based in Beira) and Indian Ocean Aquaculture (based in Pemba). Commercial production began in 2002, with exports that year of 600 tonnes of shrimp.

³ Fish farming had already begun in 1950 with the construction of tanks for fish production for agricultural workers in Nampula, Zambezia and Manica. In the early 1960s the government built research and demonstration centres in Umbelúzi, Sussundenga and Chokwe. (These facilities are no longer fully operational.)

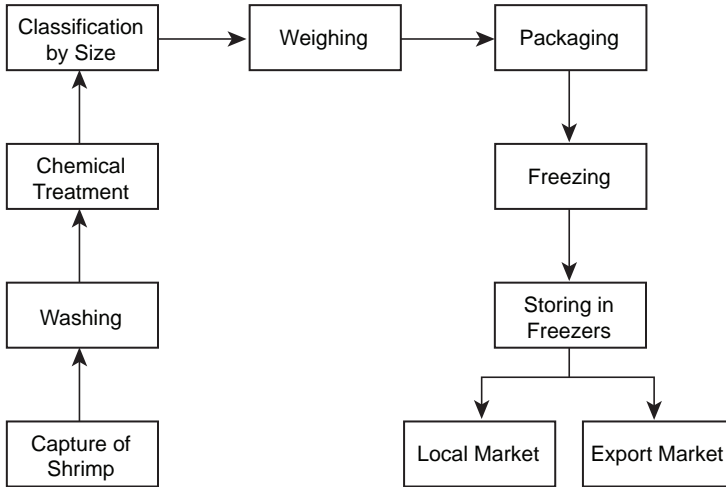


FIGURE 2.2. Supply chain for shrimp fisheries.

Shrimp aquaculture employs about 1,300 people, some 130 of whom are foreigners of various nationalities who have relevant technical skills.⁴

The Aquapesca company exports shrimp for further processing in France, where it is sold in cooked, chilled form. The French government is supporting a project to help the industry association, Associação de Produtores de Aquaculture, to design and implement a quality improvement and marketing strategy.

Supply chain. Almost all of the commercial catch is processed aboard the vessels (factory ships). Onshore processing takes the catch from boats that are not equipped with processing and freezing systems, as well as a small part of artisanal production.

There are 29 onshore facilities dedicated to shrimp processing. The main location is in Sofala, with 15 factories, followed by Maputo with 5 and Inhambane with 4. Zambezia and Cabo Delgado have two factories each. Of the 29 factories, some 15 are of international standard and their production is exported to Europe, while a further 10 export to the regional market, mainly to South Africa.

The supply chain is illustrated in Figure 2.2.

⁴ Oceanic Development. 2010. *Ex post* evaluation of the current protocol to the Fisheries Partnership Agreement between the European Union and Mozambique and analysis of the impact of the future protocol on sustainability, including *ex ante* evaluation.

Exports. Most of the catch of shrimp, prawns and lobster is exported; other fish products are mostly sold locally, although small amounts are exported.

As recently as 1999 shrimp exports represented 40% of Mozambique's total exports, but falling output, declining prices and the growth of other export industries (especially mining) have led to a major decline in the relative importance of shrimp exports, which now account for a little over 1% of the value of total exports (see Figure 1.1 in the first chapter and Figure 2.3 below).

Some 51% of exports go to Africa (Democratic Republic of Congo, Malawi, Republic of South Africa, Zambia and Zimbabwe), while Europe (Italy, Portugal, Spain and the United Kingdom) accounts for 43%. The remaining 6% goes to Asia (Hong Kong and Japan).

Policy context. The government operates a system of quotas for fishing based on Authorized Total Capture for each type.

Commercial fishing (industrial and semi-industrial) requires approval of an investment project and authorization from the Minister for Fisheries for the construction or purchase/import of fishing vessels. Fishing licenses are issued for each vessel and are not transferable.

Artisanal fisheries are organized via associations and are controlled through co-management initiatives monitored by the Provincial Directorates of Fisheries. Under the recent Law of Decentralisation, local fishing communities participate in resource management.

Except for subsistence activities, all fishing activity is subject to licensing and fishing licenses are valid for one year. For artisanal fishing, licenses are issued to individual fishermen and are not transferable.

The Ministry of Fisheries conducts port inspections of licensed fishing vessels, puts scientific observers on board the vessels, and requires the observers to provide reports on catch and effort. The Institute for Fisheries Research monitors and evaluates the state of the stock, with particular reference to shrimp.

Mozambique is committed to combatting illegal, unreported and unregulated fishing in its territorial waters.

An attempt was made under the Fisheries Master Plan (ratified by the president in 1995) to strengthen the relative importance of semi-industrial fisheries compared with industrial operations. The rationale for this lay in employment creation, especially onshore. It also reflects the fact that industrial operations are dominated by foreign companies, while semi-industrial operations are predominantly domestic. However, this led to no substantial changes in the relative importance of the two groups, and

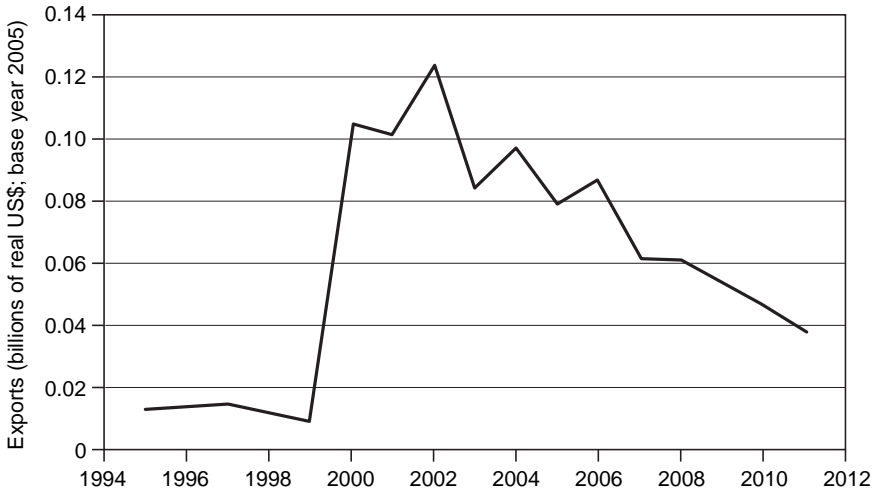


FIGURE 2.3. Mozambique prawn exports, 1995–2011.

in 1998 the Department of Fisheries passed new regulations that allowed semi-industrial fishing vessels to use on-board freezers, which meant that they no longer needed to land catch onshore for processing.⁵ The current Fisheries Master Plan for 2010–19 returns to this issue, indicating the desirability of expanding the semi-industrial fleet and indicating the need to gradually replace foreign licensed operators with domestic operators.⁶

Competitiveness. The shallow-water shrimp fisheries are over exploited, and catches are in steep decline. Attempts to control overfishing have not been successful, and stocks are insufficient relative to the current level of quotas.

Some 80% of the landed catch in the industry is by-catch, most of which is offloaded at sea. Regulations require that the volume of by-catch landed should be no more than twice the volume of prawns, but enforcement is not effective.

A proposal to require turtle excluding devices on shrimp trawlers has not been implemented due to opposition within the industry. This means that there are no exports by the industrial shrimp sector to the United States, for which the use of turtle excluding devices is mandatory.⁷

⁵ Coalition for Fair Fisheries Arrangements (2014).

⁶ Oceanic Developpement (2010).

⁷ Coalition for Fair Fisheries Arrangements (2014).

Challenges.

(1) Because shrimp fishing shows signs of over-exploitation, measures are being implemented to ensure sustainability via a gradual reduction in the level of fishing effort through limiting the number of vessels. Nonetheless, production is expected to grow at around 8% per annum over the next few years.

It is important to implement measures to control the operations of artisanal (non-industrial) fishing, as uncontrolled operations are a major factor underlying the depletion of shrimp stocks.

(2) Piracy: no areas are totally safe in the north of the Indian Ocean, even for ships escorted by international patrols.

(3) The availability of ice to fishermen and traders is inadequate.

(4) Small operators lack funding for the purchase of improved boats, engines and fishing gear.

(5) There is a lack of extension, training and technical support.

(6) White spot disease poses a serious problem for shrimp production.

(7) Poaching, and a lack of reporting of catches of tuna and shrimp, particularly by foreign fishing fleets, is a major issue.

(8) The production of fry/larvae is a key factor for expansion of aquaculture. The deployment of stations/centres for the production of fingerlings will encourage new producers to enter this activity. A transfer of fry nurseries established by the public sector to the private sector could contribute significantly to the availability of fry/larvae for fattening.

2.2 Profile of a Major Firm

2.2.1 Sociedade de Pescas de Mariscos–Pescamar, Lda

Basic details. Sociedade de Pescas de Mariscos–Pescamar, Lda is a joint venture between the Pescanova Group, a publicly traded Spanish company, and Emopesca (Empresa Moçambicana Pescas EE), owned by the government of Mozambique. It employs 1,100 people during the fishing season and 700 at other times. The group turnover in 2011 was US\$25 million.

History. Pescamar was founded in 1980, at which time Pescanova acquired a stake in the company – a stake it has increased over time by making

a succession of investments in the fishing fleet, eventually becoming a majority shareholder.

In 1997 Pescamar founded the Pescabom company, based in Quelimane, as a semi-industrial fishing company operating seven boats, with a quota of 505 tonnes per annum.

In 2004 Pescamar acquired a 60% share in Beiranave, a boat repair and maintenance company that also owns a dry dock.⁸ In 2007 a major investment was made in the reconstruction of the dry dock.

In 2010 Pescamar acquired Efripel, a joint venture company originally owned by the Japanese Maruha corporation (51%) and the government of Mozambique (49%).⁹

Pescamar has established onshore facilities (workshops and offices) for management, maintenance and operations, in contrast to all other Mozambican fisheries companies, which confine their activities to offshore operations, doing repairs abroad and contracting maintenance to foreign companies.

The firm currently operates 34 ships and it accounts for 51% of Mozambique's industrial shrimp catch.

Current activities and products. Due to the low catches of shrimp since 2006, Pescamar has diversified its production. Its current product range includes shrimp, lobster, crab, swordfish, kitefin shark and liver oil. It also supplies croakers, grouper and sawfish to local fishmongers.

Firm capabilities. All of the group's 34 boats are cleared for export to the European Union, which has particularly demanding hygiene and sanitary standards. The company has also registered in the United States with the Food and Drug Administration, in case it should wish to export there, and with the Chinese AQSIQ (sanitary inspection body). Pescamar's total investments in building its operation between 1980 and 2011 amount to some US\$45 million.

Pescamar operates four boats under the Mozambican flag in Angola.

Supply and marketing chain. The catch is processed at sea in factory boats. All marketing is done by Pescamar itself.

⁸ Wilson, N., and J. Cacho. 2007. Linkage between foreign direct investment, trade and trade policy: an economic analysis with application to the food sector in OECD countries and case studies in Ghana, Mozambique, Tunisia and Uganda. OECD Trade Policy Working Paper 50.

⁹ This acquisition followed an earlier acquisition, in 2006, of Efrimel's subsidiary company Companhia de Pesca do Oceano Indico.

Organization and management. The general manager, who reports to a managing board appointed by the two shareholders, is responsible for day-to-day management.

Exports. Some 80% of Pescamar's sales are to Portugal, Spain and China. Pescamar exports the following products to the indicated destinations.

- Shrimp: Spain, Portugal, China, South Africa and Vietnam.
- Lobster: Spain.
- Crab: Spain and South Africa.
- Swordfish: Spain.
- Kitefin shark: Portugal and Spain.
- Liver oil: Japan.

Development agenda. Pescamar intends to maintain its current customer base while being prepared to respond to any opportunities that come in from China and/or the United States.

Chapter 3

CASHEW NUT PROCESSING

3.1 Sector Profile

*Background and overview.*¹ During the late 1960s and 1970s, Mozambique was the world's largest producer of cashew nuts, accounting for over half of global output. The high point was attained in 1972, when production reached 216,000 tonnes. Over this period small manual production systems were gradually replaced by large-scale industrial processing. In 1973 some 14 processing factories were in operation, employing 17,000 workers (Figure 3.1).

Following independence in 1975, most of the plantation and processing plants were nationalized. Trade was controlled by Enacomo (Empresa Nacional do Comércio de Moçambique). Processing was brought under the control of Caju de Mozambique, which took over the factories. A number of processors remained in private hands (Companhia de Caju de Monapo, Socaju, Companhia de Culturas de Angoche, Inducaju and Cashew Industries Gordhandas Valabhdas SARL), accounting for 30% of total output. In 1978 the export of raw cashews was banned, with a view to supporting the local processing industry. This led to lower prices for producers, and the industry entered a period of decline. By 1990/91 Mozambique's share of world exports had fallen to 2.8%, and the output of raw cashews had fallen to 22,000 tonnes, or one-tenth of its historical high point.

Under the economic reforms of the early 1990s, the state-owned INCAJU (Instituto Nacional do Cajú) was privatized in 1991. The ban on the export of raw cashews was relaxed in 1991; producers were required to preferentially supply local processors but could thereafter sell to raw cashew exporters.

¹ This section draws on two very informative reviews of the sector. Paul, B. 2008. Factories in the field: rural transformation and the organization of work in Mozambique's cashew triangle. Report prepared for TechnoServe. Aksoy, M. A., and F. Yagci. 2012. Mozambique cashew reforms revisited. Policy Research Working Paper 5939, World Bank.

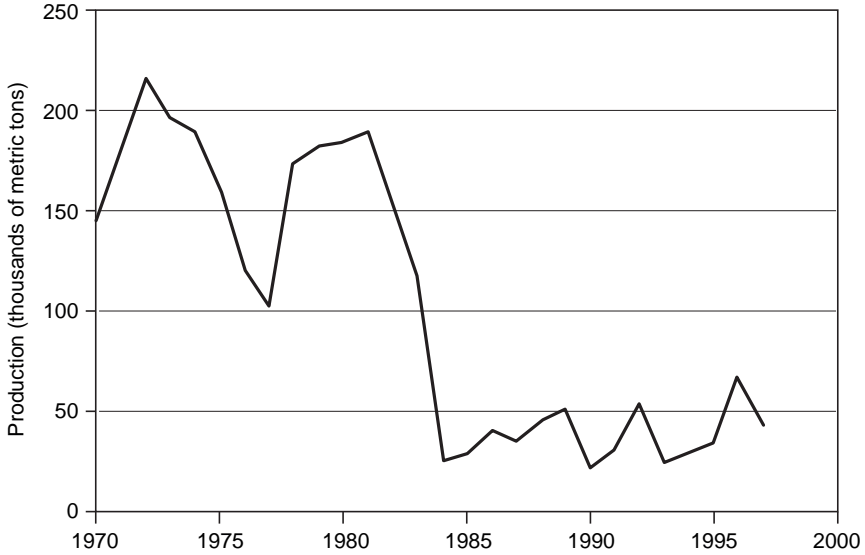


FIGURE 3.1. Cashew nut production.

To encourage local processing, a tax was imposed on the difference between the FOB ('free on board') price received from exporting raw cashews and the price paid by local processors. The tax was initially set at 60% but was reduced to 35% in 1992/93.

A major shift in the policy environment within which the industry operated occurred in 1995, in the wake of a Country Assistance Strategy report by the World Bank. This questioned the operation and viability of the newly privatized industry. It argued for liberalization of cashew nut exports, which would make the exporting of raw cashew nuts more profitable. It argued that

- (a) a reduction of export taxes on raw cashews would stimulate demand and raise competition among exporters,
- (b) an elimination of trade licences would increase the number of traders,
- (c) traders would then compete for raw cashew nuts and pay higher prices to small producers, and
- (d) higher prices for small producers would increase the incentive to produce and market cashew nuts and increase farm incomes, and would improve the management of cashew plantations and encourage the planting of new trees.

The Mozambican government, on the basis of this advice from the World Bank, liberalized the export of raw cashew nuts, opening the sector to international trade and forcing processors to compete for raw cashews with direct exporters.

These measures brought the industry into direct competition with the Indian processing industry, which thereafter imported large volumes of raw cashew nuts, especially during the months of December to March when the crop in India is not yet harvested. Indian processors could pay higher prices than domestic firms, cover freight and other costs, and still be price competitive in the global market.

Local processors complained about being unable to compete with direct exporters for raw cashew nuts. The main domestic processors exited the industry between 1997 and 2000.

The 'new generation factories'. Beginning in 2002, a series of new firms entered the market. Most of these receive technical support from TechnoServe (USAID), which has helped to move the industry to a new model of industrial organization. This rebirth of the industry was supported by the government's INCAJU, a public institution with a clear mandate:

- (i) the promotion of cashew production in terms of both quantity and quality and
- (ii) the promotion of domestic processing.

The new processors are medium-sized firms that use manual processes that are similar to those that are standard practice in India and elsewhere.² Almost all of these new-generation firms are located in Nampula province.³ By 2004/5, 16 units were in operation, employing almost 3,000 workers.

Currently, there are 11 main processors and a dozen or so small operators (Aksoy and Yagci 2012). Acquisitions and exits among the new generation firms led to the emergence of Miranda Caju as today's largest firm in the industry: already by 2008 it had 1,493 employees compared with Condor Caju's 2,400 employees (this company is profiled in the next section)

² The mechanized impact shelling used in the country's large-scale factories tended to break a large proportion of the nuts. A key determinant of profitability is the fraction of nuts lost as 'brokens', and this can often be as high as 30% when a large-scale industrial process is used. 'Brokens' have relatively little value on the market. Semi-mechanized shelling requires a large labour input but leads to a lower fraction of 'brokens'. Ramundo, K. 2011. From soup to nuts: reviving Mozambique's cashew industry. USAID *Front Lines* (November/December).

³ Aksoy and Yagci (2012) remark that the firms are clustered in this region 'not because the cashew trees are more productive ... but rather because essential competencies and complementary service support is readily available'.

and OLAM's 1,095 employees (OLAM is profiled in Chapter 11).⁴ Some half-dozen medium-sized firms had emerged by that time, each with between 100 and 250 employees: Africaju, IPCCM, Moma Caju, Alexim Ltd, Mauricaju and Gan Lda.⁵

There is a strong clustering of firms in a 'triangle' formed by the two coastal towns of Moma and Monapo and the inland town of Murrupula. The Moloque Agro-Processing (MAP) company is based in Alto Moloque in Zambezia, east of this triangle. It is profiled in the next section.

INCAJU has developed a comprehensive and integrated strategy that is based on cooperation between the private sector, government, non-governmental organizations (NGOs) and communities; the strategy is aimed at revitalizing production, processing and marketing. Public support was offered for the purchase of fungicides and pesticides for the treatment of cashew trees, and for the establishment of processing plants, in order to ensure that entrepreneurs could obtain loans through the banking system. Research, extension services and monitoring arrangements were put in place, in a collaborative effort between government, businesses, producers and NGOs.

To ensure continuation of these activities, and the emergence of new ventures, a number of incentives have been implemented.

- A surcharge is imposed on raw cashew exports at a level of 18% of the FOB price. Some 20% of revenues from the surcharge are allocated to the development programme of the local industry, including the creation of guarantee funds. The fund can guarantee up to 80% of the credit requested by processing plants, depending on the amount, maturity and purpose of the loan.
- Exports of raw cashews are banned in the period from October to December.
- In the period when exports are allowed, domestic companies exercise a right of option on raw cashew nuts.
- Support is given for a replacement programme of cashew seedlings.
- Support for a research programme and the introduction of new species of cashew.

Estimates indicate that Mozambique now has about 40 million cashew trees, concentrated in an area between the coast and about 200 miles

⁴ Miranda Caju's first operation involved a new processing factory built by local workers using local materials. As reported in Paul (2008): 'On the opening day of business, over 1,000 people applied for 64 jobs. Two years later, Miranda Caju was ... employing over 400 workers.'

⁵ Paul (2008); Hanlon, J., and T. Smart. 2008. Cashew: from disaster to export model. In *Do Bicycles Equal Development in Mozambique?* Woodbridge, UK: Boydell & Brewer.

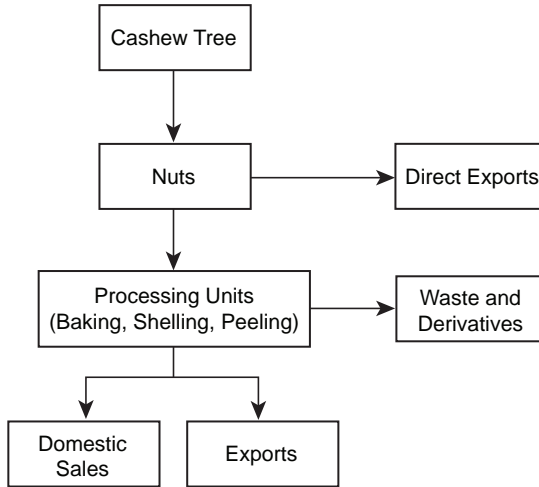


FIGURE 3.2. Cashew nut supply chain.

inland, mainly in the provinces of Nampula, Cabo Delgado, Zambezia, Inhambane and Gaza. (Some 70% of trees are in the northern region, with Nampula province alone accounting for 40%.) Small producers account for about 95% of production.

Supply and marketing chain. Approximately 80,000–90,000 tonnes of raw cashew nuts are produced per year, of which approximately 40,000 tonnes are sold to domestic processors. The remainder is exported (see below).

The few active southern processors export mainly to South Africa via road. Northern processors are currently using OLAM as their de facto export, marketing and distribution channel.

A small number of large traders/exporters have an extensive network of small intermediaries who buy raw cashews directly from farmers in rural areas, or from retail shopkeepers who in turn buy from farmers. The large trading companies have strong contacts in India and liberalization has involved the renewal of long-standing trade networks between Mozambique and India. The number of small unlicensed traders has increased in number since liberalization.

The industry supply chain is illustrated in Figure 3.2.

The activities of baking, shelling and peeling generate waste and derivatives that can be converted into end products such as tannin (from the film of the nut).

Policy context. The government offers financial support to private companies that want to invest in the sector through the provision of guarantees from the banking system and through the provision of improved credit conditions (interest rates, grace periods).

Additionally, the government supports research to develop improved cashew clones that are productive and pest resistant.

The government has created the Cashew Committee as a platform for dialogue between all stakeholders in the industry.

Competitiveness. Mozambique is one of the major producers of cashew nuts south of the equator. It begins marketing nuts in the October–December period, when the rest of the world is not yet harvesting, and this allows its producers to sell both raw and processed nuts at favourable prices.

One group of processors has formed a holding company, the Association of Agribusiness Industries, through which most processors in Nampula province market their processed kernels. The group has established its own brand (Zambique), and offers quality monitoring and transportation as well as managing multi-year contracts with international buyers (Aksoy and Yagci 2012).

Challenges. The cost of the spraying of cashew trees is currently US\$1.20 per tree each season. It is important to find ways of reducing this to US\$0.70 by switching from branded products to generics or by other means.

A continuing challenge for the industry is to raise the fraction of nuts processed domestically.

Efforts are being made to find ways to commercially utilize the peduncle or pseudo-fruit, which is not at present used industrially in Mozambique. It is possible to use it in the manufacture of sweets, and also to extract pulp for juice and other beverages, while the resulting bagasse can be used for animal feed.

Exports. Mozambique exports both raw and processed nuts. The main market for raw cashew nuts is India, followed by Vietnam and Singapore. The main export destinations for processed cashew nuts are the United States, the European Union, South Africa and, more recently, Saudi Arabia and Lebanon.

Mozambique exports 10 varieties of the 27 internationally recognized varieties. Exports are mainly of type W320, which is a white nut that is not used for final consumption but is instead a raw material for the international food processing industry.

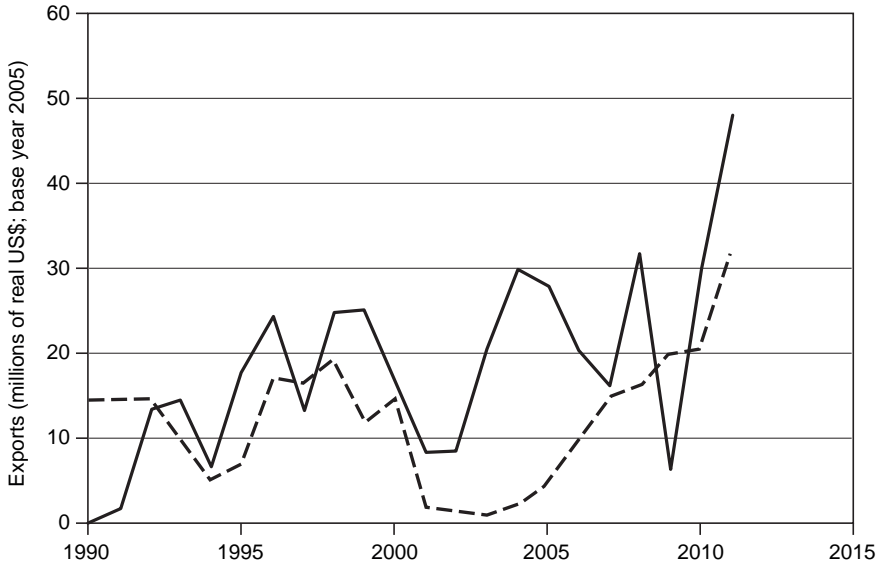


FIGURE 3.3. Cashew export value (solid line, raw; dashed line, processed).

Currently, total annual exports of cashew nuts, both raw and processed, are valued at US\$70 million (Figures 3.3–3.5⁶).

3.2 Profiles of Major Firms

3.2.1 *Moloque Agro Processing (MAP)*

Basic details. The company was established in 2007 by Construção e Serviços (CETA), a leading Mozambican construction company, which is owned by Mozambican investors.

It employs 300 workers and had sales of US\$700,000 in 2011.

History. After the end of the civil war, CETA decided to turn its site at Alto Moloque in Zambezia into a factory for processing cashew nuts, thereby establishing MAP. It acquired modern machinery, with a production capacity of 42,000 tonnes per year. However, it has never reached this production volume.

⁶ We follow Askoy and Yagci (2012) in estimating export volumes and values. For exports of raw cashew we use the import figures from India, where all the raw cashew exports go. For processed cashew exports we use the import values from all countries except India.

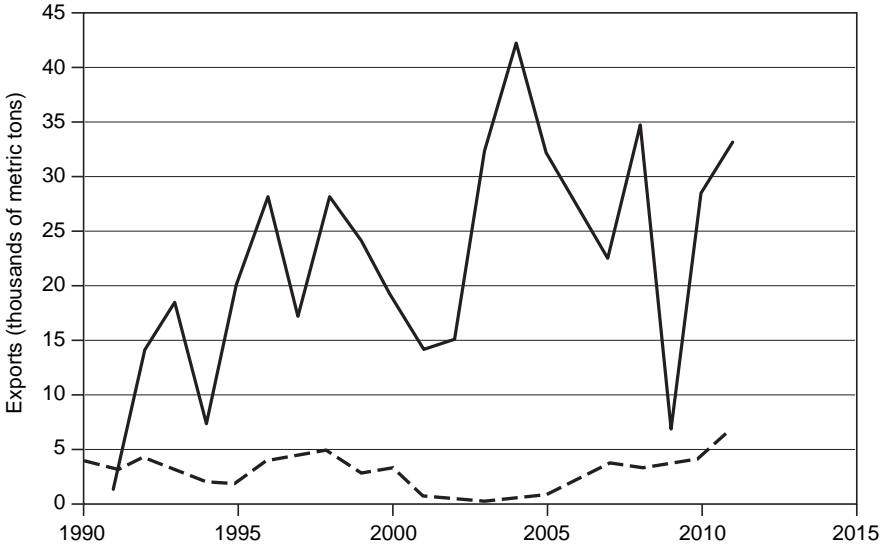


FIGURE 3.4. Cashew export volume (solid line, raw; dashed line, processed).

Current activities and products. In 2011 MAP's parent company CETA was sold to INSITEC, a holding company comprising Insitec Imobiliaria, Insitec Constroii and Insitec Energia. Following this acquisition, MAP continued as a going concern and was acquired by former shareholders of CETA. It is dedicated primarily to the sale of cashew processing services to third parties.

MAP processes 1,200–1,500 tonnes of raw cashew annually, exporting about 400 tonnes.

MAP also sources corn and potatoes in local markets, and packages them to sell in bulk.

It is also involved in small-scale corn milling, with a production capacity of 1 tonne per day.

Organization and management. The plant is managed by an Indian expatriate, Mr D'Costa.

Recent developments. The current owners of the company are in the process of selling MAP and have already initiated talks with potential buyers. The company's senior quality advisor is working with Agrifuturo with a view to obtaining international Hazard Analysis & Critical Control

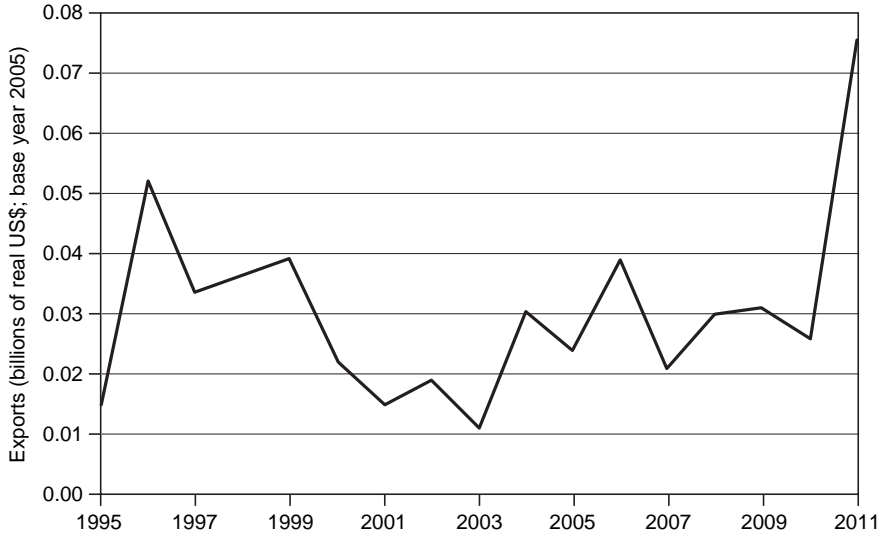


FIGURE 3.5. Cashew exports (raw and processed) 1995–2011.

Point (HACCP) certification. Success in obtaining certification would lead to higher prices, but the costs incurred in obtaining certification and in subsequent compliance are substantial.

3.2.2 *Condor Caju Lda*

Basic details. Condor Caju Lda, a private company, is one of the three largest cashew nut processors in Mozambique. It operates two processing concerns, Condor Caju and Condor Nuts, and employs about 2,400 people.

History. Condor Caju was founded in 2004 and Condor Nuts was founded in 2007, the majority shareholders in both being Portuguese businessmen who also had interests in hotel and construction.

Condor is one of the many processors supported by TechnoServe (USAID). When it began operations, it hired a US-trained Indian manager, and many of its employees formerly worked at the JFS Geba plant, which had closed down.

The firm currently uses labour-intensive methods, with individuals operating foot pumps to shell the cashews, which are then cleaned, sorted and

sealed in plastic bags with carbon dioxide to kill all unwanted organisms before shipment.⁷

Each of the firm's two processing plants has a capacity to process 6,000 tonnes of cashew nuts per annum. Currently, production at each plant is around 4,500 tonnes per annum.

Supply and marketing chain. Condor Caju Lda continues to operate its two original plants, sourcing nuts from various districts of Nampula province. Condor extracts the nuts and exports them to Europe for further processing (flavoring, roasting, packaging and retail).

The company is in the process of seeking certification (the ACA Seal).⁸

Exports. Condor Caju Lda exports to the United States (accounting for 62% of total exports), Europe (28%), the Middle East (8%) and South Africa (2%).

Organization and management. The shareholders recruit and appoint the firm's directors.

Recent developments. The company has recently acquired about 100 automatic shelling machines, as well as a new feeding system for its ovens.

⁷ USAID. 2009. Mozambique: cashews and co-ops help farmers earn more. *Front Lines* (November).

⁸ The ACA Seal is a widely recognized mark that denoted compliance with international standards in quality, food safety and labour standards. It has been reviewed and approved by the US Food and Drug Administration.

Chapter 4

AGRIBUSINESS AND FOOD PROCESSING

4.1 Sector Profile

Background and overview. The food processing sector traces its origins to the early years of the twentieth century, when Portuguese settlers established bakeries and grain mills. In 1925, for example, Fábrica Nacional de Moagem e Massas Alimentícias was set up by Paulino Santos Gil, G. B. Buccelatto and Costa e Cordeiro. Its main activity was grain milling and the production of macaroni and spaghetti.

The industry experienced two major waves of development, in the 1930s and the 1960s. According to the Instituto Nacional de Estatística, there were more than 970 large and medium-sized firms active in the food processing industry in 2009, and they accounted for more than 60% of total employment in manufacturing.

The major products are beer, sugar, processed cashew nuts, carbonated soft drinks, tea, frozen shrimps, maize meal, wheat flour, cooking oil and bread. Beverage production accounts for about half of the total sales revenue of the sector.

Currently, the sector is emerging from a long period during which many of the food processing enterprises were state owned. The sector suffers from serious problems in regard to the lack of infrastructure and logistical constraints.

The agribusiness and food processing sector comprises the following subsectors.

Sugar manufacturing. This is discussed in Chapter 9.

Fruit and vegetable processing is dominated by small private-owned firms that produce tomato paste and mango and orange juices.

Edible oil production. Mozambique produces a wide range of oleaginous seeds to supply the local edible oil factories. These include cotton, coconut, sunflower, groundnuts and sesame. Processing is carried out by medium-sized and small-scale businesses that produce edible oil and cheese for the domestic market. This sector is discussed in Chapter 8.

Milk and dairy products. Local production of milk and dairy products satisfies only a small percentage of existing market demand. Private-sector involvement in this area is now developing.

Grain milling. The milling of maize and wheat is practised by major companies located in Maputo, Beira, Nampula and Nacala. There are numerous small-scale millers located in villages throughout the country. Maize is the main raw material, and 90% of this is grown on family farms. Wheat is almost all imported and is milled by four large wheat flour mills. It is used for bread, pasta and biscuit production.

Bakery products are mostly produced by small-scale businesses, some of which also produce pastries and cakes.

Cashew nuts processing employs more than a million smallholder farmers and is an important source of foreign exchange for the country. It is described in Chapter 3.

Intensive poultry production. The intensive poultry industry was first developed in Mozambique in the early 1960s, but the industry suffered a major decline following independence. The state-owned company Avicola EE was established to restore activity in the area, and during the early 1980s state-owned farms accounted for 95% of the country's production of poultry products. From 1987 onwards, some of the state-owned farms were privatized while others ceased operations. A new private sector was slow to develop, and by 1991 the volume of production of poultry meat had fallen to less than half of its peak level. In 2005, by which time some two-thirds of chickens consumed in the country were imported, a new initiative by TechnoServe (USAID) brought together private- and public-sector partners in an attempt to revitalize the industry. Today, some 85% of chickens consumed in the country are produced domestically.

Seed production. In 1978 a national seed production programme was initiated, leading to the establishment of Sementes de Moçambique Lda (see page 47). Currently, the commercial production of seed is dominated by two more recent entrants: Pannar and Moçfer Industrias Alimentares (see below).

Profiles and lines of business of large firms.

Wheat-based products manufacturing. There are about 200, mostly large-scale, firms that produce flour for direct sale on the local market, and as an input for the production of macaroni, spaghetti and biscuits. Among the largest firms is Companhia Industrial da Matola, a privately owned

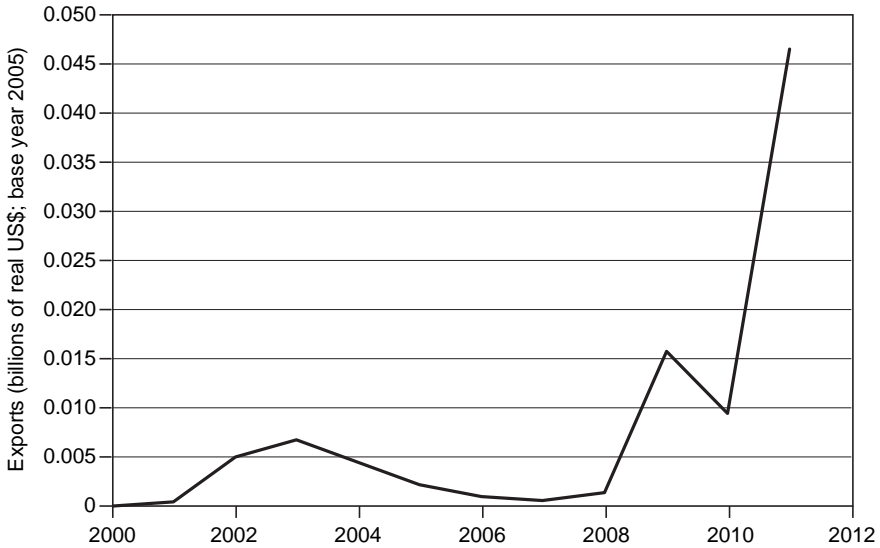


FIGURE 4.1. Exports of flour.

firm established in 1952, which produces wheat flour, pasta, macaroni and biscuits. It is profiled in Chapter 8 (see page 38).

Processing of fruit and vegetables. Mozfoods is the leading firm in the subsector; it is profiled in the next section.

Edible oil manufacturers. There are about 100 medium-sized firms and a larger number of small-scale businesses engaged in the production of edible oil, vegetable butter and margarine. One of the largest firms, Ginwala, is profiled in Chapter 8 (see page 74).

Soft drinks. Over a dozen medium-sized firms have begun operations in soft drinks (fruit juices and mineral water) in recent years. Coca Cola SABCO Moçambique, a member of the SARL group, is the largest company in the sector.

Beverages. Cervejas de Moçambique is the leading company in the market; it produces beer under its Laurentina, 2M, Manica and Impala brands. It is profiled in Chapter 5 (see page 53).

Intensive poultry production. There are nine hatcheries producing day-old chicks, six of which are in Maputo province. The latter include the TM Holding Company, the Co-operation Union (UGC) and Higest, a subsidiary of the Portuguese group Higest Holdings Ltd, which is profiled in the

next section. Of the remaining three operators, Novos Horizontes, one of two hatcheries located in Nampula province, and Empresa Avicola Abilio Antunes, located in Manica province, both operate a vertically integrated system from breeder to abattoir.

Seed production. Here, the leading firms are Pannar Seeds Lda, founded in 2000 (profiled in the next section), and Moçfer industrias Alimentares, founded in 2007 (see page 39).

Lines of business of medium-sized firms.

Bakeries. There are about 200 industrial bakeries across the country, all privately owned. Small-scale local bakeries are found in most areas.

Production of dairy products. There are fewer than ten firms, most with fewer than 50 employees, producing fresh milk and dairy products (butter, yoghurt, cheese, etc.).

Small-scale, informal and peripheral activities. Informal and small-scale food processing units include small-scale grain mills, which are common in all areas of the country. Households buy grains (teff, maize, pulses) from nearby markets and take them to the mills for processing. Local cereal snacks are supplied by many small businesses at relatively low prices.

Exports. The main food products exported are sugar, cashews, prawns and flour (see Figure 1.1).

Policy context. Food processing is one of the government's priority sectors, and the government has introduced various policies to strengthen the industry, focusing on extension services, training, seed production, consultancy, animal breeding and information systems.

Challenges.

- Poor information systems. The provision of information is poor in relation to tariffs, logistical costs, port handling and domestic transport costs.
- Infrastructure problems. Supplies of electricity and running water are lacking in many areas. The poor transport infrastructure (poor roads and lack of vehicles) is a serious constraint in marketing and exporting.
- Poor access to finance. Access to finance is hampered by high interest rates and a lack of collateral to obtain loans.

Profiles of selected medium-sized firms.

Nguluzane Agro-pecuaria Ltd is a private company engaged in agribusiness. It has 55 employees and had a turnover of US\$214,621 in 2011.

Nguluzane was established in 2002 and began production in 2004. It was founded by a Portuguese group, Thanda Vantu—Investimentos and Participações, SGPS, SA, which holds 60% of the company's stock, with the remaining 40% being held by a domestic group, Marrangwe & Company, Ltd.

Nguluzane provides Mozambican cattle herders with technical input to modernize their businesses through the development and monitoring of projects and through the purchase of selected animals adapted to southern Africa. Nguluzane initially imported livestock from South Africa for cattle raising projects aimed at milk and meat production, as well as goats of the Boer breed. The company has a partnership with Brazil Enterprises for the development and monitoring of agricultural technologies developed in Mozambique.

Empresa Orizicola de Zambezia (EOZ) is a rice processing estate that employs about 40 workers.

The company was created through an initiative by rice producers operating in the districts of Maganja da Costa, Namacurra, Nicoadala and Mopeia. Since 2006 EOZ has been a legal entity and has established a network of four cooperatives of producers. In 2009 these four cooperatives jointly formed Empresa Orizicola de Zambezia.

Prior to the formation of EOZ, two of the participating cooperatives each had a small rice husking machine and bought-in rice to process and sell. However, such small-scale operations have proved to be inefficient and are not cost effective.

EOZ buys rice from its primary cooperatives and transports it to a central plant for processing/husking, packaging and sale.

EOZ benefited from a donation for the construction of two warehouses and two dryers/threshing floors from the Royal Dutch Embassy. It also obtained European Union/Oxfam Novib funding for an industrial rice processing machine. In its first year of operation EOZ received a loan from Banco Terra for working capital (purchase of raw materials) and for investment. The implementation of its cooperative business model was guided by the Association for the Promotion of Commercial Agriculture.

4.2 Profiles of Major Firms

4.2.1 *Companhia Industrial Da Matola (CIM)*

Basic details. CIM is the largest food processing company in Mozambique. It employs 750 people and has an annual turnover of about US\$42 million.

History. The company traces its origins to an original production facility established in 1950. It was nationalized in 1968 and was privatized again in 1995.

CIM is currently owned by South African and Mauritian investors, with some Mozambican private investors and investment from the Mozambican state.

Current activities and products. CIM is widely diversified, with a product range that includes wheat flour, maize meal, pasta, biscuits and animal feed. CIM's animal feed subsidiary, CIM Feeds, is also active in broiler and egg production. In eggs, it holds a management contract with the Galvados group, which produces 42 million eggs a year. In broilers, CIM produces 25,000 birds a year.

In 2008 CIM acquired a maize and wheat mill in Beira from the Seaboard company; together with its earlier maize mill in Nampula, this gives CIM a stronger geographic range in terms of product availability and service.

Firm capabilities. In addition to its facilities in Matola and Beira, CIM has a controlling interest in CIMPAN, a maize mill in Nampula.

CIM's biscuit business was established in 2005 with a production line sourced from the Italian Lazer company.

CIM's poultry operation is working towards HACCP accreditation.

Supply and marketing chain. CIM sells its production through a well-established national distribution network, based on seven regional depots and a large number of sales agents.

Organization and management. A board of 11 directors oversees an executive management team that is led by the managing director and includes heads of milling operations, of biscuit and pasta operations, and of agribusiness, as well as a head of sales and marketing.

4.2.2 Mozfoods SA

Basic details. Mozfoods SA is a group comprising Companhia de Vanduzi SA (based in Manica) and Moçfer Industrias Alimentares SA (MIA) and Mozseeds (both of which are located in Chokwe).

The company employs 2,200 workers, 900 of which are permanent employees. Some 700 of the permanent employees are employed by Companhia de Vanduzi.

The turnover in the agricultural season in the financial year 2009/10 was US\$10.2 million.

History. Mozfoods SA was established in 2005 as an agribusiness concern focused on the production of seeds and of food crops in two major agricultural areas, Chokwe on the Limpopo river and Vanduzi in Manica. Mozfoods SA is owned by Aquifer, a company registered in the United Kingdom.

At the first site, where it operates as Moçfer Industrias Alimentares, it operates a rice mill with a capacity of 20,000 tonnes a year and silos with a storage capacity of 60,000 tonnes. It owns a 500 hectare farm serviced with centre pivot irrigation. A second 500 hectare area relies on flood irrigation. Over 2,700 farmers have contracts with the company for the production of rice.

Companhia de Vanduzi operates on 500 hectares of irrigated land, producing three crops a year of chilli, baby corn, mangetout, sugar snaps, fine beans and okra. The main export destination was formerly the United Kingdom, but sales to South Africa are growing rapidly, and the company is already a major supplier of fresh produce to the offshore gas drilling concerns north of Pembe in Cabo Delgado and to the coal mines in Tete.

The company has a processing capacity of 20,000 tonnes of paddy rice a year.

In 2008 MIA established an operation, originally named MIA Seeds, that later became Mozseeds. Mozseeds is engaged in research and the production of certified rice seed, and it produces seed crops adapted for the Mozambican market and for southern Africa. The company has a research centre located in Lionde, Chokwe, with facilities for seed development and a fully equipped laboratory for assessing the purity of the seed.

Current activities and products. Companhia de Vanduzi produces and markets rice, baby corn, chilli peppers (piri piri), green beans, peas, sweet pea beans, okra, sweetcorn, passion fruit, courgettes, pattypan, cucumbers, lettuces, cabbage, tomatoes, cauliflower and carrots.

MIA is engaged in the production of rice, in research and development into seeds for rice, corn and soy, and in the production of seeds for peanuts, barley, sesame and various beans.

Firm capabilities. Mozfoods has been certified by

- GlobalGap, which certifies good agricultural practices,
- the British Retail Consortium, which certifies operations in warehousing and packing,
- Linking Environment and Farming, which certifies good environmental practices in production, and
- Fair Trade, which certifies fair trade practices.

It supplies leading food retailers Marks and Spencer, Tesco, Sainsbury's, Pick Pay and Spar.

Mozfoods has registered its Vanduzi trademark for baby corn, chilli peppers, green beans and peas.

The favourable climate, excellent soil and the availability of water in Vanduzi and Chokwe allow the company to operate throughout the year.

Supply and marketing chain. The company is mainly focused on exports. Over the past two years, however, with the emergence of large coal and gas projects in the country, there is rising domestic demand for Mozfoods products to supply catering companies in Pemba and Tete. It is now supplying these catering firms with cabbage, tomatoes, cauliflower and carrots, in addition to its established product lines.

The company has a unit for processing fresh products with a capacity of 100 tonnes of perishable vegetables per week.

The company has developed its own production facilities for compost and currently produces close to 1,000 tonnes per week, in order to maximize its utilization of waste (corn leaves) and reduce its dependence on inorganic fertilizers.

Exports. Eighty-five percent of production is exported, with the United Kingdom and South Africa being the main destinations.

The company's annual exports total 7,000 tonnes, with a value of US\$9.5 million.

Initially, the largest export destination was the United Kingdom, with 84%, while South Africa took 16%. Over the last two years this has changed, with the UK share falling to 60% and South Africa's increasing to 40%.

Organization and management. The chief executive officer (CEO), who is responsible for operational matters, reports to the managing board, which deals with group policy. Aquifer appoints the president of the board.

4.2.3 *Parmalat Productos Alimentares SARL*

Basic details. Parmalat Productos Alimentares SARL was established in 1997 in Mozambique as a subsidiary of the Italian multinational Parmalat SPA Group. It currently has 120 workers, and its sales revenue in 2011 was approximately US\$13 million.

History. The company was established in Mozambique by the Portuguese branch of Parmalat, which acquired the state-owned company Criadores de Gado, a cattle breeders cooperative that had produced and sold pasteurized bottled milk since the 1960s.

Parmalat began its operations by producing milk and dairy products; some years later it expanded into fruit juices.

Current activities and products. The company produces milk, flavoured milk, yoghurt, Gouda type cheese and melted butter, all under the Parmalat brand. It also produces fruit juices under the Santal brand, including tropical fruit, orange and mango.

Firm capabilities. Parmalat operates a laboratory for quality control. The group observes quality standards set by either South Africa or Europe, and in particular it is ISO 22000 certified.

Supply and marketing chain. Milk is sourced locally and is delivered to the factory, at low temperature, within six hours of milking.

The company also imports processed and packaged milk, as well as nectars, from South Africa.

Labels and packaging are sourced within Mozambique.

Organization and management. The board is composed of representatives of Parmalat's South African and Portuguese companies. The director general is supported by a technical director, a commercial manager and an administrative and financial department (which incorporates a human relations function).

Recent developments. One of the continuing challenges for the company is to establish a regular supply of inputs at the required quality standards.

The company aims to continue its ongoing investments, upgrading its technology to include automation and reduce manual contact with products in processing.

4.2.4 *Grupo Madal SARL*

Basic details. Grupo Madal SARL is a company involved in agro-industrial activities. Its primary activity is the extraction of coconut oil, but in recent years it has developed a range of new activities in agribusiness. It employs about 2,250 people and has an annual turnover exceeding US\$3.8 million.

History. Madal was established in 1903 as a family-owned business, by the Bobone family, and was registered in the principality of Luxembourg in 1904 under the name Société du Madal. In 1913 a group of Norwegian investors acquired a stake in the company.

The company initially traded copra and rented land near Quelimane. It began planting palm trees in 1904 and this area of activity grew very rapidly, from an initial 70,000 palms to over 800,000 by the 1940s.

In 1947 the company changed its name to Sociedade Agricola do Madal e Sociedade Agricola de Pebane. From 1954 it became active in the production, processing and export of tea, and in the production of salt.

The company's activities were more or less dormant during the Civil War period (1975–92). The Norwegian majority shareholders relaunched its activities in the post-Civil War years. Today, the company has over 1.4 million palm trees.

Between 1993 and 1997 it set up a game farm (Mahimba Game Farm) and built a sawmill, which is still operational, in Quelimane.

In 2000 it was acquired by Gestores, Técnicos e Associados, SARL, which sold the company in 2005 to its current owner, Saxonian Estate (Rift Valley Holdings, Zimbabwe).

In 2002 Madal set up a factory for the processing and extraction of copra oil in Quelimane; it is still operational.

Current activities and products. Nowadays, the main activity of the Madal group is in coconut plantations. During the past five years Madal has renewed its crops using the Green Giant of Mozambique variety, which has been proved to be tolerant to the disease lethal yellowing. It is also active in coconut and derivatives processing, wood processing, cattle breeding, tourism and hunting, milling and marketing of cereals, logistics of land and water transport, development of family sector agriculture, training and capacity building for family farmers, technical services to slaughterhouses, and in the cultivation of coconuts.

Supply and marketing chain. Madal produces most of its own raw materials and complements its own production by buying copra from the family sector. Its inputs of wood are sourced from its concession in Nhafuba and processed in the firm's sawmill.

Exports. Most of Madal's output is exported. Its main exports are

- crude copra oil (to Switzerland and sporadically to Malawi),
- timber (to South Africa, Zimbabwe, Italy, Belgium and Mauritius),
- briquettes (to Portugal) and
- coco coal (to India).

Organization and management. Madal's owner, the Rift Valley Corporation, has been investing in various agri-industrial businesses in Africa since the 1990s. The members of the board of Madal are directly involved in its management. Madal's director general oversees departments of marketing, finance, agriculture, industrial operations, maintenance and transport, human resources and administration.

Recent developments. The company currently has projects to control and eradicate lethal yellowing of palm trees and nampuim (*Oryctes rhinoceros*) in conjunction with the Millennium Challenge Account.

4.2.5 *Frutas Libombos Lda*

Basic details. Frutas Libombos Lda, commonly known as Bananalândia, is a private limited company engaged in the production and marketing of bananas. It has 300 permanent employees and 500 seasonal employees. It has an estimated annual turnover of about US\$3 million.¹

History. Frutas Libombos was founded in 1998 by a South African entrepreneur, Peter Andreas Gouws, who has since acquired Mozambican nationality. At that time, Mozambique imported substantial quantities of bananas from South Africa. Production at Frutas Libombos began in 2000, and exports to South Africa followed from 2003. Its Bananalândia estate includes eight sites that together comprise 1,600 hectares, and the estate produces about 12,000 tonnes of bananas a year.

Frutas Libombos began its activity with a series of investments totalling about US\$200,000 and a plantation of 60 hectares. Further investments were made as it developed new facilities for packaging, cool storage facilities and refrigerated transport. Total investment to date has been around US\$10 million.

¹ Exports of bananas in 2009 totalled 26,000 tonnes, valued at US\$7.8 million. (Eastern and Southern African Video Conference on High Value Horticulture. 2010. Increased regional trade: opportunities and issues in Mozambique.). Bananalândia accounted for 8,600 tonnes, implying export sales revenue of about US\$2.6 million.

Initially, the company recruited South African technicians and purchased seeds in South Africa, but over time there has been a substantial transfer of knowhow, and most of the technical staff are now Mozambican.

Current activities and products. Frutas Libombos supplies bananas to the province of Maputo and to South Africa.

Supply and marketing chain. The plantation area is near a river and has an irrigation system.

Seeds are now produced in-house, and the remaining raw materials (fertilizers, packaging and cold storage products) come from South Africa.

Produce is inspected by the Ministry of Agriculture, but the company does not at present have certification.

The company has two trucks with a capacity of 52 tonnes that it uses for its export business, and it has four trucks for domestic delivery. The company operates 14 sales outlets in Maputo province.

Exports. About three-quarters of total output, amounting to more than 8,000 tonnes a year, is exported to South Africa.

Organization and management. The founder and owner is supported by a management team that includes a production director and a director of logistics.

Challenges.

- Tsetse fly, which can cause serious damage to the crop; constant spraying is essential.
- High fuel costs.
- There are weak fiscal incentives. For example, there is no refund of value added tax (VAT) on the purchase of equipment and parts.
- There is at present no warehousing facility for bought-in agricultural products.
- The fact that public authorities emphasize that agriculture is a high-risk activity is unhelpful to the firm's relationship with its bank.

Recent developments. The firm has been exploring export opportunities in Spain, as a gateway to European sales. It is also planning a large-scale expansion in output and employment over the next few years.

4.2.6 Citrum – Citrinos de Umbeluzi, SA

Basic details. Citrum – Citrinos de Umbeluzi, SA is a producer and exporter of citrus fruits and bananas. The company employs almost 200 full-time workers and about 350 seasonal workers. It has an annual turnover of about US\$1 million.

History. The estate on which Citrum – Citrinos de Umbeluzi operates was first developed following a grant of farmland in the Boane area, 60 km west of Maputo, in the late 1940s by the president of Portugal to the Italian Mussolini family, who began growing fruit trees on the estate. During the Civil War period the estate fell into neglect. In 1996 it was acquired by Lomaco, a joint venture company formed six years earlier by the British Lonrho group and the Mozambique government. In 2006 Lomaco, which was indebted to the German bank DEG, transferred 25% of its shares to cover its debt to DEG and sold the remaining 75% to Mozambique Citrinos, Lda. Shortly afterwards, both these shareholdings were acquired by its current owner, GAPI, a Mozambican investment and development bank. The firm's name was changed to Citrum – Citrinos do Umbeluzi. That same year it acquired 700 hectares of land.

Current activities and products. The company produces and exports citrus fruits (oranges and grapefruits) and bananas. Nine-tenths of its output is exported. Oranges are harvested 2–3 weeks before the harvest in South Africa. Processing involves washing, drying, visual selection and calibration, waxing for protection and appearance, and packing.

Firm capabilities. Since August 2012 the company has been certified by Global GAP (Good Agricultural Practices). This certification was essential to its growth in export markets.

The company is affiliated to the Fruit Growers Association of Southern Mozambique and to the Institute for Exports of the Ministry of Industry and Trade, through which it undertakes promotional activities and participates in trade fairs.

Supply and marketing chain. The final output is transported in the firm's own trucks, and others, to the port of Maputo. Rejected fruit is sold to the local market.

Output has been growing rapidly over the past few years, with total tonnage in 2012 (2,543 tonnes of citrus fruits and 1,526 tonnes of bananas) being about three times greater than the volume produced in 2009.²

² Farming for consumers. Global GAP Summit 2012, Madrid.

Exports. Citrus – Citrinos de Umbelezi is Mozambique's only exporter of citrus fruits.

The main export destinations, for both citrus fruits and bananas, are South Africa and Europe.

Competition. There are no other companies producing and processing citrus in the southern provinces. The firm competes in the banana business with Bananalândia, Campo Verde and others. In central Mozambique the firm competes with Mozfoods.

Organization and management. The company is managed by a board appointed by GAPI. It is run by a director general, while a production director oversees production, local processing, transportation and marketing.

Administrative and financial management is provided by GAPI. A human resources department is responsible for training and health and safety.

Recent developments. The company is examining possible diversification into other fruits, through market research and feasibility studies.

4.2.7 Riz Industria Limitada

Basic details. Riz Industria Limitada is a private company located in Maputo; it is engaged in the manufacture of biscuits. It has 176 employees with an annual turnover of approximately US\$400,000.

History. The plant was established in 2006 by three owners of Asian origin. The plant began operations with a small oven and a packaging machine. It initially manufactured eight brands. About four new brands, flavours or varieties have been introduced each year since.

Current activities and products. The company has until recently operated with nine packaging machines, four kneading machines and a large oven, one small oven and three cream machines. Recently, the company has acquired a new cream machine, two additional kneading machines and three additional packaging machines.

Supply and marketing chain. Flour and sugar are sourced domestically; butter is imported from Asia.

Exports. The company does not export.

Competition. Riz Industry's main competitors are Mobisco, Incopal and Sasseka.

Organization and management. The three shareholders supervise the management team. The plant has three sections: production, packaging and distribution.

Challenges. The main challenges faced by the company relate to failures in the supply of electricity and drinking water during the rainy season.

4.2.8 Pannar Seed Lda (Moçambique)

Basic details. Pannar Seed Lda is a Mozambican subsidiary of a South African multinational, Pannar Greytown. It is a limited liability company with capital fully paid by its South African owner. It has about 65 permanent workers and between 100 and 150 seasonal workers. The sales volume of the company is about 2,500–5,000 tonnes of different seeds each year.

History. Pannar Seed Lda was established in 2000 and began its operations as a seed importer then, supplying farmers in Inhambane, Maputo and Gaza. At that time, the only seed producer in Mozambique was Sementes de Moçambique Lda (SEMOC), founded in 1978.³

Pannar held its first field day in Kuchi in Manica province, at which the company introduced itself to the public and to local government. Since then, field demonstrations and field days have been a company tradition.

In 2004 Pannar began to participate in the main national agricultural trade fairs organized by the government and by the Food and Agriculture Organization of the United Nations, which were held in Inhambane, Manica and Sofala.

In 2001 Pannar registered its first maize varieties, including the hybrid Pan 67, which became widely used by Mozambican farmers. Since then, Pannar has engaged farmers in seed production projects in the south, in the highlands of Manica, and in Angónia in Tete.

From 2007 to 2008, at the invitation of the Provincial Directorate of Agriculture of Sofala, Pannar participated in a pilot programme for the production of Macia sorghum seed in semi-arid areas of the province. The success of this programme allowed Pannar to export to Angola and other neighbouring countries.

³ SEMOC was, by 1994, producing 9,000 tonnes of seed per year, supplying NGOs and government operating emergency programmes. By 2000, however, as demand from emergency programmes waned, SEMOC was importing most of its seed, and by 2006 its production of certified seed had fallen to 1,000 tonnes per year. Wulff, E., and J. Torp. 2005. *Seed Sector Country Profile: Mozambique. Volume I: Overview of Seed Supply Systems and Seed Health Issues*. Frederiksberg: The Royal Veterinary and Agricultural University, Department of Plant Biology.

In 2008 Pannar began a project with MIA (see page 39) for the production of about 1,200 tonnes of hybrid corn of the variety Pan 67 in Chokwe, Gaza.

Current activities and products. Pannar produces a range of seeds at its main base in Chimoio, suited to the various regions of the domestic market, which differ in their agricultural and climatic environments. Its current portfolio of products includes cowpeas, sorghum, maize, beans and sunflowers.⁴

Firm capabilities. Pannar is engaged in research on new seeds to suit national climatic conditions. Such investigations take approximately five years, prior to approval and marketing.

Supply and marketing chain. Pannar has established a national distribution network for its products and services.

Pannar continues to import some seeds from southern African countries through other companies in the Pannar group.

Exports. Pannar exports about 250–1,000 tonnes of seeds per year to neighbouring Southern Africa Development Community (SADC) countries.

Organization and management. The company has a board of directors, which oversees the work of its several departments.

Challenges. Pannar hopes to play a role in developing a normal commercial market for seeds. (The market is still dominated by emergency programmes that distribute free or subsidized seed.)

4.2.9 Higest Mozambique, Lda

Basic details. Higest Mozambique is a vertically integrated company in the poultry sector that produces feed, chicks and fresh and frozen chicken. It employs 258 workers. Its sales revenue in the financial year 2011 was just over US\$28 million.

History. Higest Mozambique, Lda is owned by the Portuguese group Higest Holdings Ltd and a Portuguese businessman, Manuel Teixeira de Almeida, each with a 50% stake.

The company was registered in 1993 and began operations in 1995. In 2009 it constructed the largest and best-equipped slaughterhouse in Mozambique for the processing of chickens. It subsequently built a factory to produce feed, and an incubation centre.

⁴ Wulff and Torp (2005).

Current activities and products. Higest produces 1,750 tonnes of feed per month, 150,000 chickens per week, and sells 170 tonnes of chicken per month.

Supply and marketing chain. The manufacturer of animal feed requires a regular supply of corn and soybean, which Higest sources locally, supplementing its supply with imports from South Africa and Argentina when necessary. Pre-vitamins are sourced from Europe, as are supplies for the hatcheries.

Higest distributes fresh and frozen chicken, under its well-established national brand, to all large supermarkets in Mozambique and to grocery stores and restaurants in Maputo province. Higest operates a chain of 14 retail stores, covering the provinces of Maputo, Gaza and Inhambane.

Organization and management. Higest Mozambique is run by a managing director, who is appointed by the shareholders.

Recent developments. Higest aims to double the scale of its feed mill and to begin raising chickens in-house, in order to maintain and stabilize output levels.

The process of implementing HACCP certification is in progress.⁵

⁵ HACCP is an international standard pertaining to food safety. HACCP certification can be obtained either as an extension of ISO 9001:2008 or as a separate certification.

Chapter 5

BEVERAGES

5.1 Sector Profile

Background and overview. The beverages industry comprises one major beer producer, Cervejas de Moçambique, one producer of wines and spirits, Lusovinhos, three companies producing bottled water, and a large number of small informal enterprises, many of whom make traditional alcoholic drinks.

Profiles and lines of business of large and medium-sized firms.

Cervejas de Moçambique (CDM), a subsidiary of SABMiller plc, is the country's only domestic beer producer; it is profiled in the next section.

Lusovinhos, a leading producer of wines and spirits, is profiled in the next section.

Coca-Cola Sabco (Moçambique) SARL is the country's leading supplier of carbonated soft drinks, accounting for 87% of total sales. It began its operations in 1994 and currently employs 775 people in its three plants, which are located in Nampula, Chimoio and Maputo. It operates a highly developed countrywide distribution system, and its current investment projects include the installation of a new polyethylene terephthalate (PET) production line at its Chimoio factory, which will triple its PET production, displacing much of its current imports from South Africa.¹

Three companies are engaged in the production of bottled water: Sociedade de Águas de Mozambique, Lda, Agua Vumba, Lda and CELFER (Empresa Aguas Montemor).

The largest of these companies, Sociedade de Águas de Mozambique, accounts for 60% of national sales, with most of its business in the southern and central areas of the country. Agua Vumba operates in the central area, principally around Tete, and has a 20% share of total national sales. CELFER,

¹ Armitage, I. 2013. The untouchables. *Africa Outlook*, October.

with its Montemor brand, has 10% of the total market and operates mainly in the south of the country. The remaining 10% of national sales is taken up by imports, especially from Portugal, which are targeted at high-end restaurants and hotels.

Small-scale, informal and peripheral activities. The manufacture of traditional alcoholic drinks in Mozambique involves fermentation of cereals, wild or cultivated fruit or sugarcane, using environmental yeast or processed seeds as a fermentation agent. Following fermentation these drinks may or may not be filtered and may or may not be distilled, before being bottled.

Several traditional alcoholic beverages vary in composition, or carry different names, in different areas of the country.

These drinks are produced by several hundred enterprises, are popular among low-income buyers, and are sold in informal markets on the outskirts of cities and in rural areas.

Supply and marketing chain. The raw materials for brewing in Mozambique come from both local production (cassava and maize) and imports.

Policy context. The government has introduced several initiatives to encourage the use of local raw materials for the manufacture of beer. In 2011 parliament approved the production of cassava-based beer. This directive allowed CDM to launch a new variety of beer in 2011, branded as Impala, and made from cassava.

The production of cassava-based beer now uses in the region of 40,000 tonnes of cassava annually, raising demand from smallholder farmers and creating jobs for 1,500 people. This initiative is supported technically by the International Fertilizer Development Centre, an international organization that supports farmers across Africa. Under this programme the farmers grow cassava and sell it to the Dutch Agricultural Development and Trading Company (DADTCO), which specializes in the processing of cassava.

DADTCO has a mobile processing unit and it travels to the regions, processing the root, which needs to be used within 24 hours, *in situ*, making transportation issues easier.

In each region that DADTCO visits a borehole is made. This supplies water not only to the mobile processing unit but also to the local population.

After processing the cassava, DADTCO sells the processed raw material (cassava flour) to CDM, and it is then incorporated into the process of

brewing Impala beer, whose formula is made up of 70% cassava and 30% malt.

Challenges. The smuggling of drinks across national borders, which avoids tax and undercuts local suppliers in price, is a continuing problem.

Exports. There are no exports of beverages.

Profile of a medium-sized firm. CELFER (Empresa Aguas Montemor) is a family-owned business that produces mineral water, sourced from a spring in Vila Namaacha in the Lebombo mountains. It has 42 permanent employees. In 2011 it had a turnover of US\$3.1 million.

The company was founded in 1932 under the name Sociedade de Águas de Montemor. It initially produced locally sourced spring water and later became a franchised producer for Canada Dry. It was nationalized in 1991. In 1998 the company was 100% acquired by its present owner, Group CELFER.

CELFER has a 15% share of the market for mineral water nationally, but a 30% share in the region where it is marketed (the southern and central provinces).

5.2 Profiles of Major Firms

5.2.1 *Cervejas De Mocambique (CDM)*

Basic details. Cervejas de Mozambique, the country's only beer brewer, employs more than 1,200 people and has an annual turnover of about US\$300 million.

History. Filipe Dicca, an Albanian national, settled in Lourenço Marques in 1898, at the age of 24. In 1920 he acquired a soft drinks factory from an Italian businessman and it was this operation that later led to his setting up a brewery, producing under the 'National Beer' brand.

To build the brewery, Dicca acquired a failing brewery in Southwest Africa (now Namibia) and transported all its plant and equipment to Mozambique. To support the venture he obtained the right to exclusive manufacturing for ten years from the then High Commissioner.

In the early twentieth century a Greek immigrant named Cretikos, who sold fresh water door to door in Lourenço Marques, realized that there was no locally available ice to preserve the fish that was unloaded every day at the docks of the city. In 1912 Cretikos opened the country's first ice factory and bottled water plant, opposite the harbour. His enterprise was named

the Victoria Ice and Water Factory and it was an immediate success. Within a few years it began producing soft drinks. In 1932 Cretikos travelled to Germany to recruit a brew master, who developed a European-style beer that Cretikos named 'Laurentina', in reference to Lourenço Marques, where the factory was located. The brand proved highly successful, winning six gold medals at Monde Selection in Brussels.

In 1938 Dicca's Cerveja Nacional beer factory merged with Cretikos's Fábrica de Cerveja Vitoria, creating Fábrica de Cervejas Reunidas (SOGERE).

In 1965 the Mac Mahon brewery was built in Lourenço Marques. Its beer became the most popular brand in Mozambique. In 1966 another brewery was established in Beira, selling under the Manica brand.

One year after independence, in 1975, the Mozambican state nationalized all breweries. Fábrica de Cervejas Reunidas was renamed Sociedade Geral Cervejas e Refrigerantes de Moçambique, SARL.

In 1995, under the Programme of Economic and Social Rehabilitation, the government privatized the Mac Mahon (Maputo) and Manica (Beira) breweries, selling them to SAB Ltd, thereby leading to the formation of Cervejas de Moçambique (CDM), a Public Limited Company. Meanwhile, SOGERE was acquired in 1997 by the French group BGI-Castel and the Irish Guinness company. In 2002 it was acquired by CDM.

Current activities and products. Apart from its three main (barley based) beer brands (2M, Manica, Castle Light), CDM has recently launched a cassava based beer (Impala), which uses locally sourced inputs, carries a lower rate of sales tax and sells at around 70% of the price of its other brands.

Supply and marketing chain. Prior to the opening in 2011 of its third plant in Nampula, CDM supplied customers in the north of the country by road from its breweries in Maputo or Beira.

CDM's production of its new cassava based beer is located at the Nampula brewery, which has become a guaranteed buyer of cassava from 1,500 small farmers in the region.

Organization and management. CDM is a subsidiary of SABMiller, whose international headquarters are in London. The director general of CDM is supported by directors for finance, corporate affairs, human resources, commercial and technical, and by a general manager.

Recent developments. The Nampula brewery has recently become the first brewery in the SABMiller group to introduce a new dynamic fermentation technology, leading to a two-day reduction in total fermentation time.

CDM has recently introduced returnable bottles, with a view to reducing the waste that goes into landfill.

5.2.2 Lusovinhos Ltd

Basic details. Lusovinhos is a private company that manufactures alcoholic wine and spirits. It employs 146 people. Its turnover in 2011 was US\$7.9 million.

History. The company was established in 1996 when two Portuguese nationals, João Francisco and José Lino Vieira, decided to expand a business they had established in Portugal. The company began with eight employees manufacturing red and white wines in five-litre containers.

As the business grew plant and equipment were acquired, and the product line was expanded in 2001 to include spirits.

Current activities and products. When the company explored the use of smaller unit sizes it became clear that there was considerable demand, and the range was therefore extended to include a wider range of sizes. The main milestones in this development were

- 1996, five-litre glass demijohns,
- 1998, two-litre glass bottles,
- 2000, 750 ml glass bottles,
- 2001, 750 ml glass bottles for spirits,
- 2001, 500 ml PET bottles for wine,
- 2001, one-litre 'tetra packs',
- 2002, 375 ml glass bottles for spirits (now discontinued),
- 2004, 250 ml PET bottles, and
- 2005, the replacement of the first 500 ml PET bottles by a new 550 ml bottle.

Firm capabilities. Lusovinhos is the biggest company in Mozambique that produces alcoholic beverages other than beer.

Its sales grew at around 15% annually in its early years, but sales have now decreased due to growing competition from a number of enterprises, including Comercial Portuguesa (Maputo), Reddys Global (Maputo), Universal Beverages (Matola), United Distillers (Maputo), Fabrica de Licores de Moçambique (Maputo), Fabrica de Licores da Beira (Beira), CIC (Nampula) and Marfer (Tete).

TABLE 5.1. Annual sales for Lusovinhos, 2007–12.

Year	Sales (millions of US\$)
2007	5.46
2008	6.28
2009	6.16
2010	7.85
2011	7.93
2012	5.15

Source: data from the managing partner of Lusovinhos.

Supply and marketing chain. Alcohol and wines are imported from Swaziland, Spain, South Africa and Portugal. Packaging comes from Portugal, South Africa and from domestic suppliers. Plastic packaging is sourced domestically.

The factory has its own sales outlet and also distributes via retailers nationwide.

Exports. The company exports to South Africa and other countries within southern Africa.

Organization and management. The two founding partners still control the business.

The company's structure incorporates the following divisions: management, maintenance, distribution, administrative, accounting, human resources, production and a commercial department.

5.2.3 *Sociedade de Águas de Mozambique, Lda*

Basic details. The company has 250 permanent employees, 80% of whom are based in the company's production department in Namaacha. In 2011 the company had a turnover of about US\$7.1 million and it is growing rapidly.

The company produces mineral water collected at source under the Namaacha brand.

History. The company was founded in the 1940 by António Ferrão, who began to bottle and sell water from a popular local spring located on his property. By the 1960s it was being sold in glass bottles, and by the late 1960s in plastic bottles. The firm was nationalized in 1976 and operated under worker management until it was again privatized, in 1998, and sold

to a consortium of owners, who held 80% of the shares, with the remaining 20% still held by the employees.

In 2006 it was acquired 100% by the current partners, who changed its name to Sociedade de Águas de Mozambique/Water Company of Mozambique, Lda. The new owners made substantial investments in new equipment and machinery to collect, transport, filter and store the water, in laboratory equipment for quality control, and in other plant and equipment.

Firm capabilities. The product Água da Namaacha, the only brand marketed by the Sociedade de Águas de Mozambique, has an overall domestic market share of 60% in mineral water, and a 70% share in the southern and central areas.

Though demand is rising, supply in the market as a whole is limited by the capacity of developed sources.

Supply and marketing chain. Spring water is collected at sources in the Lebombo Mountains. The precast polyethylene for bottles, as well as labels and reagents for laboratory analyses, are purchased from South Africa via a local importer. More recently, some supplies have been sourced from Portuguese and Mozambican suppliers.

Water quality control is carried out by sampling water twice a day for an initial visual examination and tasting; laboratory tests are done weekly. Further laboratory analyses are made fortnightly by employees of the Ministry of Health. Further tests are also carried out periodically by laboratories in Johannesburg.

Organization and management. Sociedade de Águas de Mozambique is a private company with a board of directors composed of shareholders, who do not play an executive role, but who meet regularly with the managing director and the managers of the various departments of the company.

The director general oversees departments of marketing, administration, finance, sales and production.

Recent developments. A new mineral water project is now underway in the district of Mossuril in Nampula province. The water source, which is located on a property that belonged to the farmer and entrepreneur João Ferreira dos Santos, has been known for over a century. Tests have been made on the water and it will be marketed in the near future.

Chapter 6

TEA

6.1 Sector Profile

Background and overview. Mozambique has extensive regions of high land with good rainfall and temperatures not exceeding 25–26°C, thus offering excellent conditions for the cultivation of tea. Tea was first cultivated in Mozambique in 1914 on the high ground of the mountains that dominate Morrumbala, Tombine, Muabo, Chiperone and Namuli, as well as in Ile, Lugela, Namarroi and Gilé.

The Empresa Agrícola de Lugela established a factory in 1924 to process the tea grown on its 270 hectare estate in Milange. In 1925 it began exporting, with Portugal as its main destination.

By 1940 there were four more firms in operation: Sociedade do Chá Oriental, based in Milange, and three companies located in Gurue: Companhia da Zambézia, Chá Moçambique Lda and Manuel Saraiva Junqueiro.

In 1972 Mozambique had 36 registered tea producers operating on a total of 15,605 hectares, producing 79,334 tonnes of green leaf tea and 18,678 tonnes of processed tea, over 90% of which was exported. The largest of these companies were Chá Moçambique Lda, Companhia da Zambézia, Plantações Manuel Saraiva Junqueiro SARL, Chá Guruè Lda, Sociedade Agrícola do Madal and Sociedade Chá Oriental.

The main export destinations were the United Kingdom, Portugal, India, South Africa, Holland, Ireland, Germany, Australia, Canada and the United States. The highest prices for Mozambican tea were those obtained on the London auction market, and the United Kingdom was the leading export destination.

On the eve of independence tea cultivation employed 60,000 workers and total annual output stood at over 18,000 tonnes. Mozambique was Africa's third-largest tea producer, and was ranked eleventh in the world.

Following independence, when many plantations were abandoned by their owners, the state intervened in 1978 and merged most of the remaining companies into a single state-owned enterprise, Empresa de Cha de

Moçambique (EMOCHA). Only Companhia da Zambézia and Companhia Agrícola de Madal remained as private enterprises, employing 8% of the labour force in the industry and accounting for 13% of total tea production.

Substantial investments in the industry were funded by the African Development Bank, by the Organization of the Petroleum Exporting Countries (OPEC) and through the state budget, resulting in the rehabilitation of 22 plants and the construction of three more. Further investments were devoted to the transport fleet, to staff training and to the installation of an industrial workshop. In 1982 tea production reached a new high of 22,300 tonnes of processed tea.

With the resurgence of armed conflict, EMOCHA lost over half of its production capacity, while many workers fled to towns and cities in search of protection, and tea output dropped sharply.

As part of the economic reforms introduced after 1987, EMOCHA was privatized and broken into several separate companies (see below), while several new small tea businesses were established.

Nowadays, new areas of cultivation have been developed, including Mossurize and Buzi. In total there are almost 900 locations, with cultivated areas ranging from 0.5 to 2 hectares. Most of the new small firms supply tea to processing plants in Zimbabwe.

Tea grown in Mozambique no longer suffices to supply domestic demand, and sales of tea are dominated by imports from South Africa (which was formerly one of Mozambique's main export markets).

The tea companies rely heavily on seasonal workers. There is a view in the industry that higher quality standards could be achieved by supporting the growth and development of individual growers through giving them managerial and technical training.

Profiles and lines of business of large and medium-sized firms. Privatization of the state-owned EMOCHA resulted in the formation of seven firms, three of which are still active. All three are located in the Zambezia province in districts located on the high ground of Zambezia.

Chazeiras de Mozambique operates on 1,450 hectares and produces about 1,200 tonnes annually. It is profiled in the next section.

Sociedade de Desenvolvimento da Zambezia operates on 1,650 hectares, with annual production of 891 tonnes.

Cha Magoma operates on 1,410 hectares, with an annual production of 764 tonnes.

Three further firms are currently operating.

Companhia Agrícola João Ferreira dos Santos (Grupo JFS), SARL had 2,600 hectares of plantations and two tea factories. It was until recently a member of the East African Tea Trade Association but has now been sold to an Indian company that has already begun to produce tea.

Sonil Lda is a private company involved in tea, tobacco and trading. It has a factory in Socone, and it is now connected to the national grid, having relied on micro-hydropower for many years.

Chá Magoma, SARL is a private company located in Gurue that was in the past known as Monte Branco, and before that as Chá Luso. It employs 1,000 workers on 2,500 hectares, and it has an annual turnover of about US\$3 million.

Supply and marketing chain. Figure 6.1 shows the supply chain of the tea sector.

Exports. Annual exports are currently running at US\$8 million. This constitutes over 85% of total production. (Some 50% of production goes to the Mombasa auctions, 20% goes directly to the United States and 15% to the United Kingdom.)

Policy context. The Mozambican government has taken various measures to revitalize the sector. It allows tea producer firms to develop partnerships with small Mozambican green tea growers (individual families and/or associations) by providing them with management and technological expertise to increase the green tea leaf supply base and, thereby, the output of raw leaf tea.

The government has also requested assistance and cooperation from the Indian tea industry.

Competitiveness. The tea sector comprises various classes and categories: some companies focus on one high-quality high-price tea while others focus on achieving high volumes.

Tea harvesting is a delicate process and it is difficult to harvest quickly without damaging the leaves. Manual harvesting is preferred, for reasons of quality, by some cultivators; others prefer large-scale mechanized harvesting, which offers higher productivity.

The producers are organized via the Associação de Produtores de Chá da Zambézia (the Tea Producers Association of Zambezia).

Challenges. A new processing plant is badly needed in the new production regions of Buzi and Mossurize.

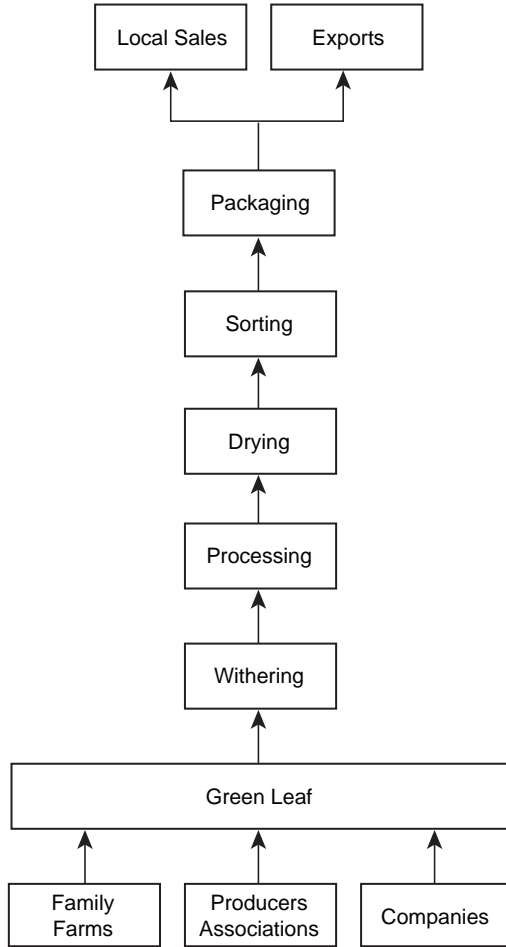


FIGURE 6.1. Tea sector supply chain.

Termites can cause great damage to tea plants. Chemical insecticides are very effective but are harmful to the environment.

The industry lacks the financial capacity to invest in renewing existing plantations, since this requires large investments for nurseries and/or the importation of plants, as well as outlay on research and agronomic assistance.

The high cost and poor supply of electricity is a continuing concern.

Access roads are poor in the plantation regions, and this increases the costs of marketing and exporting.

6.2 Profile of a Major Firm

6.2.1 *Chazeiras de Moçambique, Lda*

Basic details. Chazeiras de Mozambique, Lda is owned by Group Gulamo, headquartered in Gurue in Zambezia province. Its main activity is the cultivation and processing of black tea.

Its production capacity in each annual season is around 1,200 tonnes of processed black tea. The company employs 143 full-time workers and over 1,000 part-time workers.

History. Chazeiras of Mozambique was formed in 1998 from the privatization of two of the smaller production units of the former state company Empresa de Cha de Moçambique (Cha Sambique and Cha Gurue).

These two production units were acquired during the privatization process by Group Gulamo, a family-owned group of businesses with interests in Nampula province, Zambezia province and Maputo. The Gulamo family began its activities in the import and export trade, and later expanded into industrial activities, including milling and the production of wheat flour, edible oils, soaps and cement.

Chazeiras de Mozambique has an installed capacity to process 50 tonnes of green leaf per day, giving a daily output of 10 tonnes of processed tea.

Current activities and products. The company produces bulk tea in various grades. Its retail sales comprise both loose tea and tea bags, sold under its Gurue, Five Stars and Licungo brands.

Firm capabilities. A favourable climate and excellent soils allow the company to produce to a high international quality standard, though uncontrolled fires have been a serious problem in recent years.

Teas from different regions vary in their characteristics, with cultivar, the nature of the soil and (most importantly) the processing technique all playing a part. The Gurué mountains are one of the few regions in southern Africa suitable for the cultivation of tea. Due to their location, and their high altitude, the Gurué mountains benefit from a microclimate, receiving more rain and being cooler than most other areas in Mozambique; this provides ideal growing conditions. The green leaves are harvested by hand. The tea is smooth with flavour notes of vanilla, rose and nutmeg.

Supply and marketing chain. The company sources all its green leaf from its own plantation in Gurué. Where quality is not the overriding

consideration, mechanical harvesting using the crush–tear–curl, or CTC, technique is used.

Some 90% of the firm's production is exported via the Mombasa auctions, or directly to the United States, Poland, the United Kingdom and Germany. The company's exports are valued at about US\$1.32 million per year.

Organization and management. The company has a director general appointed by the shareholders, who are family members. The director general oversees the activities of the directors of production, sales and marketing, finance and human resources.

Recent developments. Chazeiras de Mozambique has recently acquired new equipment to modernize its operations.

Development agenda. The company has begun a development process under which it will gradually renew its plantations.

It is cooperating with other tea producers to achieve a separation of processing from cultivation. The aim is to encourage agricultural production of tea by households and individual farmers, so that the companies can focus on industrial processing and marketing.

Chapter 7

SALT

7.1 Sector Profile

Background and overview. The production of (sea) salt along Mozambique's coast has a long history. In many provinces, especially those located in the north of the country, salt production is the main industry, and small production sites are scattered along the coast.

The move to industrial-scale production began during the colonial period, when a number of private companies began operations. In 1976 several of the private companies were nationalized, in part due to abandonment by their owners.¹ Others, however, remained private. Following economic reforms during the period 1990–95, the nationalized salt producers were privatized.

Standards are imposed on the industrial-scale producers by the Mozambican Quality Salt Standard (NM9-2005). A law dating from 2000 requires that all salt produced, marketed and imported for human and animal consumption should be iodized, using potassium iodide, to levels between 25 ppm and 55 ppm. The National Laboratory of Hygiene of Food and Water in Maputo carries out analyses of calcium, magnesium and sulphate content and measures humidity. Small laboratories in Nampula, Inhambane and Cabo Delgado also carry out analyses.

Eight large production sites account for total annual production of 76,000 tonnes.

- In the Maputo area: Salina Zacarias, Salina Afrisal do Mar and Spence Afrisal do Mar.
- In Nampula: Salina Patamar and Salina Transalt.
- In Inhambane: Salina Batame IMC, Salina Salema and Salina Wane Pone.

¹ Ferrão, V. 2002. *Compreender Moçambique: Política, Economia e Fatos Básicos*. Maputo: Editora Escolar.

TABLE 7.1. Consumption of iodized salt in Mozambique.

Human consumption	80,000 tonnes per year
Animal consumption	10,000 tonnes per year
Fish salting	14,000 tonnes per year
Other food/chemical industry	3,000 tonnes per year
Export	20,000 tonnes per year
Total consumption	127,000 tonnes per year
Production	145,000 tonnes per year
Theoretical surplus	18,000 tonnes per year

Source: Directorate of Industry (Ministry of Industry and Trade).

Additionally, there are 273 medium and small-scale sites with a combined annual output of 69,000 tonnes. Total annual output therefore amounts to some 145,000 tonnes.

The uses of iodized salt in Mozambique are shown in Table 7.1.

Supply and marketing chain. Poor transport facilities limit the extent to which salt can be profitably sold far from its production sites, and price differences across regions can be substantial. Nonetheless, informal salt vendors compete with the industrial companies, and their presence sometimes exerts a strong downward pressure on prices.

Exports. Some 20,000 tonnes of salt are exported annually, most of it going to Malawi and South Africa. There is evidence that some of the salt exported to Malawi is reexported to Zambia.

Policy context. Under a Ministerial Decree of 2001, iodized salt is exempt from VAT. This measure is aimed at stimulating salt iodization and is intended to allow low-income consumers to have access to iodized salt.

Challenges. Notwithstanding the high volumes of salt produced domestically, Mozambique still imports some table salt. This reflects the superior levels of packaging and presentation of imported branded salt.

The current level of profits for industrial producers is too low to allow them to generate internal finance to upgrade their production facilities in order to meet international specifications, leading to a loss of export opportunities. Salt companies also report difficulty in raising bank financing due to a lack of credit guarantees.

The high cost of transportation reduces the ability of the major companies to achieve wider geographical coverage. (The firms rely heavily on rail transport.)

7.2 Profile of a Major Firm

7.2.1 *Afrisal do Mar, SARL*

Basic details. Afrisal do Mar is the largest salt producer in Mozambique. It operates two production units (in Matola and Spencer), each on an area of 180 hectares. The company is part of the Grupo Epsilon Investimentos, SA.

The company employs 80 permanent and 120 seasonal staff.

History. Afrisal do Mar traces its origins to the privatization in the early 1990s of the state-owned Empresa Estatal de Extração, Tratamento e Transformação de Sal (Extrasal) (this translates as the state company for extraction, treatment and transformation of salt). Extrasal had itself been formed through the nationalization of an existing privately owned plant following its abandonment in the post-independence period by its former Portuguese owners.

Extrasal comprised two production units: Salima Matola and Salina Spencer. It benefited from an expansion and improvement project funded by the Italian government and became one of the country's largest salt producers.

When Extrasal was privatized in 2001 it was acquired by SCI – Sociedade de Controlo e Gestão de Participações Financeiras, SARL, who held an 80% stake, while the remaining 20% was held by the state with a view to a subsequent sale to the company's managers, technicians and workers.

Following SCI's acquisition of the company in 1998, the new owners suffered a serious setback from floods in 2000, which destroyed much of the country's salt fields. Substantial investment was required for rehabilitation.

The company was subsequently sold by SCI to Epsilon Investimentos, whose other interests are currently all in real estate.

Afrisal do Mar is a member of the Associação dos Produtores do Sal do Sul do Save (the Association of Producers of Salt in the Southern Save Region), who cooperate on issues affecting the sector.

Current activities and products. Afrisal do Mar uses two production processes.

- A manual process in which salt is removed by squeegee while a layer of 2–3 cm of water still remains. When this is done well it allows the harvesting of clean crystals, both thick and thin. The layer with impurities provides salt for industrial users (glass factories, tanneries and the producers of livestock feed and tyres, etc.).

- An industrial process in which the collection as well as subsequent stages of production (washing, refining, drying, crushing and packing) are all carried out mechanically.

Afrisal produces

- (i) washed and iodized thick salt,
- (ii) refined iodized salt, thick, and
- (iii) refined iodized salt, thin.

Supply and marketing chain. Most distribution occurs via wholesalers who buy at the factory door before distributing nationally.

Exports. The company occasionally exports small volumes of salt to South Africa. The major constraint on export activity is the cost of transport. There is some evidence that some of Afrisal's output is being exported informally by third parties to Zimbabwe and Malawi.

Organization and management. The company is owned by Epsilon Investimentos, which appoints the board of directors. The director general oversees the operational management of the company.

Recent developments. Afrisal aims to reduce its (currently high) production costs, and it continues to seek ways to reduce transportation costs for salt, so as to facilitate export activity. The company hopes to export directly to Zimbabwe and Malawi in the future, as well as to South Africa.

Chapter 8

EDIBLE OILS AND SOAPS

8.1 Sector Profile

Background and overview. The edible oils and soaps industry started in the 1950s in a number of regions where raw materials could be sourced locally. Nampula factories were established in the area of Monapo, where sunflower and cotton were grown. Sunflower produced in Sofala and Manica was used by factories in Beira. In Lourenço Marques, now Maputo, there were some small factories that used sunflower as raw material. Later, firms began to use copra as raw material.

In the 1960s a number of small factories in Lourenço Marques, now Maputo, merged, establishing a large company named Fasel Saborel, which operated on an industrial scale.

During this period, some refined oil was exported to Zimbabwe and Portugal. It was also at this stage that firms began to use peanuts as a raw material.

After independence, and following the abandonment of factories by some owners, a number of factories were taken under management by the state, with new boards of directors appointed by the government.

These were Fasel Saborel, Saboeira de Inhambane (copra and soap), Geralco in Quelimane (copra and soap) and Fábrica de Óleo de Chimoio (sunflower oil).

A second group of firms continued as independent private companies: Companhia Industrial do Monapo (owned by Grupo Entrepasto, and producing cotton, sunflower oil and soap), Companhia Industrial da Beira, and Ginwala.

The raw materials now used in the industry are sunflower, raw cotton, copra and peanuts.

Some factories have ceased their pressing operations, and many producers now import crude oil from Argentina, Malaysia and some European countries. Copra is still sourced domestically. Factories import Malaysian tallow, which is the key raw material for soaps.

Profiles and lines of business of large firms. The large companies, producing over 100 tonnes a day, are as follows.

Southern Refineries, located in Maputo, owns two factories in Matola with a combined capacity of 500 tonnes a day.

GS Holdings, located in Nacala, produces crude palm oil and has a capacity of 200 tonnes a day. It also produces a range of soaps.

Fasorel, located in Maputo, has closed its pressing facility. It produces edible oil from bought-in supplies of crude oil. It has a capacity of 150 tonnes a day.

Faberol, located in Beira, also produces refined oil from bought-in crude oil. This unit has a capacity of 150 tonnes a day.

Sanoil of Namialo, located in Nampula, also refines bought-in crude oil; it has a capacity of 100 tonnes a day.

All these refineries are located in the port cities of Maputo, Beira and Nacala, which allows easy access to imported raw materials.

Limitations on storage capacity at some plants means that they do not always operate at full capacity.

Profiles and lines of business of small and medium-sized firms. Small and medium-sized enterprises with a daily production capacity below 100 tonnes are mostly located near growing areas for copra and sunflower, in Inhambane, Sofala, Manica and Nampula. They deal directly with the growers and produce crude oil that is sold to refineries.

These companies include Maxoil, Sany Industrial, Samoil and Fábrica de Óleos de Nhancoongue, all located in Inhambane. They also include Alif Química and Geralco, located in Zambezia. All these firms use copra as their main raw material.

Alif Quimica Industrial Lda was established in 1991. Based in Zambezia province, it specializes in the manufacture of copra and castor crude oil, refined oil from sunflower, cotton seed and groundnuts, and soap and other detergents.

Some 20% of its output is exported within Africa and to Europe. The company sources its inputs (sunflower, soya, groundnut and cotton) through a scheme of contract farming and sharecropping. Employing 208 workers, Alif Quimica has an annual turnover of US\$4.6 million.

MAFUIA operates two plants using sunflower: one in Mafuia (in Manica province) and one in Dondo (in Sofala province).

Supply chain. Most edible oil factories use crude oil imported from South Africa, Singapore, Indonesia, Malaysia and Argentina. Their output is sold on the domestic market via wholesalers and retailers.

Some refineries, including Group Maeva, plan to implement a programme of incentives for farmers to supply soya as a raw material. Maeva is aiming to achieve participation by 30,000 smallholders.

Coconuts are widely grown, especially in Inhambane and Zambezia, with 60% of output being produced by smallholders. There is a lack of crushing facilities in the main growing areas.

Exports. The Maeva group has recently begun to export to Madagascar, Tanzania and Burkina Faso.

Policy context. The government is aware of weaknesses in the local production of raw materials and has exempted oils and soaps companies from direct payment of customs duties on imports of crude oil and tallow. This measure is aimed at stimulating production, keeping the existing factories active, and securing the supply of refined oil.

The government has imposed a relatively high tariff rate of 20% plus VAT on imports of refined oil in order to protect the domestic industry. The government has also exempted the payment of VAT throughout the marketing chain of refined oil.

Challenges. Mozambique once had one of the world's largest areas of palm plantation. Today, as a result of the aging of trees and because of diseases, the Mozambican industry is experiencing one of its biggest challenges. Production of copra has fallen dramatically, from 42,800 tonnes in 2001 to 30,707 tonnes in 2010. Exports of copra halved between 2004 and 2011, falling from US\$10 million to US\$5.1 million.

Mozambique has ideal climatic conditions for sunflowers. As a result of the civil war that ended in 1992, and the displacement of populations and the closure of large enterprises, production is much lower than it was in the past (Figure 8.1). Today, with the government encouraging agriculture, new small and medium-sized enterprises have begun or resumed sunflower cultivation.

Initiatives are underway at various levels to encourage the cultivation of sesame.

As noted earlier, many factories have wound down their pressing facilities. One consequence of this is a reduced level of demand for mafura seed, which is largely produced by the household sector.

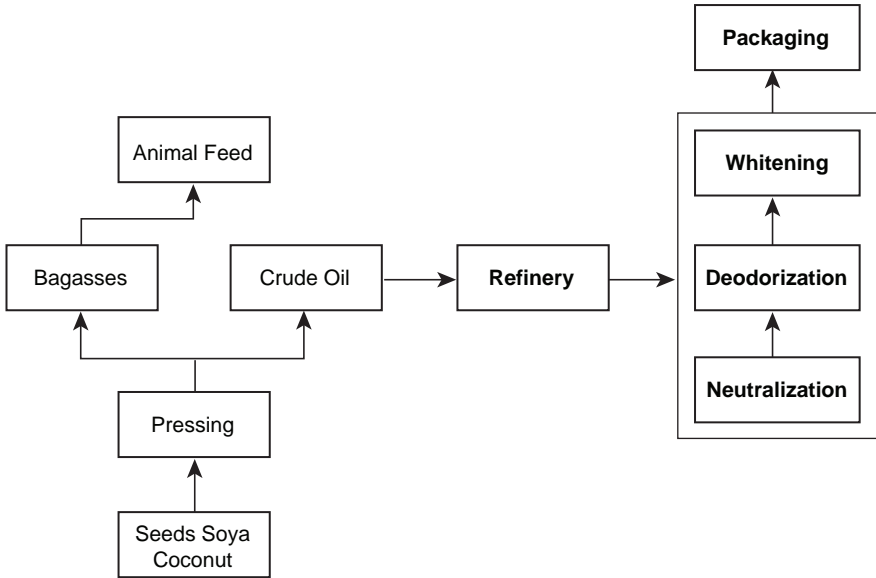


FIGURE 8.1. Edible oils supply chain.

8.2 Profiles of Major Firms

8.2.1 The Maeva Group: Sabimo Ltd and Southern Refineries Ltd

Basic details. Sabimo Ltd is a private company originally set up with French capital; it is currently part of the Maeva group. It has 80 employees and is involved in the manufacture of soap and powder soap under the Maeva brand. It had sales of US\$1.5 million in the financial year 2011.

Southern Refineries Ltd is a private company and is part of the Maeva group. It refines edible oil and olive oil, sold under the Maeva brand. It operates two factories in Matola. Its sales were approximately US\$5.7 million in the financial year 2011. It has 240 employees.

History. Sabimo began its activities in 1998. Mozambique at this time was trying to attract foreign investors after the end of the civil war, under its Economic Recovery Programme. The initial phase involved training and some employees were sent to India, the country from which much of the machinery used in the industry was purchased.

The factory had an initial daily production capacity of 9 tonnes. In 2010 a second production line was introduced with a daily production capacity of 36 tonnes.

Southern Refineries was founded in 2004 by the shareholders of the Sabimo soap factory with the opening of a factory with a daily capacity of 150 tonnes. Its capacity is now around 500 tonnes per day following the installation of a second factory in 2011.

Current activities and products. Sabimo manufactures soap and soap powders. Southern Refineries manufactures soybean oil, sunflower, palm, rapeseed and olive oil.

Supply and marketing chain. Sabimo's main raw materials are crude palm oil, copra, caustic soda and talcum powder. Seventy percent of the raw material is sourced from Malaysia, India and China, while 30% is purchased on the domestic market.

Southern Refineries imports crude oil from Malaysia, South Africa and Argentina.

Organization and management. The Southern Refineries general manager reports directly to the board of the Maeva group. Reporting to the general manager are the commercial director, an executive director, a finance director and heads of human resources, production, agricultural development, factory operations, accounting and customs clearance.

Challenges. Currency fluctuations pose a serious challenge, as raw materials are imported, and a fall in the value of the national currency, the metical, can wipe out a year's profits. A second challenge relates to competition from imported products, and especially those from South Africa, which are very competitive in price.

Recent developments. Southern Refineries has embarked on a new venture, through a company in the Maeva Agro Lda group, to plant soybean and sunflower in Inhambane province. It has also established agreements with rural producers in Sofala and Manica to support the cultivation of sunflowers. The initiative has the support of the Beira Agricultural Growth Corridor, the Associacao de Ajuda Crista, the Associacao de Desenvolvimento Social, and other NGOs that support rural communities. However, production is not yet at a level sufficient to meet the company's needs. A study is being carried out to assess the possible development of soybean and palm plantations in the province of Zambezia and in the coastal zone of Cabo Delgado.

8.2.2 S. E. Ginwala & Filhos Ltd

Basic details. S. E. Ginwala & Filhos Ltd is engaged in the refining of edible oils and the production of soaps. It employs 110 workers and has an annual turnover of US\$9–10 million per annum.

History. The company was established in 1945 as a private family-owned firm by the Ginwala family, who were resident in Mozambique at that time. The business of the firm involved the crushing of oilseeds to produce crude edible oils, which were mostly exported to foreign firms who used them as inputs for the production of refined edible oils. Ginwala's heavy-duty crushing machines, sourced from Germany, are still operational today, though they play only a small part in the firm's current operations. A small quantity of Ginwala's unrefined product was sold on the domestic market.

Ginwala continued as an independent entity throughout the period 1974–94, when many of the country's industrial enterprises were nationalized. The government took ownership of the company's plant and premises but rented it back to Ginwala, so that business could continue as usual.

Shortly after independence, in 1975, a share in the firm was purchased from the Ginwala family by the Portuguese company Entrepосто, which had substantial interests in Mozambique, particularly in edible oils and in car dealerships. Under its new owners the company extended its activities into the manufacture of soaps.

It was in the early 1990s that the firm's activities took on their present form, as it invested in new plant and equipment that supported its core activities in edible oils and soaps: manufacture of plastic bottles, automated filling, and a continuous production line for soaps.

In 2004 Entrepосто decided to exit the industrial sector in order to focus its attention on its other main business, car dealerships. It sold Ginwala to its then general manager, Carlos Oliveira, and the firm has been a privately owned family business since that time.

Current activities and products. Some 70% of revenue comes from refined edible oils. The remaining 30% of revenue comes from soaps.

Supply and marketing chain. For 95% of oil sold, the raw material is imported crude oils, which are sourced from South America (for soya and sunflower) and Indonesia (for palm oil). A small amount of sunflower oil is obtained from local firms that run crushing operations and supply crude sunflower oil.

All the firm's output is sold directly on the domestic retail market.

Organization and management. The firm's operations are run with a relatively informal management structure.

Challenges. The market for edible oils and soaps is highly competitive. Ginwala is much smaller than some other local refiners of edible oils such as Fasorel, Southern Refineries or Gein, each of whom have production volumes about three times greater than Ginwala's. With tough competition on price, and small unit margins, the industry's focus over the past two years has moved to non-price competition. This trend began when one manufacturer marketed a soap that had a perfume additive and its rivals followed.

Until 2010 Ginwala exported some crude oil made from copra, but this activity has ceased due to restricted supply of input following the outbreak of crop disease affecting coconut trees.

Recent developments. Ginwala has recently acquired a blow moulding machine and has started to produce its own plastic containers in-house. This move is a response to unsatisfactory consistency in bought-in bottles.

Chapter 9

SUGAR

9.1 Sector Profile

Background and overview. The cultivation of sugarcane for industrial processing began in the late nineteenth century along the Zambezi and Buzi rivers.

In 1893 the Companhia do Açúcar de Moçambique was founded by a British national, John Petez Hornung, with a factory located in Mopeia. In 1898 the Buzi Company was established under a contract between the Portuguese crown company Arriaga & Comandita and the Mozambican authorities.

The Sugar Company of Portuguese East Africa, a company backed by French capital, was established in 1902 with a factory in Marromeu. In 1910 this factory was acquired by another enterprise that had been established by John Hornung: Marromeu Sena Sugar Estates Factory, Ltd. It was subsequently renamed Sena Sugar Estates.

In 1913 a Scotsman who had acquired second-hand equipment in Mauritius installed a small plant with a milling capacity of 50 tonnes of cane per hour along the Incomati river. This marked the beginning of the Incomati Estates company.

Sena Sugar Estates began operations in 1924 with a new factory in Luabo.

It was not until the 1950s that Portuguese capital began to play an important role in the sugar industry. In 1953–54 a group of Portuguese investors bought the Incomati Estates factory and increased its production capacity from 50 to 100 tonnes per hour. In 1954 another group of Portuguese investors built a sugar factory at Mafambisse, forming the Mafambisse Company.

In the late 1960s the Marracuene Agricultural Sugar (Maragra) company was established by the Petiz family. It commenced production in 1970.

By 1972 the industry was producing 321,000 tonnes of sugar a year, and sugar had become one of Mozambique's biggest export sectors, accounting for 11% of the country's exports. (At that time, the export of cashews accounted for 23% of all exports, while cotton's share was 21%.)

TABLE 9.1. Sugar output.

	2009	2010	2011
Cultivated areas (ha)	47,260	48,695	49,704
Cane production (tonnes)	2,296,577	2,728,541	4,000,657
Sugar production (tonnes)	253,000	287,000	400,000
Sales in domestic market (tonnes)	188,301	193,450	195,555
Exports (tonnes)	96,000	136,000	238,812
Exports receipts (US\$)	43 million	61 million	91 million
Workforce (campaign)	31,174	34,034	36,183

Source: National Sugar Directorate

Following independence, many factory owners and skilled workers left the country and production fell sharply. In 1977 the industry was nationalized, with the exception of one company, the Society of Agriculture of Incomati, located in Xinavane. Annual output had fallen to 13,000 tonnes by 1992.

In 1987, following economic reforms, the sector began to receive funding from international institutions, and this led to the rehabilitation of many factories. By the 1990s a process of privatization was underway. Following the multiparty elections of 1994, the government put in place a new policy for the sugar industry, aimed at attracting foreign investment.

The sugar industry in Mozambique currently comprises four factories, which are owned by three multinational groups:

Maragra Açúcar, owned by Illovo Sugar, Africa's largest sugar producer, which has interests in six African countries, and which exports to Europe and the United States;

Açucareira de Xinavane and Açucareira de Moçambique, both owned by Tongaat Hulett Sugar, a multinational operating in South Africa, Zimbabwe and Swaziland, as well as Mozambique, whose origins can be traced to 1892; and

Companhia de Sena, owned by the French multinational Tereos International via its Brazilian division Açúcar Guarani.

The Mozambican government retains a minority stake in each of the four factories but it aims to divest these shares over time.

During the past three years the sugar sector has enjoyed a remarkable recovery in terms of output (Table 9.1).

In the financial year 2010/11, total sugar production amounted to about 311,000 tonnes, well in excess of domestic demand of 195,555 tonnes. The total cultivated area in that year was 49,704 ha and the industry employed

about 36,000 people. It is estimated that more than 150,000 people depend directly or indirectly on the industry for their livelihoods.

The sugar firms are currently developing new projects to utilize by-products for biofuels and electricity generation.

Mozambique's exports are wholly of raw, rather than refined, sugar. The companies argue that the price differential between raw and refined sugar in international markets would not cover their costs of refining.

Profiles and lines of business of large firms.

Maragra Açúcar is located in Manhiça in Maputo province. Its factory was renovated in 1998 by its new owner, Illovo Sugar Ltd. The factory currently has an estimated annual production of 102,000 tonnes. It is profiled in the next section.

Açucareira de Xinavane is located in Xinavane in Maputo province. Its factory was renovated in 1999 by the new owners, the Tongaat Hulett Sugar Group. Its production in the 2010/11 season was 183,000 tonnes.

Açucareira de Moçambique is located in Mafambisse in Sofala province. It was renovated in 1998 by its new owner, the Tongaat Hulett Sugar Group. The current annual production of the factory is estimated at 71,000 tonnes.

Companhia de Sena is located in the district of Marromeu in the Sofala province. Its factory was renovated in 1999. Its current annual production is 73,000 tonnes.

Supply and marketing chain. The supply chain of the sugar industry in Mozambique is organized on behalf of the four factories by Distribuidora Nacional do Açúcar, which acts as a distributor across the entire country (Figure 9.1).

The factories source sugarcane from their own plantation farms and also from community-owned cane plantations in neighbouring areas.

The planting, irrigation and harvesting of sugarcane are carried out both by machines and manually.

All four factories process sugarcane to brown or white sugar. This is then supplied to Distribuidora Nacional do Açúcar for distribution. For the domestic market, the main selling depots are located in Maputo, Matola, Chókwè, Xai-Xai, Maxixe, Beira, Chimoio, Tete, Milange, Quelimane, Nam-pula, Nacala, Montepuez, Cuamba, Lichinga, Pemba and Marromeu. All sugar exports are made through Distribuidora Nacional do Açúcar.

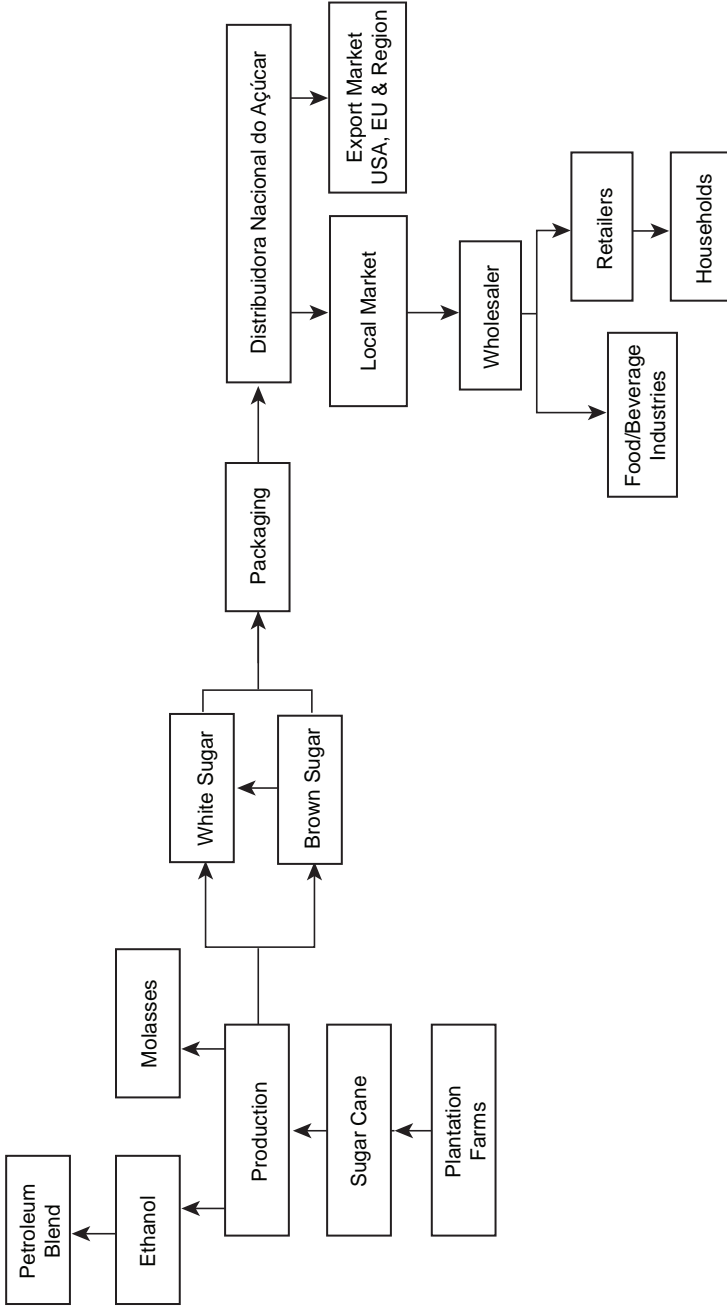


FIGURE 9.1. Sugar's supply and marketing chain.

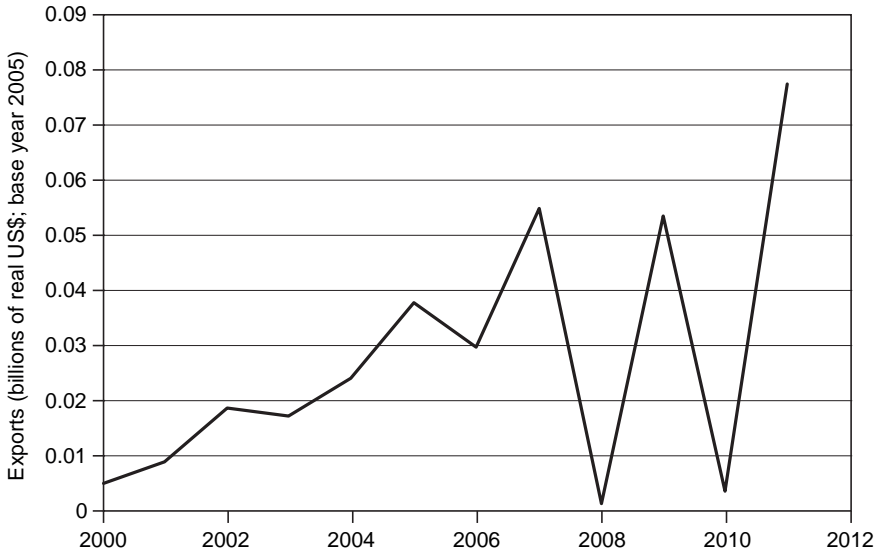


FIGURE 9.2. Exports of sugar.

Exports. In the financial year 2010/11, export revenues from sugar amounted to US\$91 million. This was an increase of 49% on the previous year, reflecting rising international prices, a good harvest and improved factory performance following investments in renovation.

Policy context. Following privatization, the government has, since 1997, supported the industry through a variable levy on imports (in addition to the basic import tariff of 7.5%), supporting domestic prices when international prices have fallen.

Since April 2012, domestic sugar production has been exempt from VAT. This (temporary) exemption was granted in order to protect local producers facing competition from illegal imports.

Competitiveness. The climate of Mozambique is favourable to sugar production, and the country has abundant land suitable for sugarcane. The proximity of these areas to ports serves to reduce the (still very high) transport costs.

The strength of the sector could be enhanced by constructing dams, and by improving irrigation systems, so as to reduce the costs associated with the adverse effects of droughts and floods.

Challenges. There are several challenges facing the industry.

- Refining costs remain high. Mozambican sugar is exported as raw, rather than refined, sugar to European refineries. If refining costs could be reduced, it would be feasible to refine prior to exporting.
- The current land policy, which states that land is state property, has a negative impact on the firm's ability to raise credit lines at favourable interest rates.
- The firms in the industry need to develop strategies to reduce the risks they face from exchange rate fluctuations vis-à-vis the US dollar and the euro.

9.2 Profile of a Major Firm

9.2.1 Maragra Açúcar SARL

Basic details. Maragra Açúcar, a subsidiary of the Illovo Sugar Group, operates the Manhiça sugar mill and cane plantation near Maputo.

Its output in 2012 was 91,000 tonnes, representing 21% of total output in the sector.

In the 2013 season Maragra Açúcar employed 4,803 people (3,760 seasonal and 43 permanent staff) and had a turnover of just under US\$21 million.

History. Maragra Açúcar was founded by the Portuguese Petiz family in 1968. The original name of the company was Maragra Marracuene Açucar. It commenced production in 1970 and produced 44,100 tonnes of raw sugar at its peak in 1972.

Following independence the company was nationalized, and in 1984 it ceased operations. In 1992, under the privatization programme, the firm was reacquired by the Petiz family.

To restore operations the Petiz family sold a 50% stake to the Illovo Sugar Group, the largest sugar producer in Africa, headquartered in South Africa. The company changed its name to Maragra Açúcar SARL in 1997; 50% of the shares were held by Illovo Sugar Group and 50% by the Petiz family. Illovo Sugar Group currently holds 76% of the shares and the Petiz family holds the remaining shares.

Maragra Açúcar had planted more than 4,000 hectares of sugarcane and restored the factory by the end of 1999, at a cost of US\$55 million. The entire cane crop was destroyed by the floods in February 2000. By December 2001

the entire agriculture infrastructure had been rebuilt and 6,300 hectares of land had been replanted at an additional cost of US\$15 million. In 2001, 139,000 tonnes of cane was processed and 16,000 tonnes of sugar was produced. In 2002 output reached 412,000 tonnes of cane and 50,000 tonnes of sugar: the highest levels in the history of the company up to that date.

Current activities and products. Maragra Açúcar cultivates and processes sugarcane to produce sugar for domestic and foreign markets (the EU and the United States).

Supply and marketing chain. Maragra sources sugarcane both from its own plantation and from local smallholders, and it processes this cane into (unrefined) sugar for sale to sugar refineries in other countries.

Maragra Açúcar, like all other Mozambican producers, exports through Distribuidora Nacional do Açúcar.

Exports. Mozambique exports to the European Union under the new Economic Partnership Agreements introduced in 2009, and to the United States under the African Growth and Opportunity Act. Both agreements allow access on preferential terms.

In 2012 Maragra Açúcar exported 50,409 tonnes of sugar.

Organization and management. The owners (Illovo and the Petiz family) have outsourced the day-to-day management of the business to two external consulting companies.

Recent developments. Maragra Açúcar has set up a partnership with the local community of Maragra to plant sugarcane on 4,000 hectares of land some 40 kilometres from its refinery.

The partnership will produce 400,000 tonnes of sugarcane per year and is linked to a project to double the annual production capacity of the company's Maragra refinery to 150,000 tonnes.

Illovo Sugar has acquired an option to buy a 90% stake in a sugarcane plantation in Búzi, close to the city of Beira, which could lead to construction of a refinery in the area.

Development agenda. In terms of growth strategy, Maragra Açúcar will continue developing small Mozambican cane growers by providing management and technological expertise to increase its cane supply base and, consequently, its annual output of raw sugar.

Chapter 10

TOBACCO

10.1 Sector Profile

Background and overview. Tobacco was first cultivated in Mozambique in the 1920s.

Given the favourable characteristics of climate and soil, cultivation quickly developed all over the country, but especially in the provinces of Manica, Tete, Nampula, Zambezia and Niassa.

Mozambique is the world's twelfth-largest producer and exporter of tobacco leaf, with an output of 86,000 tonnes in the 2011/12 season (Figure 10.1). Though the domestic market for cigarettes is large, locally produced cigarettes are not manufactured from domestic tobacco leaf. Instead, domestic cigarette manufacturers rely on imported tobacco leaf. This reflects the fact that Mozambican consumers have a preference for Virginia tobacco over locally produced tobacco, which is predominantly of the burley type.

Each of the two activities – leaf production and cigarette manufacture – is dominated by a different multinational company. Cigarette production is dominated by British American Tobacco, which has three southern African plants, one of which is located in Mozambique. The processing of tobacco leaf is dominated by Moçambique Leaf Tobacco Limitada, which is a subsidiary of the US-based Universal Leaf Tobacco Company Inc.

Tobacco operators fall into four groups.

Class I: family sector. Individuals or households who grow tobacco without the use of wage labour.

Class II: non-autonomous farmers. These farmers cultivate tobacco with the support of certain bodies that are authorized by the Provincial Department of Agriculture and Rural Development, to whom they are contracted to sell their output.

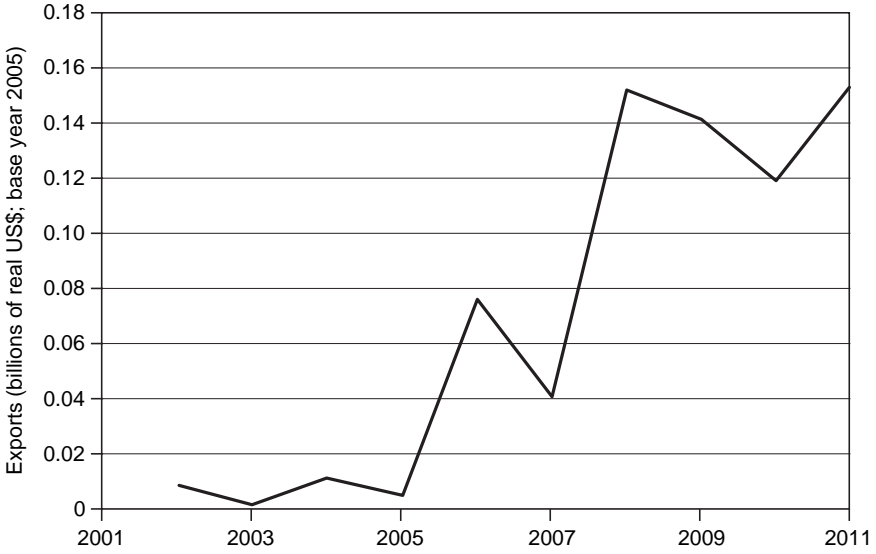


FIGURE 10.1. Exports of tobacco.

Class III: autonomous farmers. These farmers are self-sufficient in terms of resources and they cultivate tobacco without making commitments or contracts to a buyer; they may therefore negotiate prices at the time of sale.

Class IV: developers and marketers of tobacco. These are individuals or organizations who do not grow tobacco but who promote cultivation and buy and/or sell under contract.

Class III and IV operators are incorporated in the Provincial Department of Agriculture and Rural Development of the province in which they operate.

Statistics provided by Moçambique Leaf Tobacco Limitada indicate that tobacco cultivation now involves more than 131,000 individuals, compared with only 6,000 at the end of 1996. The twentyfold increase in employment numbers reflects both the huge (US\$100 million) investment by Moçambique Leaf Tobacco Limitada and the decline of Zimbabwean output.

Profiles and lines of business of large firms.

British American Tobacco is profiled in the next section. It accounts for 95% of domestic cigarette sales.

Mozambique Leaf Tobacco Co. Limitada was established in 1996 as the regional headquarters of Universal Leaf Tobacco Company Inc. Headquartered in Virginia in the United States, Universal Leaf Tobacco Company Inc. is the world's leading leaf tobacco merchant and processor.

Mozambique Leaf Tobacco, based in Tete province, employs over 5,000 people and has 120,000 outgrowers. Since 2003 it has operated a processing factory in Tete. It has a long-standing partnership with the local Mozambican/Portuguese firm Joao Ferreira Dos Santos.

Moçambique Leaf Tobacco Limitada's core business is the procurement, processing, parking and supply of flue-cured and burley tobacco to manufacturers of tobacco products.

Lines of business of medium-sized firm.

Sonil – Niassa Company Ltd, located in Nampula city, shares the 5% of sales not accounted for by British American Tobacco with two importers (Philip Moore, an agent for Marlboro, and GTI, an agent for Camel).

Supply and marketing chain. Tobacco leaf processing involves pulling the stem and veins from the leaf. Different classes of tobacco are mixed (the class is determined by the position of the leaf on the tobacco plant) according to the specifications dictated by the customer. In the next stage, moisture is added and withdrawn, while ensuring that the quality and chemistry of the tobacco is not affected.

Mozambique's four varieties of tobacco leaf are as follows.

Burley tobacco, the most widely produced variety, is cured in the open air.

Virginia tobacco. After harvesting it is dried in an oven using hot air.

Production of Virginia tobacco is expected to rise in response to growing demand over the coming years.

Dark air cured tobacco is at an experimental stage. Its curing method is similar to that of burley tobacco.

Dark tobacco uses a mechanical process for curing, involving five stages up to packaging for export.

Figure 10.2 shows the supply chain for tobacco processing.

Processing requires strict temperature and humidity controls to prevent wastage of tobacco leaf.

Exports. The major export destinations are Belgium (21%), the United States (15%) and Germany (8%). Other markets include Russia, South America, Australia and South Africa.

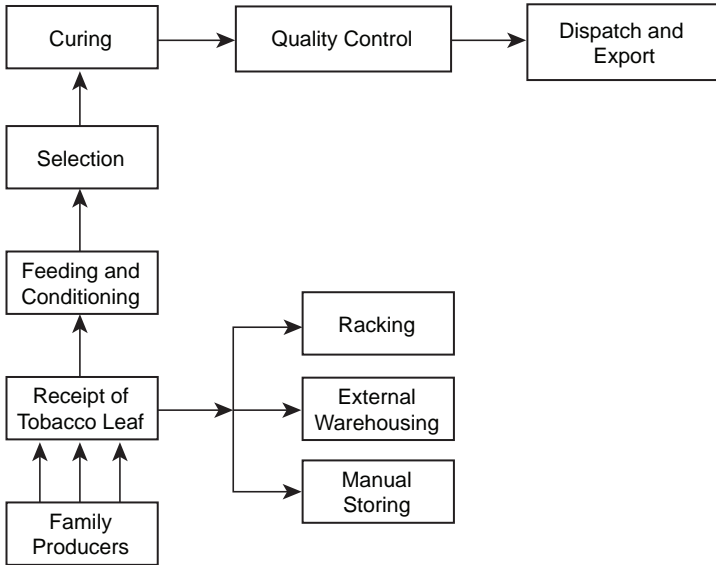


FIGURE 10.2. The supply chain for tobacco leaf processing.

Policy context. The importing of raw leaf tobacco or shredded tobacco, and of samples of these, is restricted to authorized importers or agents.

Producers are required to send information on their imports to the National Directorate of Agriculture each year.

Funds from the collection of fees are distributed as follows:

- 20% to the investigation and inspection activities of the National Directorate of Agriculture;
- 40% to the research and inspection activities of the Provincial and District Directorates of Agriculture and Rural Development of the tobacco-producing provinces; and
- 40% to the Agrarian Promotion Fund.

Tobacco imports are subject to the maximum level of tariff protection (20%), well above the average tariff level (10.1%).

The Ministry of Agriculture sets the minimum purchasing prices that are payable to growers.

Challenges. Illicit trade accounts for an estimated 3% of total sales, and this share appears to be growing.

10.2 Profile of a Major Firm

10.2.1 *British American Tobacco (BAT)*

Basic details. British American Tobacco Mozambique is a member of BAT International, which operates in more than 180 countries and is the market leader in over 50 of these.

The company employs 130 workers at its factory in Maputo, producing about three billion cigarettes per year.

History. British American Tobacco Mozambique began operations in April 2001.

The company subsumed three established tobacco firms, which were combined in a series of acquisitions: Sociedade Unificada de Tabaco, Sociedade Internacional de Tabacos Tian Ma, Lda, and Sociedade Agrícola de Tabaco.

These three firms were acquired either by Rothmans or by BAT prior to the 1999 merger of Rothmans and BAT to form BAT IBV. The details are as follows.

- The Sociedade Unificada de Tabacos, SARL and its subsidiaries were, prior to the 1999 merger, owned by British American Tobacco (Investments) Ltd, through its 1997 acquisition of COTAPO, a Portuguese company that was the main shareholder in Sociedade Unificada de Tabaco.
- Sociedade Agrícola de Tabacos, Lda was founded on 5 April 1935 in the district of Inhambane by three Greek nationals: Panos Macropulos, Manuel Macropulos and Tshihlakis Telemachus, who were involved in farming and tobacco growing.

The first tobacco factory was installed on the farm of one of the partners, but as the business expanded operations were moved, first to Inhambane and later, in 1940, to Lourenço Marques. A series of expansions in scale and in technology were carried out during the 1950s.

- Sociedade Internacional de Tabacos Tian Ma, Ltd (formerly Tian Li International Company Limited, a Chinese tobacco company) was founded in 1994 by Li Jianping and Yan Alexander. Its main activity was the production and marketing of cigarettes.

Both Sociedade Agrícola de Tabaco and Sociedade Internacional de Tabacos Tian Ma, Lda were acquired by Rothmans prior to its 1999 merger with BAT (the former in 1998 and the latter in 1999).

With its purchase of COTAPO, British American Tobacco (Investments) Ltd had become the majority shareholder in Sociedade Unificada de Tabaco. The 1999 merger of BAT and Rothmans thus brought all three operations under the control of BAT IBV. Through a series of reorganizations that occurred between 2003 and 2007, all operations were brought under the direct control of BAT Mozambique.

BAT Mozambique is 95% owned by BAT IBV, with the remaining 5% held by Mozambican investors.

Current activities and products. The company produces about three billion cigarettes annually, under three main brands: GT, Safari and Pall Mall, which represent 98% of production. The remaining 2% comprises international brands (Dunhill and Peter Stuyvesant).

Firm capabilities. BAT's factory in Maputo is one of three BAT factories in southern Africa. BAT IBV ensures that the plant operates to international standards.

Supply and marketing chain. BAT Mozambique sources its processed leaf tobacco from BAT in South Africa.

Cigarettes are distributed nationwide through three sales outlets located in Maputo, Beira and Nampula. These outlets deliver only to distributors, who sell to wholesalers and/or retailers.

Exports. The company does not export.

Organization and management. BAT Mozambique has a director general who is appointed by BAT IBV. There are five divisional managers (operations, marketing, human resources, logistics, corporate and regulatory affairs and legal), and a finance director.

Chapter 11

COTTON

11.1 Sector Profile

Background and overview. The cultivation of cotton began in the 1920s and gradually expanded over the following decades.¹ By the 1950s and 1960s, the industry was well established, and the Portuguese government, inspired by Belgian experience, established a 'zoning system' under which a firm could obtain an exclusive right to purchase seed cotton in a certain area.

Under the Decree of Forced Labour for Cotton of 1928, each rural family was legally required to cultivate at least half a hectare of cotton. This led to a situation in which cotton cultivation outweighed the production of food crops.

The Colonial Cotton Export Board was set up in 1938, and by the early 1940s twelve companies had signed contracts with the board to oversee cotton development.²

The historical peak of annual cotton production was reached shortly before independence, in 1974, when it stood at 133,200 tonnes.

Following independence, the government recognized the strategic importance of cotton as a foreign exchange earner and tried to reverse the downward trend in production by taking over all production facilities abandoned by the cotton companies.

The government's strategy involved the establishment of large state agricultural companies and communal villages, but under this regime annual production suffered a drastic reduction, falling to 5,200 tonnes by 1985.

¹ Pereira Carvalho, P. 1996. *Manual Do Algodoeiro*. Lisbon: IICT.

² Dinerman, A. 2006. *Revolution, Counter-Revolution and Revisionism in Postcolonial Africa: The Case of Mozambique, 1975–1994*. London: Routledge.

In the late 1980s, in an attempt to reverse the crisis in the sector, the government decided to open the industry to private operators. A number of institutional arrangements remained in place, however, including an auction system under which cotton companies had to compete for 'exclusivity' zones.

The government invited Portuguese and British companies to form joint ventures with the state in selected areas of Nampula and Cabo Delgado provinces. Three such joint ventures were formed, each enjoying the exclusive right to purchase cotton from smallholders within its area of operation. The government hoped these joint ventures would lead to an injection of capital to rehabilitate ginning facilities, build rural roads and provide other infrastructure.

The three joint venture companies were as follows.

- (1) Empresa Estatal de Algodão de Nampula was wound up and incorporated into a joint venture with João Ferreira dos Santos, creating the new Sociedade Algodoeira de Namialo (SODAN).
- (2) Grupo Entreposto was incorporated into the newly formed Sociedade Algodoeira de Monapo.
- (3) In Cabo Delgado the government signed an agreement with Lonrho Mozambique Agro-Industrial Company, a subsidiary of the British company Lonrho plc, to establish a joint venture arrangement.

The newly formed joint venture companies allocated annual use rights to selected smallholders under contract arrangements, under which they purchased their seed cotton and provided fertilizers and insecticide. Each joint venture company enjoyed a monopsony right over smallholders' cotton production.

Following the end of armed conflict, the production of cotton increased rapidly until 1998/99, when it reached 120,000 tonnes of seed cotton and a little over 35,000 tonnes of cotton fibre. In 1999/2000, however, there was sharp decline in production to 35,000 tonnes of seed cotton, in part due to weather-related issues.

In 2000/2001, the three new joint venture companies played a leading role in the industry.³ Over the following decade, however, the structure of ownership of the main concessions changed greatly, both through acquisitions and through the entry of new processing firms. SODAN's concessions in Erati and Chiure were acquired by a new entrant to the

³ Mozambique Support Program for Economic and Enterprise Development. 2001. *Mozambique Sub-Sector Cotton Study*.

market, Plexus Mozambique Lda, while SODAN's other interests were acquired by Grupo JFS. Plexus also acquired the concessions of Lonrho Mozambique Agro-Industrial Company, making it the largest firm in the industry. The concessions owned by Entrepósito (in a joint venture with the French company Dagrís) were acquired by another new entrant, the China–Africa Cotton Mozambique Limited. Currently, Plexus, JFS and China–Africa Cotton Mozambique Limited, together with two other recent entrants, OLAM and SANAM, account for 86% of total processing.

The industry today. Cotton cultivation involves more than 300,000 peasant families and supports 1.5 million people. It also accounts for over 20,000 waged jobs (including seasonal jobs). Household production represents almost 97% of total output.

There are three bodies that represent different interests in the industry: producers are represented by the National Cotton Producers Forum, the companies are represented by the Mozambique Cotton Association, and the public sector is represented by the Ministry of Agriculture through the Instituto de Algodão de Moçambique.

Production is concentrated in the northern area (Nampula, Cabo Delgado and Niassa) and the central zone (Sofala, Zambezia and Tete), where rainfall and soil fertility allow rain-fed agriculture.

Production involves relatively low levels of inputs, and there is little or no use of fertilizers. The production potential is limited by the inadequacy of applications of insecticide against several caterpillars that attack the capsule, particularly *Harmigera*.

All cotton produced in the country is classified by the Instituto de Algodão Moçambique as being either '1st Quality' (white cotton or lightly coloured, fully ripe, without spots or impurities) or '2nd Quality' (stained cotton (yellowish or gray spots) and/or mixed with pieces of leaves, bracts, capsules, dirt or any other foreign elements).

Data recorded during the classification process shows that there has been a gradual decline in average quality.

Average yields in the household sector are substantially lower than yields obtained in French-speaking West Africa, where production is also dominated by the household sector.

The organization of production. In 1991 the government set up the Cotton Institute of Mozambique to coordinate the production of seed

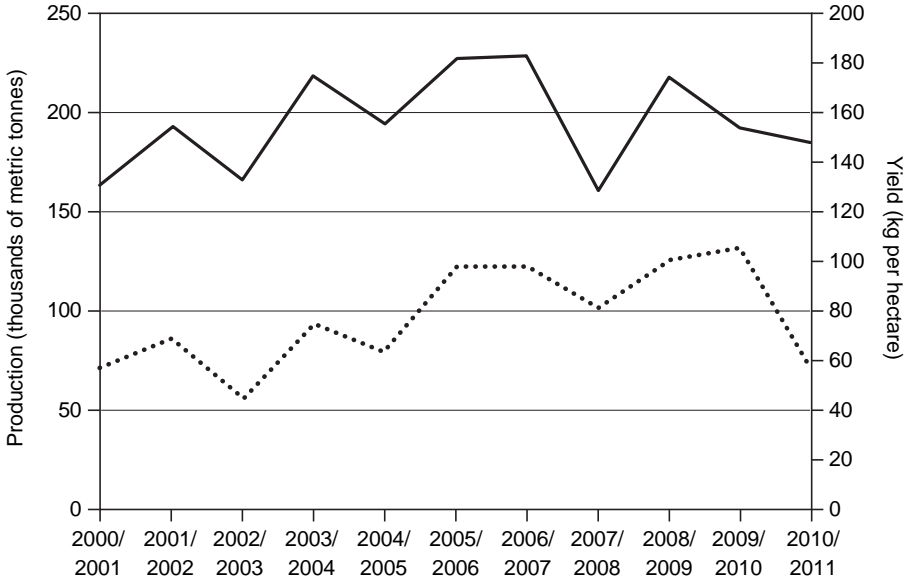


FIGURE 11.1. Cotton production and yield trends in Mozambique (solid line, yield (kg/ha); dotted line, production (tonnes)).

cotton (Figure 11.1⁴). The Mozambique Ginners Association was created in 1998 to represent concession holders, ginning companies and independent producers.

Farmers sell their production to ginning companies subject to a minimum price set by the government through the Cotton Institute of Mozambique; if there is a surplus over and above the requirements of ginners, the Cotton Institute of Mozambique purchases the surplus. The ginners provide seed, fertilizer, chemicals and sprays to the farmers; they also offer technical assistance and transport the harvested cotton to their premises. The raw cotton is transformed into lint, which is exported by the ginners, and seed, which is sold to the domestic edible oils and soaps industry.⁵

Mozambique is the only country in eastern or southern Africa to operate a monopsony system under which ginning companies have exclusive rights

⁴ The source for this figure is Dias, P. 2012. Analysis of incentives and disincentives for cotton in Mozambique. Technical Notes Series, Monitoring African Food and Agriculture Policies Project, Food and Agriculture Organization of the United Nations, Rome. Based on data from the Cotton Institute of Mozambique and Indexmundi.

⁵ International Cotton Advisory Committee. 2012. *Current Research Projects in Cotton*. Washington, DC: ICAC.

TABLE 11.1. Major destinations for cotton fibre exports.

Rank	Country	Percentage of total
1	Bangladesh	24%
2	Thailand	22%
3	Indonesia	19%
4	Singapore	12%
5	China	7%
6	Vietnam	7%
7	Malaysia	4%
8	Taiwan	2%
9	Portugal	1%

to buy in a specified geographical area and under which prices are fully administered by government.

The industry is protected by import duties of 2.5% for cotton lint and 7.5% for cotton thread; both lint and thread are subject to VAT at 17%.

Exports. While much of Mozambique's cotton was absorbed by the local textile industry in the past,⁶ the collapse of the country's textile firms in the past decade has meant that Mozambican cotton fibre is now mainly exported. South Africa and Portugal were the main destinations until 1995/96, but these destinations have become marginal, with Asian countries emerging as the major export destinations (see Table 11.1 and Figure 11.2).

Cotton exports were valued at US\$45 million in 2011.

Challenges. The challenges faced by the Mozambican cotton industry (some of which are also faced by the cotton industry in other countries) include the following.

- Mozambican cotton suffers from relatively high levels of contamination by organic and inorganic matter, which can cause damage during spinning.
- The cotton industry worldwide faces increasing competition from artificial fibres, which had come to take up half of the global market by the mid 1970s and today accounts for 60% of the total. Cotton production is subsidized in many producer countries; some sources

⁶ By 2005 all of Mozambique's textile mills had closed, in the face of competition from Asia. Traditional clothing ('capulana') was formerly produced locally, and was also exported to Malawi, but Mozambique is now a net importer of capulana, mostly from India, while being a net exporter of cotton lint (pp. 7–8).

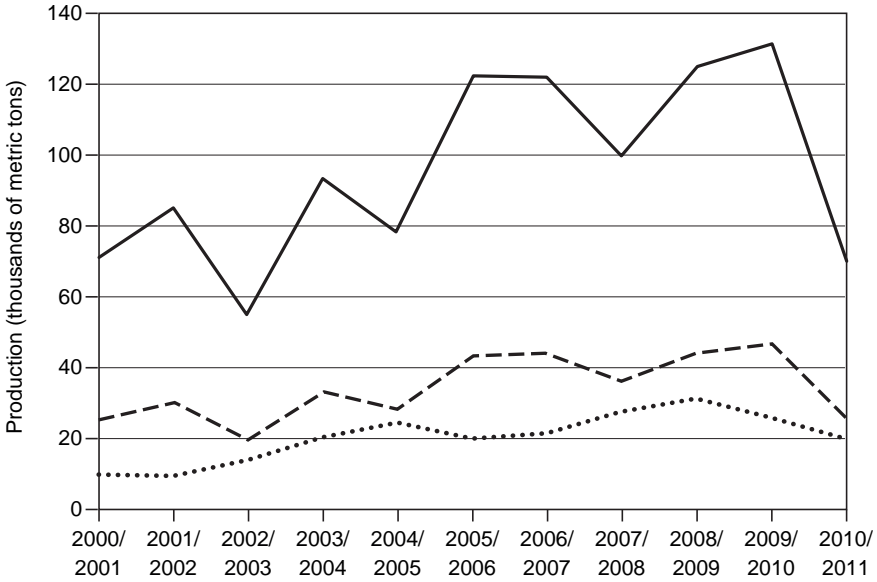


FIGURE 11.2. Cotton production and export (solid line, production seed (tonnes); dashed line, production equivalent to lint (tonnes); dotted line, export lint (tonnes)). *Source:* Dias (2012).

report that up to half of global production comes from countries (including China and the United States) where subsidies are in place.

- A 2012 report by the Monitoring African Food and Agriculture Policies Project of the Food and Agriculture Organization of the United Nations recommended an end to the monopsony system and a strengthening of Farmers’ Associations, with a view to improving the prices received by producers, and so stimulating output. (The level of output still falls short of that attained by the industry in the pre-independence period.)

Profiles and lines of business of large firms. The five major processors (ginners), their areas of operation and their market shares are shown in Table 11.2.

Plexus Mozambique Lda was founded in 2002 as a joint venture between Plexus Cotton Ltd and Caravel Development International Projects Inc., who had been invited by the Minister of Agriculture to take over an insolvent factory at Montepuez formerly operated by Lonrho Mozambique Agro-

TABLE 11.2. Mozambique's leading cotton processors.

Rank and firm	Regions of operation	Share of cotton lint processed 2010/11
1. Plexus Mozambique Lda	Erati, Nampula, Cabo Delgado	38%
2. SANAM	Nampula	21%
3. OLAM Mozambique	Nampula, Zambezia, Tete/Manica	19%
4. China–Africa Cotton Mozambique Ltd	Sofala/Manica	N/A
5. Joao Ferreira dos Santos Group (JFS)	Niassa	N/A

Industrial Company, the joint venture that the government had established in 1988 with the British company Lonrho.

Plexus holds concessions in Erati, Nampula and Cabo Delgado. It accounted for 38% of the total cotton lint processed and classified in 2010/11.

SANAM was founded in 2000 as a private company and obtained a concession in Nampula in 2003, where it has constructed the most advanced factory in the province. It is the country's second-largest processor, accounting for a 21% share of total lint processed in 2010/11.

OLAM Mozambique, founded in 1999 as a subsidiary of OLAM International, is the country's third-largest processor. It is profiled in the next section.

China–Africa Cotton Mozambique Ltd is a wholly owned subsidiary of China–Africa Cotton Development Ltd. It entered the market by acquiring Companhia Nacional Algodeira, a joint venture between Entrepосто and the French state-owned company Dagrís. Companhia Nacional Algodeira's activities in the Mozambican cotton industry can be traced back to the industry's beginnings in the early years of the twentieth century.

Joao Ferreira dos Santos Group (JFS) formed the joint venture SODAN with the government of Mozambique in 1992; JFS had a 51% share of SODAN. It operated several concessions in Nampula, including one at Erati, and a further concession in Chiure in Cabo Delgado province. Its interests in Erati and Chiure were subsequently acquired by Plexus Mozambique Lda.

11.2 Profile of a Major Firm

11.2.1 OLAM Moçambique Lda

Basic details. OLAM Mozambique Lda is a subsidiary of OLAM International. It is engaged in the production and export of cotton, cashew nuts and edible oils. It employs 580 permanent staff and some 3,000 seasonal workers. It had a sales revenue of about US\$100 million in 2011.

History. OLAM International began as a small trading company in Nigeria in 1989, exporting cashews to Vietnam and India. Now headquartered in Singapore, it operates in 65 countries and focuses on four businesses: confectionery, edible nuts/oils, cotton and timber, and rice. OLAM's strategy is built on vertical integration in these areas.

OLAM Mozambique was founded in 1999 with a factory processing cashew nuts. It opened a head office in Maputo in 2003. It has recently built a high-tech edible oil refinery in Beira and established a mechanized rice farm at Mopeia, in Zambezia province.

Current activities and products. OLAM operates concessions in Ribaué (Nampula), Murrumbala (Zambézia) and Guro (Manica) and it is beginning an operation in Mussourise (Manica).

Rice is OLAM Mozambique's second-largest business. It currently has a 26% market share of rice imported into Mozambique, and it has a network of 120 rice distributors across the country.

OLAM Mozambique now plans to cultivate 5,500 ha of land for rice in Mopeia. They have identified suitable land, and already cultivate 350 ha, but they face logistic problems in expanding the operation. The company is working with farmers' associations on mechanization and are committed to buying all the rice produced.

In cashew nuts, OLAM operates factories in Nampula province, at Monapo, Angoche, Mongicual, Napaco, Geba and Namialo. The cashew nut business employs 2,000 workers, 90% of whom are female. OLAM has a cashew plantation of 2,000 ha near Angoche, but it also buys in cashews from third-party suppliers.

Supply and marketing chain. OLAM Mozambique purchases cotton from about 67,000 farmers. It provides inputs to selected farmers (seeds, chemicals, insecticides) and supplies machinery on a seven-year lease as part of an exclusive supply contract. In some cases the company takes over land that is not currently farmed and farms it directly. OLAM works with a domestic mobile phone company to supply mobile phones to

provide information to farmers on soil conditions, to advise on planting and spraying, and to send weather forecasts.

Exports. OLAM exports processed cashew nuts, mainly to Rotterdam and the United States. Recently, small volumes have also been exported to South Africa and some raw cashew nuts have been exported to Vietnam and India. Some 5–10% of OLAM's edible oil output is exported to Zimbabwe.

Recent developments. OLAM has recently begun construction of a new state-of-the-art roller cotton gin in Beira. This gin is the first of its kind in Mozambique and complements OLAM's existing two saw gins. It will have a capacity of 120 tonnes of seed cotton per day and will employ about 200 people.

OLAM has been working with the Better Cotton Initiative programme since 2012. This programme aims to improve the social, environmental and economic aspects of sustainable cotton production. OLAM's initiatives under the programme include opening 400 farmer field schools and training 10,000 farmers in good agricultural practices.

Chapter 12

WOOD PRODUCTS

12.1 Sector Profile

Background and overview. Mozambique has an abundance of natural forests, covering approximately 78% of the total area of the country. One-third of these offer opportunities for timber production.

The forestry sector in Mozambique (excluding charcoal, fuelwood and village-based hand-sawing for timber) provides direct employment for approximately 200,000 people. It accounts for about 10% of industrial production and contributes about 1% of GDP (excluding fuelwood and other timber and non-timber forest products directly consumed by the rural population and sold in the informal market). The government of Mozambique receives approximately US\$6 million per year in royalties on logs harvested.

The first national forest inventory, undertaken in 1994 and based on satellite images, showed that Mozambique had 20 million hectares of productive forest, with about 20 million cubic metres of commercial stock and an allowable cut estimate of 500,000 cubic metres per year. The allowable cut was determined taking into consideration all the main commercial species. From the 118 tree species that have been identified as having commercial use, only 33 species (31 natives and two exotics: subtropical pine tree and eucalyptus) have some commercial potential in the market.

Most of the exploited species are classified as 'precious' or 'first class' (Table 12.1). First class species must be processed in Mozambique prior to export, but logs of precious species can be exported without processing. The first class species, destined for local processing, carry a royalty rate that is only one-quarter of that pertaining to export logs.¹

¹ Ogle, A., and I. Nhantumbo. 2006. *Improving the Competitiveness of the Timber and Wood Sector in Mozambique*, p. ix. Maputo: USAID.

TABLE 12.1. The seven most intensively exploited species (asterisks denote classification as of 2003; in 2002 these were first class).

Commercial name	Latin name	Classification	Main uses
Pau Rosa	<i>Berchemia zeyheri</i>	Precious*	Logs (export)
Pau-preto	<i>Dalbergia melanoxylon</i>	Precious	Logs (export)
Umbila	<i>Pterocarpus angolensis</i>	Precious*	Logs (export), lumber
Mecrusse	<i>Androstachys johnsonii</i>	First class	Parquet (export), sleepers
Chanfuta	<i>Afzelia quanzensis</i>	Precious*	Logs (export), lumber
Panga-Panga	<i>Millettia stuhlmannii</i>	Precious*	Logs (export), lumber
Pau Ferro	<i>Swartzia madagascariensis</i>	Precious	Logs (export)

Source: Sun, C., L. Chen, L. Han and S. Bass. 2008. *Global Forest Product Chains: Identifying Challenges and Opportunities for China through a Global Commodity Chain Sustainability Analysis*. Winnipeg, Canada: International Institute for Sustainable Development.

Timber producers can gain access to timber resources through two main channels.

- (i) **Forest concessions.** These apply to large-scale operators. Forest concessionaires can apply for renewable forest concessions of up to 50 years. The application process varies depending on the size of the concession: concessions of up to 20,000 ha must be requested from the provincial governor; those ranging from 20,000 to 100,000 ha must be requested from the Minister of Agriculture; and those over 100,000 ha must be requested from the Ministerial Council. There are 126 concessionaires currently active in Mozambique, covering an area of 5.2 million hectares.
- (ii) **Annual simple licences.** These allow the extraction of up to 500 cubic metres of timber per annum, based on mapped areas, using simple management plans. These are approved at provincial level. The number of simple licence holders is not precisely known, but estimates suggest around 1,000 may be operating.²

Holders of forest concessions are required to install a sawmill at each concession. Under a regulation introduced in 2002 first class species cannot be exported in unprocessed, i.e. log, form.

² Nhancale, B. A., S. E. Mananze, N. F. Dista, I. Nhantumbo and D. J. Macqueen. 2009. Small and medium-sized forest enterprises in Mozambique. Small and Medium Forest Enterprise Series No. 25, Centro Terra Viva and International Institute for Environment and Development, London.

Processing. While policies encourage domestic processing of logs into sawn timber, it is in fact the case that this process often does not add value. A USAID report of 2006 remarked that ‘log exported in raw form is worth 60% more than the sawn timber’ that can be produced from it.³ The reason for this is partly that Mozambican sawmills are ‘less accurate’ in their cut tolerances than larger and more modern specialized overseas mills:

The relative value of logs versus sawn timber also reflects a number of other factors: overseas sawmills may make better use of offcuts and sawdust; doing primary processing close to the end user allows a better match of cuts to users’ needs; and import tariffs on logs [are] usually less than on sawn timber.

Ogle and Nhantumbo (2006)

The low standard of local saw-milling is in part due to the requirement that each forest concession must install its own sawmill: ‘most mills installed to meet this requirement are small, old and wasteful, use labour-intensive technology, and lack market focus’. Investment in more sophisticated processing (kiln drying, veneer, plywood, moulding, joinery and furniture) is limited.⁴

The 2006 USAID report concluded that what Mozambique needed was investors who would be able to access

markets for specialist wood products and provide the technology and capital to produce such products. Mozambique already has several of these investors in the forestry sector but it could support many more.

Ogle and Nhantumbo (2006, p. 29).

Profiles and lines of business of large firms. Among the largest operators holding forest concession are the following.

Companhia de Madeiras de Moçambique is one of the largest timber exporters; it is profiled in the next section.

TCT Industrias Florestais Lda – Mobílias Dalmann holds a forest concession, and, as Mobílias Dalmann, manufactures luxury wood furniture. It is profiled in the next section.

Moflor was established in 1964 and is a subsidiary of the Entrepósito group. It specializes in forestry management and industrial processing of wood. It holds 30,000 ha of forestry concession in Sofala province, with processing units focused on the production of sleepers for railways and poles for electricity and telecommunications networks. In 2013 it established a carpentry

³ Ogle and Nhantumbo (2006, p. 24).

⁴ Ogle and Nhantumbo (2006, pp. ix, 26).

unit in Dondo, Sofala province, dedicated to the production of wood-based construction materials including parquet, floor battens, window frames and planks. The company's main clients are domestic companies in the electricity, telecommunications, railway and construction sectors. The company also exports railway sleepers to South Africa, Swaziland, Zimbabwe and Namibia. Moflor employs about 300 workers, most of whom are hired from local communities.

Ifloma – Industrias Florestais de Manica was established in the 1980s as a state-owned enterprise with forest plantations of approximately 19,000 ha in Manica province, supplying two sawmills. Now employing about 700 workers, the company's operations include three plantations with land leased on a 50-year basis, one sawmill and one pole treatment plant at Messica, a particle board plant, and a warehouse in Maputo province.

The company is majority owned by the South African company Komati-land Forests (Pty) Ltd, which acquired 80% of the share capital of Ifloma in 2004 as part of the privatization process. The remaining 20% share is held by the government of Mozambique through the Institute for the Management of State Holdings.

Yola Mobílias, Lda was established in 2000 in Maputo by a young female entrepreneur. It specializes in the production of wood-based house and office furniture. With 90% of its raw material sourced domestically, the company was granted the stamp 'Made in Mozambique'. In the medium term, the company envisages expanding its sales to the southern Africa market.

Serful, Lda was established in 2007 with an initial capital of US\$60 million. It operates in Maputo and specializes in wood processing and the manufacture of coffins, cases, doors, windows, door and window frames, and wood-based house furniture. The company employs about 50 people.

Colosso, Lda, established in 1997, operates in Zambezia and Maputo provinces. It specializes in the production of parquet and wood contours, both for the domestic market and for export. The company operates a forestry concession in Zambezia province, where it also has a wood processing factory.

Inchope Madeiras, established in 1995 with an investment of more than US\$3 million, is based in Manica province. It exports hardwood logs, saw timber and planks to Europe, the United States and Asia.

Timberworld, Lda was established in 2005 and it has offices in Maputo and Nampula. It manufactures wood products, cork products and straw and

plaiting materials. It holds two forest concessions in Zambezia province, covering an area of 23,000 ha.

OLAM, which is profiled in Chapter 11, has held two forest concessions in Zambezia province, covering an area of 65,000 ha, since 2005. It is involved in wood processing, primarily for export to China.

Ervendas Comercial, operating in Maputo, specializes in the industrial production of parquet using various species of wood. At full capacity, the company's weekly production is about 300 square metres of parquet.

Lines of business of medium-sized and smaller firms. As noted above, there are almost 1,000 medium-sized and smaller firms that hold annual simple licences. Small and medium-sized enterprises employing no more than 50 people account for over 80% of the employment in the forest sector.⁵

Simple licence holders rarely have facilities to process logs and they therefore sell to middlemen. The middlemen, who often finance transportation (charging up to US\$40 per cubic metre), are in many cases linked to exporters, among whom Chinese agents are currently the most important group.⁶

Many individual operators working without logging licences fell trees and sell them on site to middlemen, often at between US\$2 and US\$10 per log. This group is an important supplier of logs to local carpenters, who process them using hand saws. Law enforcement in many parts of the country is ineffective in respect of such activity.

Supply and marketing chain. The domestic market absorbs about 90% of the wood sector's output according to data from the Instituto de Promoção de Exportações for 2003. Four species account for the bulk of demand, from both the construction sector and the furniture sector: Umbila (*Pterocarpus angolensis*), Jambire (*Millethia sthulmannii*), Chanfuta (*Afzelia quanzensis*) and Umbaua (*Khaya nyasica*). Wood products sold domestically include school furniture, parquet, railway sleepers, wood poles for electricity networks, panels, artisanal products and building materials. The quality of these products is often low by international standards, and most forest concession and simple licence holders choose to export logs, mainly to China and Hong Kong, rather than processed products. Much

⁵ Nhancale *et al.* (2009).

⁶ Mackenzie, C. 2006. *Forest Governance in Zambézia, Mozambique: Chinese Takeaway*. Zambézia, Mozambique: FONGZA. Bossel, A., and S. Norfolk. 2007. *Global Forest Product Chains: A Mozambican Case Study Identifying Challenges and Opportunities for China through a Wood Commodity Chain Sustainability Analysis*. Maputo, Mozambique: Terra Firma.

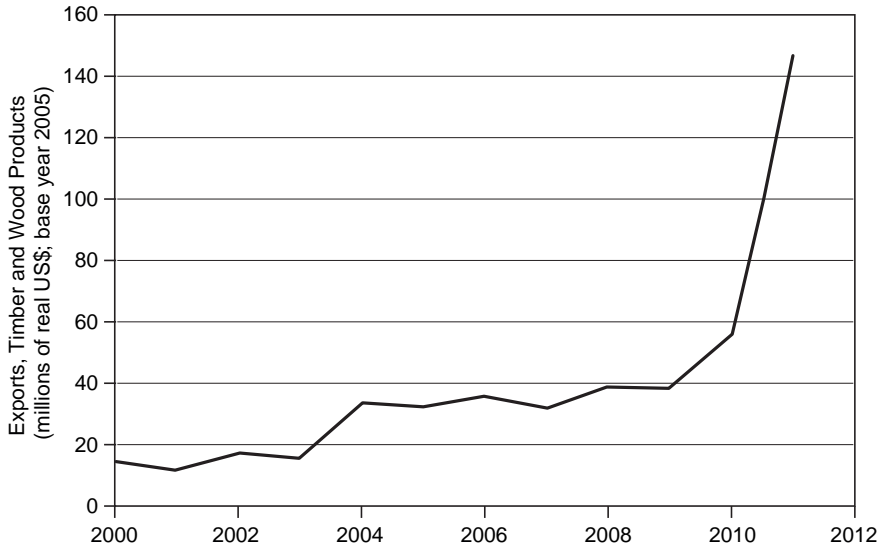


FIGURE 12.1. Exports of timber (including wood products).

of domestic demand for processed products is met from imports, mostly from South Africa and Portugal. Imports include furniture, wood poles for electricity networks and panels.

The major firms, who hold long-term concessions, operate a vertically integrated system, from logging to marketing. Medium-sized and smaller firms (mostly holders of simple licences) sell primarily to sawmills, who in turn sell directly to customers at their sites.

The major wood processors include some relatively large furniture manufacturers, who export their output. Most processing of products for the domestic market involves units with only basic carpentry equipment (e.g. lathes, multipurpose machines, parallel planes, moulding lathes, etc.).

Community carpenters are found in villages in every district. They use hand equipment to process sawn timber brought in by clients, informal operators or local simple licence holders. These enterprises produce furniture, doors, window frames, coffins, etc., which are sold locally.

Exports. The major export destinations for Mozambican timber include Hong Kong, Japan, Germany, Spain, Italy, Portugal and South Africa. However, some exports also go to West African countries (Cameroon, Ivory Coast, Ghana, Gabon and Congo), as well as to Southeast Asia (Indonesia, Malaysia and Myanmar) and to Brazil (see Figures 12.1 and 12.2).

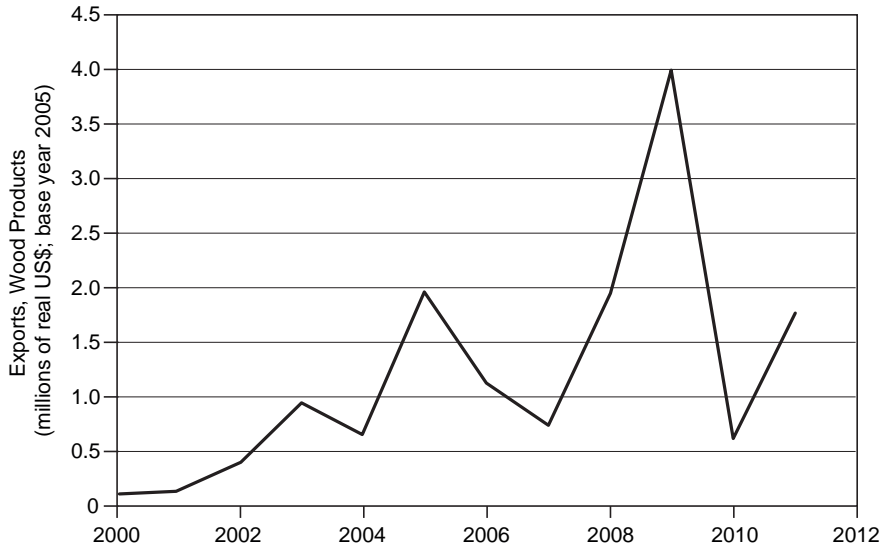


FIGURE 12.2. Exports of wood products.

Policy context. All harvesting licensees (both annual license holders and concessionaires) must pay a 15% levy in addition to royalty payments. Provincial authorities are required to have a plan for reforestation.

There is a legal requirement that local communities should benefit from concessions and should be consulted on the process of land allocation and the setting of boundaries for where forest concessions are granted. In addition, the communities should receive 20% of the royalties paid by concessionaires and licence holders.

A settled strand of policy is that there should be a reduction in the scale of operations conducted under simple licences, and there has indeed been a steady reduction in the number of simple licences issued annually: a decade ago, around 30 were issued per year, but this has now fallen to around half that number.⁷ However, 65% of licensed timber volume still comes from holders of simple licences.

A second policy objective has been to raise the proportion of processed wood in the export mix. Official statistics suggest that this proportion had risen to four-fifths by 2010.⁸ This estimate must, however, be treated

⁷ German, L. A., and S. Wertz-Kanounnikof. 2012. Sino-Mozambican relations and their implications for forests: a preliminary assessment for the case of Mozambique. Working Paper 93 (p. 27), CIFOR, Bogor, Indonesia.

⁸ German and Wertz-Kanounnikof (2012, p. 26).

with caution, as the volume of unlicensed exports, which are mostly of unprocessed logs, appears to be very substantial.

Illegal logging and timber smuggling pose one of the most serious problems in the industry. One way of estimating the scale of the problem is to compare the official export figures for Mozambique's exports of timber with other countries' import figures. For China, the two figures differ by 80% in 2012: 260,385 m³ compared with 450,000 m³.⁹

This would suggest that illegal exports of timber to China are valued at over 70% of the value of all Mozambique's official exports of timber worldwide.

Challenges. There is a serious lack of trained manpower and managerial capability. Education and training in forestry technology, entrepreneurship, business management and marketing is deficient.

Local agricultural practices lead to frequent fires and this has led to the destruction of forests, especially in young naturally regenerated stands.

Continued delays in producing improved data on the country's forest resources will allow continued unsustainable resource allocation and inappropriate harvesting quotas.

Poor infrastructure and the increasing distances travelled to obtain logs mean high and increasing landed costs at mills in major centres.

Capital markets in Mozambique are not sufficiently developed to handle the large, long-term investments that are commonly needed in the forestry sector.

There is little information on silviculture regimes, and research on forestry issues is weak.

12.2 Profiles of Major Firms

12.2.1 TCT Industrias Florestais Lda – Mobílias Dalmann

Basic details. TCT Industrias Florestais Lda – Mobílias Dalmann is a private company that operates a forest concession and, as Mobílias Dalmann, manufactures luxury wood furniture. It employs 258 people, 80 of whom work in the furniture factory, and it had a turnover of US\$1.9 million in the financial year 2010/11.

⁹ Environmental Investigation Agency. 2013. *First Class Connections: Log Smuggling, Illegal Logging and Corruption in Mozambique*.

History. The company was established in 1989 and was registered in its current form in 1995 by three owners: Graeme and James White and Filipe Franco.

The company began as a sawmill, buying logs from suppliers and producing planks for the local and South African markets. Over the last 20 years the company has grown, obtaining a forestry concession in 1997 and establishing a sawmill within the concession that manufactures furniture, wooden housing and bee hives. The firm has also set up new businesses that complement its core business: a tourism facility in the concession, a training school and a game farm.

Current activities and products. The company produces a range of high-quality domestic furniture using Mozambican hardwoods such as Panga Panga (which is available in commercial quantities only in Mozambique) and Mutondo. Each piece is made by local craftsmen using traditional techniques (mortise and tenon, frame and panel).

Supply and marketing chain. All logs are harvested from the firm's concession at Catapú but the company also buys limited quantities of planks from another company. All raw material production (based on the 'annual allowable cut') is sawn in the firm's sawmill and is mostly used for the manufacture of furniture at the firm's factory in Beira. The concession is reforested after harvesting.¹⁰

All sales are made through the company's own retail outlets situated in Beira and Maputo. Its housing and bee hives are also sold locally. Customers include private consumers, companies, NGOs, government and the diplomatic community.

Exports. Very small amounts (less than 3%) of the company's production is exported to Italy as rough sawn parquet for the manufacture of parquet floors.

Organization and management. One of the three owners (Graeme White) acts as managing director.

12.2.2 L. Duarte Dos Santos Lda

Basic details. L. Duarte dos Santos is a privately held wood products company of Portuguese origin. It has 120 employees and annual sales revenue of approximately US\$2.5 million.

¹⁰ The company is certified by the Forest Stewardship Council; as of 2009 it was one of only two firms in Mozambique to hold this certification.

History. The company was established in 1959 by a Portuguese national, L. Duarte dos Santos. It initially produced office furniture and housing. In 1962 it expanded its operations to include the installation of prefabricated houses. In 2003 it began to produce pressed wood furniture and modular kitchens.

After independence the company was nationalized and was managed by the government, under the same name. In 1991 the company was privatized and passed to its present Mozambican owner.

The company has continued to expand, acquiring new plant and equipment for plating, painting, mechanics, carpentry, mechanics, welding, plumbing and upholstery.

Current activities and products. The firm currently produces office, hospital and school furniture, modular kitchens and metal structures.

Supply and marketing chain. Wood is sourced from Nampula province. Pressed wood and accessories are imported from China and South Africa.

The company has held furniture exhibitions in various locations.

12.2.3 *Companhia de Madeiras de Moçambique (Timber Company of Mozambique)*

Basic details. Companhia de Madeiras de Moçambique is a privately held timber products company with foreign partners from South Africa. It has 37 permanent workers and 113 part-time workers.

History. The company was founded in 1947 by a group of South African businessmen, initially as one of two Mozambican subsidiaries of a South African company, Continental Timbers. With a head office in Beira, it operated concessions in Sofala and Manica provinces. The firm harvested hardwoods and contracted with local sawmills to produce timber for Continental's subsidiaries, thereby establishing itself as one of Mozambique's largest timber exporters.

With the start of the war in the late 1970s it stopped its activities, but activities were resumed in 1992. It obtained a forest concession in 1999.

In the period 1993–99 the firm's main product was railway sleepers, which it sold to mines in South Africa and to the Zimbabwe railways. In 2010–11 the company won the tender for the construction of special sleepers for the newly constructed Sena railway line.

By 2012 it was again exporting to South Africa and Zimbabwe.

The company also manufactures school desks for local communities under the company's social responsibility programme.

Supply and marketing chain. Logs are sourced from the firm's forest concession. Before the start of each year's operations, a management plan is drafted to assess the volume that can be felled each year and to arrange the planting of trees for replacement.

The export of sleepers to Zimbabwe is done by rail, while exports to South Africa go by road, in rented trucks. For domestic sales the company has its own transport fleet.

The company has obtained quality certification from the Chamber of Commerce of Mozambique.

The stages of processing wood are as follows: the timber is cut into logs, it is then taken to a sawmill, and subsequently it is transformed into sleepers for the construction of railway lines.

Timber is mainly sourced through the firm's concession in the province of Sofala and in Manica province.

Exports. Exports in 2012 were valued at US\$350,000. The main destinations were South Africa and Zimbabwe.

Organization and management. The company has a director general located in South Africa, with a representative in Mozambique who oversees administration. They are supported by a team of managers and heads of sawmills.

Challenges. Unauthorized loggers sometimes penetrate the company's concession areas.

Export costs are high, and imported equipment is very expensive.

The exploitation of timber only starts in May, but wages must be paid even when operations are inactive (between December and May).

Chapter 13

CONSTRUCTION MATERIALS

13.1 Sector Profile

Background and overview. Mozambique's construction materials industry began in the 1930s, when small-scale firms producing cement and bricks were established to serve the Portuguese settler community.

The sector flourished in the 1960s and 1970s, when many new companies entered the market.

Following independence in 1975, the government nationalized the cement, iron and steel industries and created a state-owned enterprise, *Distribuidora de Materiais de Construção*, to manage the distribution of construction materials. Much was lost during this era in terms of logistics, expertise and market intelligence, as the industry suffered an exodus of experienced operators.

The structural adjustment programme that began in 1987 led to the privatization of *Distribuidora de Materiais de Construção*, *Cometal* and *Forjadora* in 1993, and of the cement company *Cimentos de Moçambique* in 1994.

Mozambique's recent economic growth has created new opportunities in the construction and building materials industries. Demand is rising, driven by rural–urban migration and the emergence of an urban middle class. Meanwhile, the country has been experiencing rapid growth in heavy construction works (railways, highways, airports, ports, dams, production plants, etc.), and there have been various major projects in the natural resources sector (gas, coal, heavy sands). With its value-added growth averaging close to 11% a year in the period 1992–2012, the construction sector's contribution to GDP is currently just over 3% (see Figures 13.1 and 13.2). The remarkably high growth rates observed in the period 1994–99 reflect postwar reconstruction works; high growth rates have been maintained since 2000 and this is expected to continue, in part because of major new projects in the offshore gas industry.

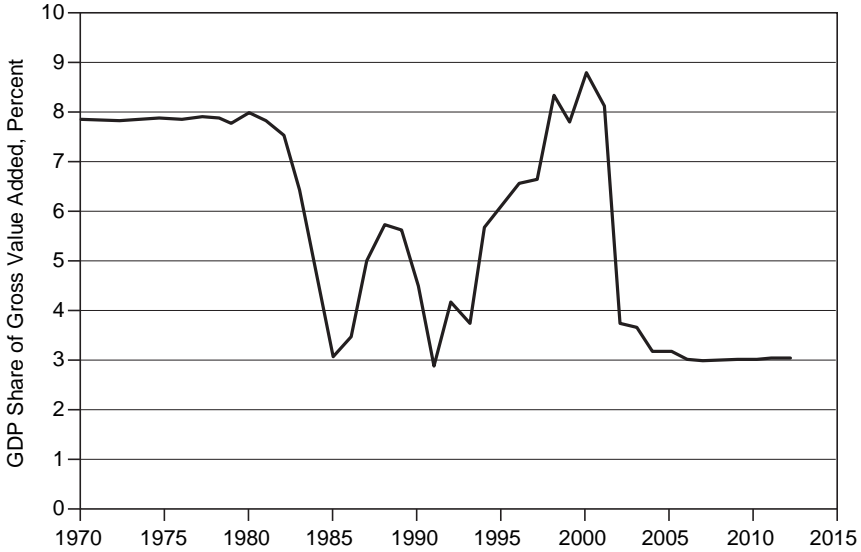


FIGURE 13.1. The construction sector's value added as a share of GDP. (Source: United Nations.)

Despite the construction boom, the building materials industry (cement, iron and glass) grew by only 2% a year on average in the period 2005–12.

There is a sharp divide in the building materials industry between the larger, mostly foreign owned, firms and the medium-sized domestic companies. The former enjoy the advantages of business links to foreign investors and markets. Domestic firms suffer from a range of weaknesses, including weak credibility and a poor track record, lack of certification, limited access to credit, lack of qualified manpower and limited use of modern technology.¹ This has led to an overall failure of the domestic industry to meet the growing demand from the construction sector. To fill the supply gap contractors must rely on imports, which in the case of cement represent about 20% of total domestic consumption.

Figure 13.4 illustrates that the prices of basic metal products and intermediate goods (which include a wide range of construction materials) have been declining over the past two years.

¹ Associação Nacional das Empresas Metalúrgicas e Metalomecânicas (ANEMM). 2000. *Sectores de Destino da Produção da Metalurgia e Electromecânica: Moçambique*, Volume II. Lisbon: ANEMM. Associação Industrial de Moçambique (AIMO). 2010. *Competitividade Industrial em Moçambique: A Contribuição da AIMO*. Maputo: AIMO.

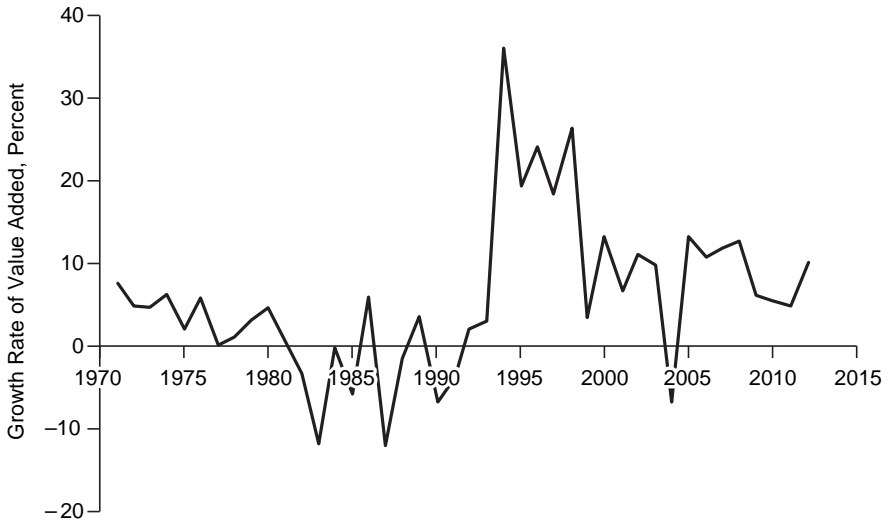


FIGURE 13.2. Growth rate of Mozambique's construction sector value added. (Source: United Nations.)

Profiles and lines of business of large and medium-sized firms.

Sulbrita, a subsidiary of CMC, the Italian multinational, employs 480 full-time workers in the production of concrete and asphalt. It is profiled in the next section.

BLITZ LM Lda, established in 1997 and based in Boane in Maputo province, produces concrete products, including paving stones, construction blocks, tiles, drainage channels and bridge parapets. Some 90% of BLITZ's output is certified by the Mozambique Engineering Laboratory.

Tijoleira de Moçambique, operating in Namaacha in Maputo province, specializes in the production of bricks from rhyolite plaque. It exports about 400 tonnes of bricks a month to South Africa. The company often operates below capacity as its suppliers of rhyolite plaques are small artisanal companies, which are often unable to supply its requirements.

Metalia Moçambique, Lda, a subsidiary of the Spanish Metalia Group, specializes in the design and assembly of metal structures including industrial warehouse roofing, metallic moulds for preformed concrete, excavator buckets and related products.

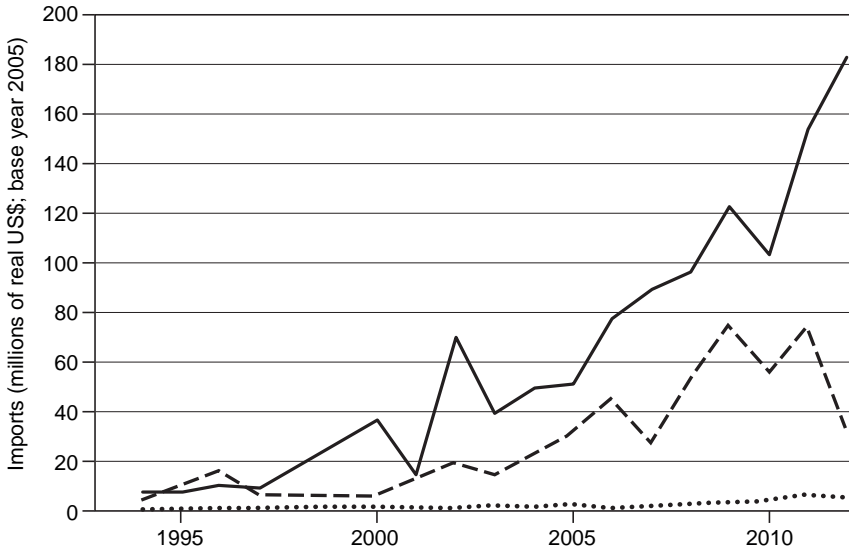


FIGURE 13.3. Mozambique's imports of construction materials (solid line, iron and steel; dashed line, cement; dotted line, glass). (Source: UN Comtrade.)

Berry Juice Construction is a Mozambican company established in 2004. It was initially established in Vilanculos in Inhambane province, but it has relocated its head office to Tete province, where two large multinationals are involved in coal mining. The company produces blocks, bricks and paving stones as well as providing general services to construction companies.

Ollava, based in Sofala province, manufactures paving blocks, building blocks, precast wall panels, retaining wall blocks, kerb stones, palisade fencing and concrete floor tiles.

Mozrih Metais, Lda, founded in 1997, is based in Maputo. It manufactures zinc roofing plate, tiles, paving stones and concrete blocks.

Lusalite de Mocambique is based in Sofala province and specializes in the production of roofing plates from fibre cement (locally known as 'lusalite').

Matola Block Yard, based in Matola, specializes in the production of concrete blocks.

Supply and marketing chain. Some 60% of the inputs used by the producers of building materials and by the heavy construction companies are

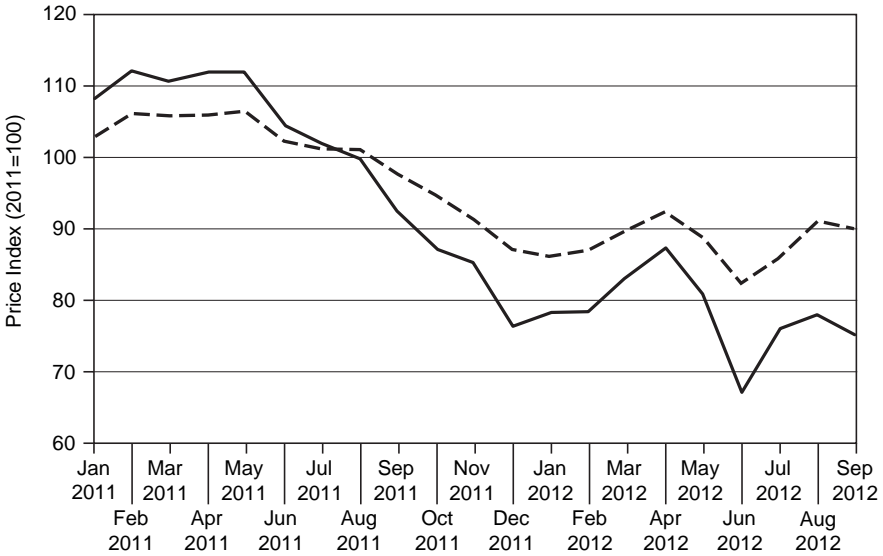


FIGURE 13.4. Prices of building materials (January 2011–September 2012) (solid line, metal products; dashed line, intermediate goods).

imported.² A survey of 30 building materials companies and contractors conducted in 2012 revealed that about 35% of companies sourcing from abroad do so because they believe that the materials are not available locally, while 45% do so because prices of imported materials are below those in the domestic market. Among the reasons cited by contractors for using foreign suppliers were domestic suppliers fail to deliver on time (10% of companies) and provide low-quality materials (10% of companies).³

Cement is sourced from domestic producers and importers, but the share of imports is declining. Due to the entry in 2011 of a new company, Cimento Nacional, with a production capacity of 250,000 tonnes per year, and the expansion by 400,000 tonnes of the annual production of Cimentos de Moçambique, by the end of March 2012 only about 20% of cement consumption was imported. The expected startup of five new cement plants in 2014 should reduce the level of imports still further.⁴

² ANEMM (2000).

³ Nhabinde, V., C. P. Marrengula and A. Ubisse. 2012. The challenges and the way forward for the construction industry in Mozambique. Working Paper, International Growth Centre Mozambique.

⁴ República de Moçambique. 2013. *Plano Económico e Social para 2014*. Maputo: Government of Mozambique.

Hollow blocks are produced in various places around the country, by both small and medium-sized enterprises. Almost all large construction companies produce their own supplies.

Traders in construction materials sell both to construction firms and to wholesalers and retailers. In some cases they also offer logistics, business brokering, storage and distribution services. Major companies include the Hariche Group, Mukoqe Construction and SOMOFER.

Mozambican companies typically have to go through three steps to import raw materials:

- (i) hire an import broker to start the import process;
- (i) pay import duties; and
- (i) clear the imported material at customs and deliver to the factory.

This lengthy process adds to their costs.⁵

Policy context. The government has established various policies and programmes (such as the Política e Estratégia de Habitação and the Estratégia e Plano de Acção para Aplicação e Disseminação dos Materiais e Sistemas Construtivos Alternativos), and a regulatory framework to boost the construction industry.

Some 62% of the companies surveyed by AIMO in 2010 (including producers of building materials such as cement as well as heavy construction firms) had not made any major acquisitions of new technology since the 1990s. With their machinery being more than 20 years old, it is often difficult to maintain it, and to replace spare parts. There are several reasons for the reported situation: 42% of the surveyed companies complained about the lack of finance and the costs of acquiring new technology, while 17% reported that their inability to access skilled labour was the main constraint. Others pointed to their inability to compete in the market (14%), to a lack of support services (11%), to information gaps about new technologies (9%), and to import procedure constraints (6%). Only one company reported that it had easy access to new technology, and this was due to its ties with a foreign investor.⁶

Delays in reimbursement of VAT (which is charged at a uniform rate of 17% in all the relevant sectors, including in construction and building materials) lead to problems with cash flow. Though not specific to construction firms, in practice delays in VAT reimbursements are perceived as hidden taxation and often reduce the capacity of medium-sized indigenous companies to compete with foreign companies.

⁵ ANEMM (2000).

⁶ AIMO (2010).

13.2 Profiles of Major Firms

13.2.1 Hariche Group Ltd

Basic details. The Hariche Group manufactures a range of building products. It has about 200 employees and its annual sales revenue is about US\$26 million.

History. The company was established as Hariche Steel International by Hariche Arquissandas in 2000, and it initially manufactured steel roofing sheets. The company has since diversified into a number of other areas, initially by forming new firms under the sole ownership of the founder: Super Distribudor, Sol Distribudor, Inso Aluminium, Hariche Cash & Carry and Hariche Glass. In 2009 these firms were brought together as the Hariche Group by Hariche Arquissandas and Cremilda Maganlal.

Current activities and products. The Hariche Group has nine divisions whose activities span manufacturing, commerce and services. Its manufacturing divisions are Hariche Steel, Hariche Tubos (meaning Hariche Pipes), which was founded in 2010, and Hariche Cozinhas (meaning Hariche Kitchens), which was founded in 2012. Its steel products include roofing sheets, pipes, lip channels and section bars. It also manufactures cover plates for domestic light switches. Its most recent manufacturing venture, Hariche Cozinhas, makes modular kitchen and wood furniture. The group is also a leading importer and distributor of aluminium structures, glass, door fittings, consumer products, beauty products and cleaning products.

Supply and marketing chain. Steel is sourced from South Africa, China, Turkey and India. Products are sold direct from the factory, to both wholesale and retail customers.

Recent developments. The Hariche Group is currently planning a new manufacturing venture in plastic pipes. It also plans to extend its range of steel products to include gutters and related fixtures.

13.2.2 Sulbrita Lda

Basic details. Sulbrita Lda produces construction blocks and paving blocks. It has 480 full-time workers and an annual turnover of about US\$24 million.

History. Sulbrita is a wholly owned subsidiary of CMC Africa Austral Lda, a Mozambique-registered company that was set up by the Italian multinational CMC in 1982 when it was engaged in work on the dam at Pequenos Libombos.⁷

Current activities and products. Sulbrita was set up in 1996 to provide construction blocks and paving blocks to CMC. It subsequently began to supply materials to other (mainly state-owned) companies.

Sulbrita currently produces precast building materials, including construction blocks and paving blocks.

Its main market is in the southern part of the country, but it also operates in Niassa, Cabo Delgado and Nampula (where it supplies concrete for the Nacala corridor), and in Sofala and Maputo, where it supplies CMC.

Firm capabilities. CMC Africa Austral Lda has ISO 9001 certification, and this also applies to Sulbrita. Sulbrita is now working to obtain certification by the South African Bureau of Standards.

Supply and marketing chain. Sulbrita sources its main inputs (stone and cement) from suppliers within Mozambique. It imports bitumen for asphalt and some special additives.

Development agenda. CMC Africa Austral has an annual investment plan for the replacement of equipment that amounts to 6–8% of its annual budget. It is currently considering investments in concrete plants and crushing plants for Sulbrita.

It is the intention of Sulbrita's human relations policy to gradually replace expatriates with Mozambican staff. The firm offers scholarships to assist the process of recruitment of qualified local employees.

⁷ CMC Africa Austral Lda was initially founded as part of Italian external assistance to Mozambique in the postwar period, but it was later commercialized with funding from the World Bank and the International Monetary Fund. CMC Africa Austral Lda is now Mozambique's largest civil contractor, employing more than 3,000 people. It is active in a number of sub-Saharan countries: Swaziland, South Africa, Malawi, Angola and Lesotho. CMC holds a 99% share in CMC Africa Austral.

Chapter 14

CEMENT

14.1 Sector Profile

Background and overview. There are currently four cement firms in operation in Mozambique, one of which, Cimentos de Moçambique, accounts for three-quarters of total sales. Cimentos de Moçambique operates three factories, which were the earliest to be constructed in the country.

The first cement factory in Mozambique was set up in 1923 in Matola, by German investors, with an annual production capacity of 30,000 tonnes. In 1944 Antonio Champalimaund purchased the Matola Cement Company from the Banco Nacional Ultramarino, a Portuguese bank that had extensive interests throughout Portuguese colonies. In 1951 the Matola company set up a second plant at Dondo in Sofala province with a capacity of 100,000 tonnes per annum. In 1955 the company's annual production capacity increased to 140,000 tonnes thanks to an extension of the Matola plant. In 1963 a third plant was set up at Nacala, with a capacity of 90,000 tonnes per annum.¹ With the development of the Cahora Bassa dam between 1973 and 1974, two new production lines were set up in Dondo and Matola with capacities of 300,000 and 600,000 tonnes per annum, respectively.

After independence, in 1979, the Mozambican government nationalized the three factories and formed Cimentos de Moçambique as the new state-owned producer, with an overall inherited capacity of 790,000 tonnes per annum (400,000 tonnes from the Matola factory, 300,000 tonnes at Dondo and 90,000 tonnes from Nacala).

In 1994 a majority 51% stake in the three factories at Matola, Dondo and Nacala was sold to Cimentos de Portugal (CIMPOR), with the state retaining 48% and Caminhos de Ferro de Moçambique holding 1%. Cimentos de Moçambique was controlled until 2012 by CIMPOR, which by then held an 82% stake. The state-owned enterprises Portos e Caminhos de Ferro

¹ Clarence-Smith, W. G. 1985. *The Third Portuguese Empire, 1825–1975: A Study in Economic Imperialism*. Manchester University Press.

and Empresa Moçambicana de Seguros held the remaining 18%. In 2012 CIMPOR sold 51% of the company to Camargo Correia of Brazil.

Apart from Cimentos de Moçambique, there are three other producers now operating, each with a single factory: Cimentos de Nacala, Sunera Ltd and Cimento Nacional Lda.

Total industry capacity is already in excess of domestic consumption, but operational problems and production interruptions limit supply. Imported cement accounts for about a quarter of domestic sales.

Mozambique has abundant deposits of limestone, but the logistical challenges of mining much of the deposits have limited the supply of clinker to domestic cement makers. Over 3 million tonnes of clinker was imported during the period 2005–12.²

Profiles and lines of business of large firms.

Cimentos de Moçambique, the industry's leading producer, operates plants at Matola, Dondo and Nacala. It is profiled in the next section.

Cimento Nacional Ltd operates a plant with a capacity of 250,000 tonnes a year in Matola. It is profiled in the next section.

Cimentos de Nacala (CINAC), incorporated in 2005 and based in the port city of Nacala in Nampula province (where it has its own limestone quarries), operates a cement mill with an installed capacity of 350,000 tonnes per year. It was acquired in 2009, following a period in which it was not operational, by the Mozambican company Insitec Investments, whose main interests are in the heavy construction business. In 2010 Insitec sold a 51% stake in CINAC to the Brazilian cement producer Camargo Correa Cimentos, which had acquired a stake in the Portuguese cement producer CIMPOR, the owner of Cimentos de Moçambique, a year earlier. In September 2010 the 51% stake that had been sold by Insitec to Camargo Correa Cimentos was acquired by CIMPOR. In March 2011 CINAC became a subsidiary of Cimentos de Moçambique.

Sunera Cement Ltd is a private company that is engaged in blending Portland cement with various additives to produce a cement that has good properties in regard to workability, resistance to acid erosion and environmental advantages. Located in the Boane district of Maputo province, it has an installed capacity of 127,500 tonnes a year.

² *CemWeek*. 2013. Mozambique: the rough diamond of south-eastern Africa. *CemWeek*, June/July.

Supply chain. Each factory sources limestone from its own local area.

Cimentos de Moçambique sells throughout all regions of the country. Each of the other companies sells only within its local area. Cement is bagged at the plant and is transported primarily by truck, though some is now being transported by rail.

Exports. Prior to independence, cement firms exported part of their production to Swaziland, Southern Rhodesia (Zimbabwe), Malawi, Madagascar, Comoros and South Africa. These export markets have never been recovered, though, and exports are negligible.

Challenges. Transport costs are high and the logistics of transport are difficult. An interruption to production at a single factory can lead to major shortages and price rises in the local area.

Recent developments. Nine new cement factories are being planned or are under construction, and all are expected to become operational by 2015. These include projects by three Chinese companies.³

- The Africa Great Wall Cement Manufacturer plans to operate a plant at Magude with a capacity of 500,000 tonnes per annum.
- The China International Fund is already constructing a plant near Salamanga, south of Maputo.
- GS Cimento plans to build a plant with an annual capacity of 550,000 tonnes at Boane Industrial Park, beside the Mozal aluminium plant.

Other planned investments include one by the South African cement firm Pretoria Portland Cement.

14.2 Profiles of Major Firms

14.2.1 *Cimentos de Moçambique*

Basic details. Cimentos de Moçambique is Mozambique's leading cement producer. It employs 2,000 people and in 2013 it had an annual turnover of US\$167 million.

³ A fourth Chinese firm has been reported to be planning a new cement factory at Cheringoma district, Sofala.

History. The company's origins can be traced to the construction of the country's first cement plant in Matola in 1920. After independence in 1979, the three cement factories then in operation were nationalized as Cimentos de Moçambique. The company was privatized in 1994, with a majority 51% stake going to the Portuguese cement producer CIMPOR. In late 2012 the Brazilian cement producer InterCement Group took over the shares held by CIMPOR, which by then held an 81.6% stake. InterCement is owned by Camargo Corrêa SA, which owned shares in the Argentinian cement company Loma Negra prior to its acquisition of CIMPOR.

Current activities and products. Cimentos de Moçambique operates five plants: two at Matola, two at Dondo and one at Nacala. With the second plant at Dondo becoming operational in August 2013, the company's total installed capacity is 2.5 million tonnes of Portland cement (of types 32.5 and 42.5) per year. The Matola and Nacala plants use a semi-wet method, while the Dondo plant uses a wet process.

Cimentos de Moçambique produces, through its subsidiary Cimbetão, 420,000 m³ of concrete annually, supplying from eight depots across the country.

Supply and marketing chain. Cimentos de Moçambique sources limestone from its own quarries, from which it produces 400,000 tonnes of clinker annually. To supply its operations in Dondo and Nacala it imports 500,000 tonnes of clinker annually. The cement is sold FOB from its factories. Since mid 2011 it has also used a hired fleet of trucks to distribute cement to retailers in an attempt to minimize sales (at inflated prices) by intermediaries.

Organization and management. The majority of board members, including the CEO, are appointed by the main shareholder, InterCement. The plants in Matola, Dondo and Nacala are operationally independent but they are overseen by the board.

Recent developments. It was reported in 2013 that Cimentos de Moçambique planned to extend its capacity to 1 million tonnes per year in the near future.⁴

⁴ *Macauhub*. 2011. Mozambique to produce 4 million tonnes of cement as of 2013. *Macauhub*, 4 April.

14.2.2 Cimento Nacional Lda

Basic details. Cimento Nacional Lda was registered in August 2010. It began by importing, and commenced production in the following year (October 2011) in the Beluluane Industrial Park.⁵ The plant has 130 workers and an installed capacity of 250,000 tonnes per annum.

History. The plant is owned by CNC Trading DMCC and by a Turkish investor. CNC Trading DMCC was established by Pakistani and Jordanian investors in Dubai in 2008. CNC Trading DMCC has extensive international interests in the mining, production and trading of coal and cement, especially in the Middle East, Pakistan and Africa. It also has interests in the international trading of metals, pulses and grains, and fertilizers. CNC maintains a network of professional staff located in various African countries.

Current activities and products. Cimento Nacional currently imports a supply of inputs from Dubai that are sufficient to maintain a level of production of 20,000 tonnes of cement per month.

Supply and marketing chain. Cimentos Nacional imports limestone, gypsum and clinker from various countries, including from the Middle East, and sources fly ash from South Africa. It is located in Beluluane Industrial Park, which enjoys relatively good air, sea and road transport links.

Organization and management. Factory operations are controlled by the CEO, who is assisted by managers for operations, production, finance, sales, legal and human relations.

⁵ The Beluluane Industrial Park is an industrial zone and a duty free area located 16 km from Maputo. It was established by Mozambique's Investment Promotion Centre and by Chiefton (Moçambique), a subsidiary of the Australian property development and management group Chiefton Management Pty Ltd. The government offers various incentives, including reduced customs duties on imported raw materials, to firms operating in the park (see Chapter 16).

Chapter 15

CONSTRUCTION

15.1 Sector Profile

Background and overview. It was in the 1930s that the first small-scale firms producing cement and bricks were set up to service a small colonial community. Using a series of 'promotion plans', Portugal introduced measures to build the first generation of local commercial ventures and encourage entrepreneurs. By 1975, Mozambique was the eighth industrial power in Africa with a relatively diversified industrial base.¹

Following independence in 1975, the government nationalized the cement, iron and steel industries. It also created state-owned companies in civil and heavy construction under the auspices of the Ministry of Public Works. In 1977 the government announced the nationalization of the house-building market.

Since the end of the civil war in 1992, Mozambique has spent billions of dollars building and repairing roads, enlarging harbours and rehabilitating railways. Commercial and residential real-estate construction has grown in response to rural-urban migration combined with the emergence of a middle class in urban areas. Mozambique is also experiencing growing demand for heavy construction works in railways, roads, airports, ports, dams and production plants. The country's housing deficit is estimated to be some 2.5 million units.

Figure 15.1 shows the growth rates of GDP and the contribution of the construction industry.

Contractors are registered and licensed for public works contracts of different categories on the basis of a minimum capital requirement. Table 15.1 shows the capital requirement for Class 1 (licensed to work on contracts of value not exceeding 350,000 meticaïs) up to Class 7 (the class licensed to work on contracts of value exceeding 50 million meticaïs).

¹ Biggs, T., J. Nasir and R. Fisman. 1999. Structure and performance of manufacturing in Mozambique. Working Paper 107, Regional Program on Enterprise Development.

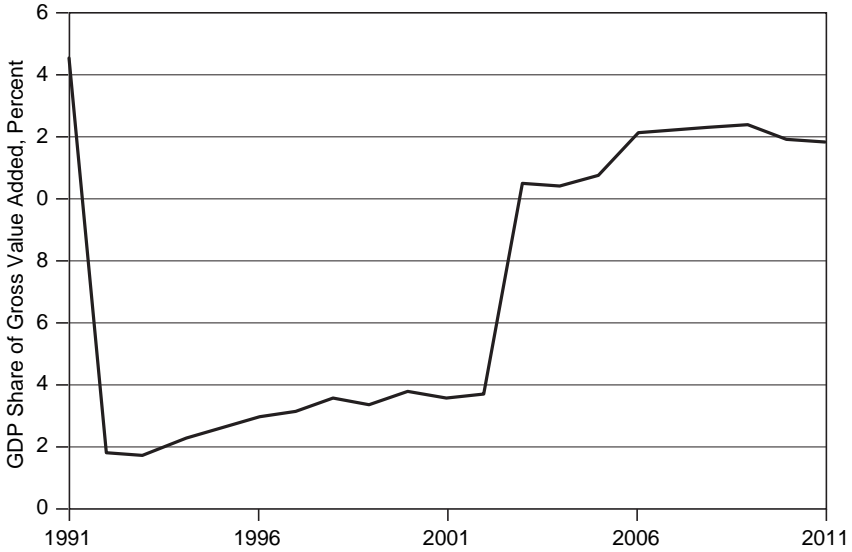


FIGURE 15.1. The construction industry's contribution to GDP
(Source: Instituto Nacional de Estatística.)

TABLE 15.1. Minimum capital requirement by value of (public-sector) contract.

Class	Maximum value of each work (thousands of meticaís)	Minimum company capital (thousands of meticaís)
1	350	20
2	850	50
3	2,500	150
4	5,000	500
5	15,000	1,500
6	50,000	5,000
7	Over 50,000	10,000

Major construction services are generally undertaken by foreign construction firms, and in particular by South African, Chinese and Portuguese companies.² Lopes (2006) reported the existence of 270 Mozambican

² AIMO (2010). ANEMM (2000). Lopes, M. 2006. *Os Empresários da Construção Civil e as Relações de Trabalho: Estratégias e Desafios, 1991–2004*. Maputo: Faculdade de Economia, UEM.

contractors, only 5% of which are able to bid for construction projects requiring high project finance.

Related activities.

Equipment rentals. The hire of construction machinery is now growing in importance.

Local builders and contractors. There are many small local building firms that lie outside the official classification scheme that are engaged in small-scale construction activities such as house extension and maintenance works, or in some cases house building.

Supply and marketing chain. Cement is sourced from domestic producers (see Chapter 14). Hollow blocks are produced in various parts of the country by both small- and medium-sized enterprises. Almost all large construction companies produce their own supplies.

Some metal inputs and finishing materials such as doors and windows, aluminium products, glass, paints, sanitary and electrical products are produced domestically, but most are imported. The larger construction companies have well-established contacts with both domestic and foreign suppliers.

Policy context. The government has established policies, programmes and a regulatory framework to boost the construction industry. These include the Política e Estratégia de Habitação and the Estratégia e Plano de Acção para Aplicação e Disseminação dos Materiais e Sistemas Construtivos Alternativos.

The main policy challenge in the construction sector is to facilitate the development of greater capabilities by domestic firms, so that they can play a bigger role in large-scale public-sector contracts.

Challenges. The development of the offshore gas industry offers major opportunities, in principle, for the development of indigenous SMEs in the construction sector. While the first major beneficiary of offshore gas development is the construction sector, serious problems can arise if the local construction industry is not well placed to respond to a sudden and substantial rise in demand. Costs and prices may rise sharply, and employment creation may be disappointing. It is against this background that attempts to encourage the rapid development of indigenous SMEs in the construction sector must be judged.

The challenges to the development of indigenous SMEs are considerable. Local firms can advance in two ways. The first route is to work towards

achieving formal certification. Here, the response to current schemes supported by donors is not encouraging: a 2010 report by AIMO³ found that only 10% of SMEs in the construction sector were willing to go through a certification process for management practices. The second way forward lies in building up a track record from successful contracts undertaken. While most SMEs develop their capabilities by acting as subcontractors to large firms on major construction contracts, the initial hurdle involved in breaking into such a subcontracting role is considerable, and many local SMEs are therefore trapped in a pattern of business that confines their activities to small projects.⁴

The tendering process for public construction projects requires open tendering on all projects whose value exceeds 3.5 million MT (US\$110,000). However, no tendering is required for small projects with a value below 175,000 MT (US\$55,000), while projects of intermediate size are allowed to proceed with a limited tender.

Domestic bidders are positively favoured on smaller public-sector contracts, through the use of restrictions on foreign participation and the application of a domestic-bidder preference margin of up to 15%.⁵

In a recent report by the International Growth Centre,⁶ it was proposed that the government could help local firms to develop greater capabilities in the following ways.

- (1) By establishing a forum for discussing the introduction of reforms on land rights (acquiring a plot for construction is currently a complex process involving 17 steps).
- (2) By reforming procurement policies to
 - (a) speed up payments to contractors (local contractors are placed at a relative disadvantage by slow payments, as they have smaller cash reserves),
 - (b) introduce mandatory requirements for the use of local firms as subcontractors (by participating as subcontractors in major projects, local firms extend their range of expertise).

³ AIMO (2010).

⁴ Nhabinde, V., C. P. Marrengula and A. Ubisse. 2012. The challenges and the way forward for the construction industry in Mozambique. Working Paper, International Growth Centre Mozambique.

⁵ Nyagah, N. 2013. Opportunities for construction companies in Mozambique. Research Analysis, Frontier Market Network (available at www.frontiermarketnetwork.com/article/3933-opportunities-for-construction-companies-in-mozambique#.UzsVWvldVtY).

⁶ Nhabinde *et al.* (2012).

(3) By improving vocational and technical training (the scarcity of individuals with appropriate technical skills is a major problem that is more acute for smaller domestic firms).

(4) By simplifying procedures for importing raw materials (local firms have fewer resources to devote to the long and difficult procedures involved in importing raw materials).

The authors also address the problems faced by local firms in raising finance, and point out that this requires not only reforms in the financial sector but also improvements in the management practices and corporate governance of local construction companies.

15.2 Profiles of Major Firms

15.2.1 *Mota Engil SARL – Delegation of Mozambique (EMOCIL)*

Basic details. The Portuguese multinational group Mota Engil, together with its local subsidiary EMOCIL (Empresa Moçambicana de Construção Civil), had a combined annual turnover of about US\$130 million in 2012. The companies have a combined workforce of 1,200 people.

History. Mota Engil has been active in Mozambique for 60 years. Based in Portugal, it has offices in 19 countries in Europe, Africa and Latin America.

The Mozambican division of Mota Engil currently has 800 workers, while EMOCIL has 400. Of this total of 1,200 workers, 90 are foreigners.

EMOCIL was established in 1991 by Mota Engil with capital from Mota Engil and Eng Edgar Ribeiro. It is currently 100% owned by Mota Engil.

Current activities and products. Mota Engil SARL – Delegation of Mozambique has worked on large contracts since its arrival in Mozambique in 1992. After the General Peace Agreement in 1992 it continued to undertake major works, including the bridge over the Zambezi River at Caia, and the Olympic Village and Olympic Pool in the Zimpeto district, near Maputo. It currently has several major projects: the second bridge over the Zambezi in Tete, the Sena railroad, and four large sections of road in the north of the country. It had a turnover of US\$121 million in 2012.

EMOCIL has been active in constructing schools, hospitals, health centres and local government buildings. In the private sector it has been particularly active in the banking sector. The company had a turnover of US\$9 million in 2012.

Supply and marketing chain. Mota Engil sources about 65% of its raw materials from within Mozambique. EMOCIL has a somewhat lower percentage of domestic sourcing.

The firms' imports are guaranteed by a company owned by the Mota Engil group, which is based in South Africa, and this eases procurement problems.

The companies follow safety and quality standards set by Mota Engil, which is certified in

- management of human resources, health and safety,
- environmental impact, and
- quality control and production.

Its certifications include NP EN ISO 9001:2008, NP EN ISO 14001:2004 and NP EN ISO 17025:2005

15.2.2 CETA – Construção e Serviços SA

Basic details. CETA employs about 2,600 people, 306 of whom are full time. Turnover in 2012 was about US\$60 million.

History. In 1975 and 1976 a number of Portuguese companies operating in the field of civil construction and public works were nationalized and became part of Empresa de Construção e Manutenção de Estradas e Pontes (Construction and Maintenance of Roads and Bridges Company) under the auspices of the Ministry of Public Works and Housing. In 1979 the ministry decided to create a state company that brought together seven of these units, and so in August 1980 CETA was formed. In that year it had a turnover of US\$60 million, deriving from works of rehabilitation on arterial roads to Malawi and Zimbabwe. Under the Economic Rehabilitation Plan of 1989, the ministry intended to privatize CETA, which at the time had 5,000 permanent employees.

The company was evaluated by an external consultant and put out to tender. Only in 1999 did the state sell CETA, when a 49% stake was purchased by Mozambique Investment Company (a financial institution with foreign capital), with 51% held by management and employees. CETA's turnover for that year was US\$10 million, thanks to the Roads and Coastal Shipping project funded by the World Bank for road rehabilitation. In 2005 the workers acquired the 49% stake of the Mozambique Investment Company.

By 2009 CETA had a turnover US\$59 million, with major contracts from Mozal, the Sasol pipeline and the Brazilian mining company VALE and

Riverside Mining (now owned by Rio Tinto) in Tete. In May 2011 CETA was acquired by a company that was 100% Mozambican owned: Insitec.

Current activities and products. CETA operates across Mozambique but is most active in the northern regions, with half of its activity concentrated in Tete and Cabo Delgado. Its activities include major public contracts, buildings, roads, concrete and steel structures, water supply, sanitation and drainage.

Firm capabilities. CETA has its own laboratories to test aggregates and steel; the labs are certified by the Engineering Laboratory of Mozambique. In some cases, tests are also carried out by a laboratory in South Africa.

Supply and marketing chain. Aggregates and cement are sourced domestically. When no concrete is available from Mozambique Cement, CETA produces concrete on its construction sites.

Other inputs are imported from South Africa, China, India and Pakistan.

Organization and management. The director general oversees the technical directorate, the commercial administrative and financial department, and the operations divisions. The operations division accounts for about 90% of all staff, including those involved in the operation and maintenance of equipment.

15.2.3 Conduril, Engenharia SA/ENOP – Engenharia e Obras Públicas Lda

Basic details. Conduril, Engenharia SA and its sister company ENOP – Engenharia e Obras Públicas Lda employ approximately 400 people between them each year, only 35 of whom are permanent employees. The companies' combined 2011 turnover was US\$45 million.

History. Conduril, Engenharia SA was established in Portugal in 1959 and became a public limited company in the 1970s. It owns companies in Portugal, Spain, Morocco, Cape Verde, Angola and Botswana. It set up a company in Mozambique, Conduril SA, in May 1998. In the same year, Conduril SA Portugal acquired ENOP, a construction company, from the Mozambican state.

Conduril now owns 85% of ENOP, with 15% belonging to the Mozambican state through the Ministry of Agriculture.

Current activities and products. The two companies complement each other in the public works market, with ENOP focused on hydraulic infrastructure, including drainage and irrigation works, and Conduril focused on roads and bridges.

The company provides technical knowhow for Conduril in other countries, including Botswana.

ENOP owns sand and gravel quarries in Chokwe.

Firm capabilities. Conduril is certified by quality standards that apply to public works companies including APCER ISU 1 4001, ISU 9001 and IGET, with annual audits by a European auditor. It has its own laboratories for testing the quality of its water, cement and aggregates and it uses the Mozambique Engineering Laboratory to test steel and hydraulic cements.

Organization and management. The two companies are run by general managers and technical managers, heads of administration and finance and a local director for each work site.

15.2.4 Electrotec SA (Intelec Holdings Group)

Basic details. Electrotec SA operates in the construction of energy systems. Its turnover in 2011 was US\$11 million. It has a core staff of 100 employees.

History. The company was established in 1997 by the Intelec Holdings Group, a private investment company, to operate in construction and management of infrastructure for electricity distribution. The Intelec group initially held a 100% stake, but in 2007 Visaberia (another company in the Intelec group) acquired 49% of the holding.

Current activities and products. The company continues with major works in the extension of the electricity grid across the country. It has current projects in Niassa, Cabo Delgado, Zambezia, Sofala, Inhambane and Maputo.

Firm capabilities. Intelec is ISO 9001:2008 certified.

Organization and management. Electrotec is a limited company with a board of five members appointed by Intelec and Visabeira: the director general, a technical director, a director of logistics, and an administrative and financial director.

Challenges. Electrotec has a contract for the construction and management of a gas power generator in Ressano Garcia in partnership with the state-owned electricity generating company EDM.

15.2.5 *Construtores Chemane Lda*

Basic details. Construtores Chemane Lda is a family business owned by Justino Chemane. It currently has 250 permanent employees and 500 part-time employees. Its total turnover for the financial year 2011 was approximately US\$4 million. The company is involved in civil construction, public works, industrial construction and road construction, as well as the manufacture of building materials and water boreholes. It has a Grade 7 registered license from the Ministry of Public Works and Housing.

History. Construtores Chemane was registered in 1987 by its current owner. The company emerged from the Economic Recovery Programme through which the government gave incentives for opening new businesses.

The company was at first involved in the rehabilitation of buildings managed by the state. At that time it was difficult to source cement and paints.

Following the end of the war in 1992, the state began to launch tenders for public works, schools, hospitals and roads, under the Ministry of Public Works. Cimentos de Moçambique established a partnership with CIMPOR (Portugal) and the supply of construction materials began to improve. It also began to get easier to source construction materials via Dubai.

With the arrival of Mozal in 2000, the business expanded to reach a sales peak of US\$40 million. The company became a subcontractor on various works: buildings, parks and streets.

Construtores Chemane also participated in industrial projects, including the construction, maintenance and expansion of Mozal's aluminium smelter. It also participated in the assembly, disassembly and installation of shipyards, warehouses and bridges.

Construtores Chemane is currently involved in the maintenance and upgrading of roads, the construction of bridges, water ducts and drainage systems.

It is also active in the sale of construction materials for woodwork, metalwork and pavements.

Supply and marketing chain. Most raw material is domestically sourced. The company imports cast iron from South Africa and finishing materials from South Africa and Portugal.

Organization and management. The founder is the current director general. He oversees four divisions: technical, production, health and safety, and administration (including finance and human relations).

Chapter 16

METALS, ENGINEERING AND ASSEMBLY

16.1 Sector Profile

Background and overview. The metals, engineering and assembly area comprises the following subsectors.

1. **Aluminium production.** This activity is dominated by a single major producer, Mozal Aluminium (see Section 16.2.1).
2. **Steel producers.**
3. **Fabricators of steel structures for construction.** The main firms in this area are Agro-Alpha and Forjadora (profiled in the next section).
4. **Producers of drawn wire, roofing sheet, etc.**
5. **Producers of electrical cables.**
6. **Vehicle body builders.**
7. **Producers of metal furniture.**
8. **Providers of engineering services.**

Profiles and lines of business of large and medium-sized firms.

Group 1: aluminium production.

Mozal Aluminium is the dominant firm in the sector. Established in 1999, it produces aluminium ingots from imported alumina. It employs 1,190 people directly, and up to 3,500 indirectly via its use of domestic suppliers. These suppliers are recruited via a large-scale formal programme designed to engage local SMEs. The Mozal company, and its domestic supplier programme, are described in the next section.

Group 2: steel producers.

Two steel mills formerly owned by the government of Mozambique, Companhia Siderurgica de Mozambique and Companhia Mozambique De Trefloria were acquired in 2007 by Mittal Steel South Africa, part of the Arcelor–Mittal group. The two firms – the drawn wire producer Companhia

Mozambique De Trefloria and the rod mill company Companhia Siderurgica de Mozambique – had both been privatized in the 1990s, when they were sold to a Portuguese investor. Attempts to turn the two companies around failed, however, and by the time of their acquisition by Mittal in 2007, both were inactive.¹

Simbe, Lda is based in Maputo city and in Nampula province. It specializes in the production of steel ingots and long products (high-tensile rebar and mild steel round bar).

Group 3: fabricators of steel structures for construction.

Agro Alfa SARM, the country's largest metalworking company, employs 300 people in the design, manufacture, repair and installation of metal structures and equipment. It is profiled in Section 16.2.2.

Forjadora was constituted in 1969 and acquired by Grupo Joao Ferreira dos Santos during the 1990s. In 2012 Forjadora established a partnership with URSSA creating a consortium capable of delivering a wide range of metalwork projects. It currently employs 80 workers and has an annual turnover of US\$5 million. It is profiled in Section 16.2.3.

Capital Star Steel, SA operates within the Beluluane Industrial Park in Maputo province. It specializes in the manufacture of steel and oil pipelines, and the transportation of water and liquefied gas.

Ram Trading operates in Maputo province. It specializes in the manufacture of steel pipes and metallic structures for export.

Duys Engineering Mozambique operates within the Beluluane Industrial Park in Maputo province. It specializes in large-scale steel fabrication engineering. Its core business is smelter support on potshell repairs. The company is involved in fabrication of bulk storage tanks, on ship repairs and barge modifications, on the fabrication of equipment for the sugar, mining, manufacturing and vessels industries, and on the fabrication of gantry cranes/lifting equipment.

IMA – Indústria Moçambicana de Aço operates in the provinces of Maputo and Nampula. It manufactures basic iron and steel and iron products, including agricultural machines and equipment and steel pipes.

Group 4: producers of drawn wire, roofing sheets, etc.

FF Wire operates in Matola in Maputo province, and it specializes in the design, manufacture and construction of steel fencing. Its products include

¹ Economist Intelligence Unit. 2006. Mozambique industry: Mittal Steel buys two firms from government for US\$11m. *Country ViewsWire*, 16 October.

field fencing, galvanized binding and strain wire, high-tensile wire, barbed wire, flat wrap and concertina razor wire, gates, and galvanized and black palisade fencing.

Cheater Industrial Roofing, based in Nampula province, produces profiled aluminium, fibre cement, steel roofing and cladding, reroofing, ventilation and associated metal sheet work. It also builds structural steel units for industrial clients. The company is also an approved supplier and installer for Global Roofing Solutions, Ventco, as well as Clotan Steel, Safintra and Macsteel.

Turnkey Solutions Mozambique operating within the Beluluane Industrial Park manufactures metal roofing sheet, metallic coating and prefabricated walls, both for local assembly in prefabricated buildings and for export.

Intersteel Rollings Mozambique, Lda, established in 2007 in Sofala province, is part of the multinational Macsteel company. The company manufactures corrugated and galvanized iron roofing products. Intersteel is also a stockist of certified steel products for the construction and engineering industries. The company has branches in Beira, Chimoio and Tete.

Intermetal, SARL was established in 1996 following the privatization of the state-owned Intermetal, EE. It operates a plant in Maputo dedicated to the production of zinc and galvanized roofing sheet. It also supplies a wide range of metal products.

Group 5: producers of electrical cables.

Aberdare Intelec Mocambique, Lda was established in 1999 as a joint venture between South Africa's Aberdare Cables, a subsidiary of Power Technologies, and the Mozambican group Intelec. The company operates a production unit in Maputo that specializes in the production of aluminium and copper low-voltage power cables, fibre optic wire, and other electricity conductors. Employing 33 workers, the company has an annual turnover of about US\$6 million.

The company sources its inputs domestically and from South Africa. The final output is sold mainly in the domestic market, including through partnerships with the public electricity company EDM and the Visabeira Group. The company's supply scheme also includes partnerships with South African companies B&W and Instrumentation and Electrical (Pty) to supply services to the Mozambican gas company Sasol, and to Chinese and Egyptian contractors operating in Mozambique.

Aberdare has plans to open a production unit near the Mozal aluminium plant from which it will produce aluminium cables.

Celmoque operates in Beira in Sofala province and in Maputo. It manufactures copper cables, wires and conductors. It is part owned by the Mozambican state.

Group 6: vehicle body builders.

Henred Fruehauf operates in Sofala and Maputo provinces. It manufactures trailers as well as supplying used trailers and related products.

Group 7: producers of metal furniture.

Metalec – Furniture and Steel Structures Factory produces metal furniture for schools, offices and public institutions. It employs 53 people and has an annual turnover of US\$3 million. The company was established in 1971 by a Portuguese businessman. It was nationalized in 1975 and then privatized in 1990, at which time it was acquired by a young mechanical engineer who had been employed by the nationalized firm. More than 90% of the company's raw material (angle steel, pipes and iron profiles, plywood and chipboard or hard wood) is imported, mostly from South Africa. Some wood, representing about 10% of the total, is of domestic origin. Metalec's main competition comes from importers, mainly from South Africa and China.

Group 8: providers of engineering services.

Cometal, established in 1957 and now co-owned by the Indian Tata group (51%) and the Mozambican state (49%). Partnering with the South African GENREC company, Cometal is a major supplier of engineering services. During the construction phase of Mozal Aluminium, it supplied specialist welders to the venture. It subsequently obtained a contract to supply similar services to the South African Hillside company, which is owned by BHP Billiton, the main shareholder in Mozal.

Metech, established as a metalworking concern in 1964, also benefitted from the Mozal II project by allying with the Australian firm Kempe International, a specialist in the supply of engineering services to the aluminium industry. Now renamed as Kempe–Metech, it has become one of the country's leading metalworking firms, specializing in the provision of metalworking services to large industrial projects.

Small-scale, informal and peripheral activities. A large number of small businesses are engaged in manufacturing office, household and school furniture.

In addition, there are a number of informal businesses that produce hand tools, such as hoes, shovels, axes, hammers and cutlery.

Exports. Aluminium represents 99% of the sector's total exports. The main destinations are Belgium, South Africa, Sweden, Italy and Japan.

Policy context. The metal and steel industry has been designated a priority sector by the government, which is committed to encouraging foreign investment in developing the industry.

The government has created an agency to promote technological development, through reverse engineering, and the adaptation and modification of foreign technologies. This unit has benefited from technology cooperation agreements with foreign governments, including those of China and Sweden.

Notwithstanding the use of scrap steel as a raw material, there are currently no export restrictions on scrap.

Challenges. The main challenges facing the metals, engineering and assembly sector are as follows.

- Competition from imported products. Some imports are felt to be of substandard quality, and testing and monitoring of quality is inadequate.
- A lack of financial capacity.
- High prices for raw materials.
- A shortage of skilled labour.
- Vocational training schools and curricula do not meet the needs of the enterprises in the sector.

Rationale for selecting the profiled firms. Mozal Aluminium is the leading firm in the sector. Agro Alfa SARL and Forjadora, Lda are leading firms in their respective areas of operation.

16.2 Profiles of Major Firms

16.2.1 Mozal Aluminium

Basic details. Mozal Aluminium is an aluminium smelter based in Belulane (near Maputo). It was set up as a joint venture between BHP Billiton (with a 47.1% stake), Mitsubishi (a 25% stake), the government of Mozambique (a 3.9% stake) and the Industrial Development Corporation of South Africa Limited (a 24% stake). It employs 1,190 people directly and a further 3,500 indirectly, and it has an annual turnover of about US\$1.1 billion.

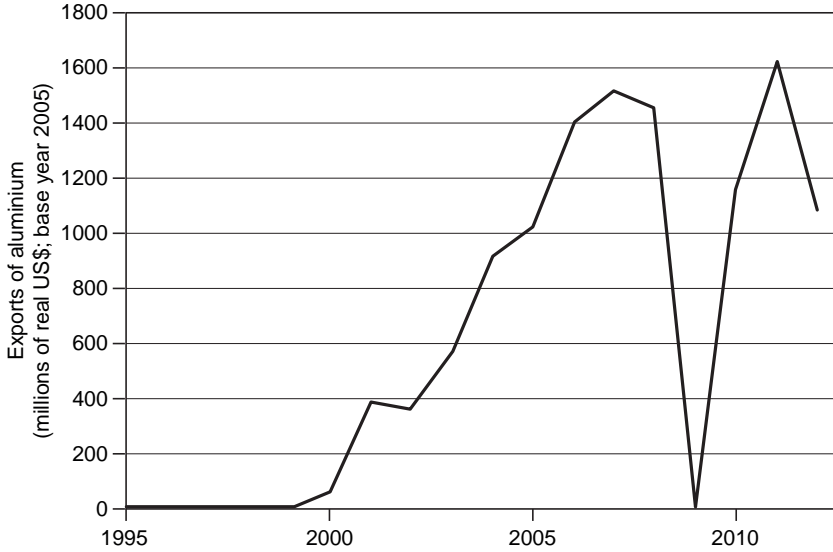


FIGURE 16.1. Exports of aluminium.

History. Mozal uses alumina to produce aluminium ingots, which until 2013 were all exported by sea to Europe. The alumina is sourced from Australia, while electric power is sourced both from domestic generators and from South Africa.²

The first phase of the Mozal project began in 1999 and the second phase, which doubled the initial size of the plant, began in 2001, becoming operational in 2003.

Current activities and products. The second phase expansion made Mozal the country's largest, and Africa's second largest, aluminium producer. With an annual output of about 580,000 tonnes, it accounts for 30% of Mozambique's export earnings (Figure 16.1).

Supply and marketing chain. Raw materials (alumina, coke and pitch) are shipped to Matola harbour and then transported by road tankers to Mozal's smelter. Mozal sources alumina from Australia, coke from the

² Aluminium ingots are produced by smelting powdered alumina via electrolysis. The powdered alumina is refined from alumina compounds that are extracted from bauxite ore by dissolving it in caustic soda. The smelting process is extremely energy intensive, requiring huge supplies of electric power. One element underlying Mozal's foundation was an offer from the government of South Africa, following the end of civil war in Mozambique, to supply its neighbour with affordable power.

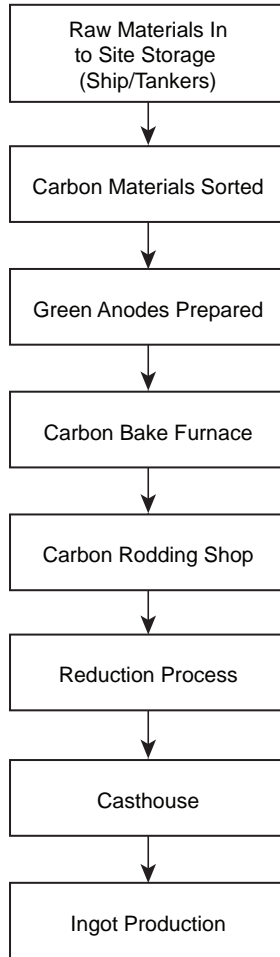


FIGURE 16.2. The production process at Mozal Aluminium.

United States and pitch from South Africa and Japan. Electricity is sourced both domestically and from South Africa (Figure 16.2).

Exports. Until 2013 all final production of aluminium ingots was exported to Europe by sea, but the first project for downstream domestic usage was agreed in early 2013 (see below).

Domestic sourcing. In 2001, with the help of the International Finance Corporation, Mozal set up a programme to involve local firms in construction activity (the Small and Medium Enterprise Empowerment Linkages

Program). The recruitment of SMEs to this initial programme began with an evaluation in 1998–99 by the Center for Investment Promotion of 370 Mozambican firms.

The evaluation suggested that 90% or more of these firms had serious deficiencies in quality, experience, equipment, management and marketing. This led to a wider survey of more than 900 firms, and to a widening of the scope of inquiry to investigate SMEs that might fit into the supply chains of other major industries, including the sugar industry.

Following this inquiry, a select short list of local SMEs was invited to bid for participation in Mozal's construction phase. It was at this point that the SME Empowerment Linkage Program was established, with the involvement of the Center for Investment Promotion, the Private Enterprise Development Program, the World Bank and the Africa Project Development Facility. A total of 33 SMEs participated and 19 were awarded at least one contract.³

The success of this programme encouraged Mozal to establish a second programme that was designed to incorporate local SMEs into its supply chain during the operational phase. This new programme, entitled MozLink, was set up in 2003. Its objective was to 'develop the SMEs' capacity to a level where the local company is competitive and qualifies to bid for work with Mozal as well as other large companies'.⁴

Within five years of its establishment, MozLink had developed the capacities of 45 local SMEs, and Mozal had increased its number of domestic suppliers from 40 to 250.

The initial success of MozLink led to the development of an extended programme, MozLink II – in which Mozal was joined by Sasol, Cervejas de Mozambique and Coca-Cola, in partnership with the International Finance Corporation – aimed at creating opportunities for local SMEs within the company's operations. The partners in MozLink now also include the Africa Project Development Facility and the Private Enterprise Development Project.

MozLink now recruits across a very wide range of activities.⁵

³ Castel-Branco, C. N., and N. Goldin. 2003. Impacts of the Mozal aluminium smelter on the Mozambican economy. Final Report submitted to Mozal Maputo (21 September). Mimeo.

⁴ World Bank. 2008. Developing SMEs through business linkages: a manual for practitioners based on the MozLink mentorship experience in Mozambique. Business Linkages Practice Notes, World Bank, Washington, DC.

⁵ A single new batch of SMEs recently recruited to the scheme came from five different areas: (1) metallurgical services and products, (2) transportation services, (3) construction, (4) electrical products and services and (5) laundry.

Today, Mozal's network of SME suppliers constitutes a large fraction of the country's metals, engineering and assembly sector. The network includes relatively large engineering operations such as Agro Alfa (profiled in the next section), Cometal and Metech. They cover a wide range of activities in both manufacturing and engineering services.

Hecon manufactures metal frames and mechanical components.

Tretyre Beluzone manufactures rubber kits, hydraulic pipes and a range of assembly and repair services.

KPM – Turnkey Solution Mozambique manufactures metal frames for construction and roofing as well as manufacturing flexible walls.

Many of the firms within the scheme operate in other industrial sectors.

Maputo Woodchips manufactures and exports woodchips produced from locally sourced timber.

R. B. Enterprises processes imported second-hand clothing to produce cleaning cloths for industrial purposes.

Bearing Man Moçambique assembles and distributes industrial equipment.

Recent developments. In February 2013 Mozal signed an agreement with the Midal company of Bahrain, a global leader in aluminium cables. Under the agreement, Midal will establish a production facility in Mozambique and source 50,000 tonnes of aluminium ingots annually from Mozal. This is the first domestic 'downstream' operation based on Mozal's output of aluminium. The factory is expected to be built by June 2014 and is expected to employ 150 Mozambican workers initially, rising to 400 over time.⁶

16.2.2 *Agro Alfa SARL*

Basic details. Agro Alfa is involved in the design, manufacture, repair and installation of metal structures and equipment for industry, oil facilities and ports. The company employs about 300 people, with headquarters in Maputo, manufacturing operations in Beluluane, and sales offices in Quelimane, Nampula and Beira. Its annual sales revenue is about US\$9.5 million.

Agro Alfa is a private limited Mozambican company that has individual and corporate members.

⁶ Fauvet, P. 2013. Mozal aluminium to be used in Mozambican industry. *Africa News*, 22 February.

History. The company was founded in 1950 by a Portuguese national, Joaquim Mendes de Oliveira, under the name Mendol. Initially, the company was dedicated to the manufacture of agricultural equipment such as animal-drawn ploughs, hoes, axes and machetes.

Following independence in 1975, the company was nationalized.

In 1996, under the government's industrial restructuring process, the company was established as a private Mozambican company with individual and corporate shareholders.

Gradually, Agro Alfa evolved as a general metalworking company. Investments were directed at human capital and technology, with an emphasis on the recruitment and training of young Mozambicans, who now form the core engineering workforce and management team.

The appearance of Mozal in 2000 created new opportunities for Agro Alfa, as did other major projects such as the Beira port and works at Cimentos de Moçambique. The company's association with the Mozal II expansion project led to a huge rebalancing of the firm's activities in favour of subcontracting work on large-scale construction projects.

During the Mozal II phase, Agro Alfa developed a partnership with a South African construction company, in which it later became a minority shareholder. Agro Alfa developed new capabilities through its works on Mozal II and it came to focus on the provision of industrial maintenance and engineering services to large industrial units. It began to specialize in the design and construction of more complex steel structures, while becoming the country's leading engineering company in industrial maintenance.

These developments in turn led to a new corporate culture, both in regard to health and safety and in respect of quality, environmental management and customer relations. It also led the company to introduce new technology for computer aided design.

Current activities and products. Agro Alfa is now primarily a manufacturer of metal structures for the construction industry, particularly for buildings, bridges and prefabricated schools. Among its recent major projects are

- the manufacture and installation of a new warehouse for phosphates at the port of Maputo,
- the manufacture and installation of structures and conveyors for the new coal terminal at Matola (TCM),

- the manufacture and installation of grain storage facilities in Nam-pula and Tete, and
- the manufacture of hundreds of prefabricated steel structures for schools in different provinces of the country.

Firm capabilities. Agro Alfa is in the pre-monitoring process for ISO 9001 certification. It is expected that by the end of 2014, the certification will be effective.

Supply and marketing chain. Agro Alfa's main raw material is steel, 70% of which is imported from South Africa with some coming from Europe and Asia, with certified quality standards.

16.2.3 Forjadora, Lda

Basic details. Forjadora produces steel structures for the construction industry, as well as steel tanks and trailers. It employs 82 permanent staff and a fluctuating number of casual workers; it has a current annual turnover of about US\$6 million.

History. In 1964 Alcidio Pinho, a Portuguese national, arrived in Mozambique and set up a small workshop for the production of steel products. This enterprise expanded over the following decade to employ 120 people by 1974, at which time its main product lines were steel tanks for water and petrol, and trailers for trucks. The company was, at that time, a privately owned family firm.

In 1974 Forjadora was nationalized, becoming one of the many nationalized firms operating under the umbrella of the Ministry of Industry.

In 1994 Forjadora was divested by the government and was acquired by the JFS Group, one of the oldest conglomerate groups in Mozambique, whose origins can be traced to the last decade of the nineteenth century. The JFS Group currently comprises six companies, including Forjadora.

By 2009 competition from both local and foreign (South African) companies had rendered Forjadora's business less and less profitable, and the present managing director was recruited from a well-established local management consulting company with a brief to run down the firm's scale of operation. Instead, he chose to embark on a new strategy, by shifting the focus of the business very heavily towards large-scale steel structures for major clients and by investing heavily in new plant and equipment. Employment was cut to contain costs, falling by 50 in 2010, but business has turned around sharply over the past two years and it is now envisaged

that if present trends continue, employment will exceed 200 within two years.

Current activities and products. About half of Forjadora's output (by value or volume) now consists of large-scale steel structures for the construction industry. Some 20% of output is accounted for by steel tanks, used mostly for water or petrol. Its more recent line of business involves roll bars and related products for vehicles, and this business now accounts for around 10% of turnover. (Forjadora supplies this equipment to Teknik Industrial, a sister company in the JFS Group.) The truck trailers business, once a major part of the firm's activity, now accounts for only 5% of output.

Firm capabilities. Forjadora is currently in the process of obtaining ISO 9001 certification and health and safety certification OSHAS 18001.

Supply and marketing chain. Steel is imported, with over half coming from South Africa and the remainder coming mostly from Turkey and China.

Organization and management. The parent JFS Group is a private family-owned firm, and the managing director of Forjadora reports directly to its shareholders. Heads of procurement, production, finance/administration and the commercial department report to the managing director.

Challenges. Forjadora faces strong competition, both from local firms (Agro Alfa, Kampe, Tata, Cometal) and especially from South African companies operating in Mozambique. Opportunities in the growing construction industry have, over the past two years, attracted new entrants to the market, including some firms from Portugal.

Recent developments. Over the past two years, Forjadora has invested US\$2 million in new plant and equipment, including a CNC plasma cutting machine. It has responded to problems in the supply of roofing sheet by beginning in-house production for its own needs. It will invest a further US\$500,000 in the next year or so on new welding equipment and on technical training for staff. The trend towards shifting the bulk of its business towards large-scale steel structures for major clients will continue.

Chapter 17

CHEMICALS AND PLASTICS

17.1 Sector Profile

Background and overview. The main segments of this sector are paints, detergents, and plastic and rubber products.

The main products produced are rubber products, paints, glues, varnishes, detergents, foams, cosmetics, medicines, industrial gases and various plastic goods (household items, furniture, bags).

In 1958 the Portuguese paints producer Robilac Portuguesa entered Mozambique. Initially, it operated as a distributor, importing supplies from Portugal, but in 1960 it set up a manufacturing plant in Mozambique, which it developed and extended over the following decade.

The paints company Tintas de Moçambique (CIN), a subsidiary of CIN Portuguesa, built its factory in 1975.

In 1962 the Pintex detergents firm was established with two factories in Maputo and Beira.

The paints producer Elvolac, whose majority shareholder was ACI (Paints) Ltd of South Africa, began operations in 1969 in the industrial zone of Matola. It ceased production in 1987.

A number of firms were active from the early 1970s in the plastics and rubber sector. Following independence in 1975, the departure of most Portuguese settlers led to a loss of technical and managerial skills. Under nationalization, several plastics firms were integrated into a state-owned entity, EMPLOME EE. Some important firms have exited the industry in the past decade, including Mabor, a manufacturer of rubber tyres.

Today, firms in this sector produce a wide range of products such as moulded plastic products, electric wires and cables, polyvinyl chloride (PVC) products, plastic boots and household products. Many companies operate with a few plastic-moulding machines, producing household utensils, furniture, construction items and plastic containers.

Studies of this sector suggest that privatization was not followed by the necessary reorganization, plant rehabilitation and technology upgrading.¹ Mozambican investors were inexperienced and had inadequate management and technical skills, while macroeconomic conditions were unstable, interest rates were high and infrastructure was weak.

Supply chain. Almost all inputs for the production of plastic materials are imported. Plastic products are produced using three types of production technology. The injection method is used to produce plastic plates and other household plastics, blow moulding is used for the production of plastic containers, and extrusion is used to produce plastic pipes, construction plastics and laundry plastics.

Most products are marketed through sales outlets at the factory gates, or through wholesalers and retailers.

Challenges.

A lack of access to government projects. Most governmental sectors prefer to import plastic materials for public infrastructure rather than buy from domestic producers.

Poor production technology. Many of the factories in the industry do not meet international safety and environmental standards.

A lack of local skilled personnel. The lack of colleges or training institutions that educate professionals in related fields poses a problem when it comes to the recruitment of skilled personnel.

Exports. Exports of chemicals were valued at US\$3.4 million in 2011 and were valued at US\$123 million in 2012.

Policy context. Chemical firms have benefited from support provided by business development agencies or programmes in the form of specialized technical assistance, management training, certification, or consultancy and engineering services. These include the Mozambique Private Sector Development Project, which was set up by the World Bank and other donor agencies in 2000 to support private-sector development in Mozambique. This initiative, managed by a private consultancy firm under the general umbrella of the Mozambican Ministry of Industry and Trade, ran between 2000 and 2006, providing credit, training and technical assistance to local

¹ Pitcher, M. A. 2002. *Transforming Mozambique: The Business of Privatization, 1975–2000*. Cambridge University Press. Cramer, C. 2001. Privatisation and adjustment in Mozambique: a 'hospital pass'. *Journal of Southern African Studies* 27(1), 79–103.

small and medium-sized enterprises. The Instituto Nacional de Normalização e Qualidades is the government's quality and standards agency; it provides support to local firms in relation to certification.

Profiles of large and medium-sized firms.

Modet – Mozambican Detergent Company Ltd produces personal care products and chemicals for domestic and industrial use. It is profiled in the next section.

Pintex SARL manufactures paints, varnishes, glues, thinners and related products. It employs 53 workers and has a turnover of about US\$800,000.

The company was founded in 1960 under the name Fábrica de Tintas do Ultramar, and it began production in Maputo in 1962. Its main activity was the manufacture of paints, varnishes, glues, thinners and related products. Its paints included domestic and industrial types, paints for aluminium and paints for road marking. In 1971 it opened a second factory in Beira.

In the post-independence period the original shareholders left the country, and in 1982 the company was nationalized. In 1996 it was sold to new shareholders under the Economic Recovery Programme. The share capital was divided into a 60% stake for private shareholders with the remaining 40% held by the state. In 1996 the Beira factory was sold.

As the country moved to having a more open economy, and in particular with the establishment of the SADC Protocol² in 2005, Pintex adopted a new marketing strategy that focused on product quality, customer recovery, and the introduction of new lines of plastic paints.

PINTEX was one of the first firms to adopt the certification Made in Mozambique (in 2007) and is currently applying for ISO certification. Quality control and supervision are carried out by UDIQUI (the Managing Unit for Chemical Industries).

New Tintas 2000 Ltd, a private company owned by two Mozambican nationals, has 21 employees. It manufactures paints and varnishes, and also imports and distributes supplies used in the painting process. New Tintas 2000 was established in 2000 by South African partners. In 2006 the company was acquired by its current Mozambican owners. The company grew rapidly up to 2008/9, but with the opening up of the market to SADC countries, difficulties started to emerge as the company faced strong competition from South African imports.

² The SADC currently has over 20 protocols that commit member states to objectives and procedures in a wide range of areas, including finance and investment, education and training, and trade.

While the construction market has grown rapidly in recent years, most public-sector works have involved Portuguese construction companies. These companies source building materials from Portugal, and New Tintas 2000 has gained little from these developments.

The factory currently plans to cease its manufacturing activity and engage instead in import and distribution.

Politejo de Moçambique, Lda was established in 1998. It employs 31 workers and had a turnover of US\$2 million in 2011. This company is 100% owned by an Iberian group of the same name that has companies in Spain, Portugal, Angola, Mozambique and Brazil. It produces pipes for construction and public works, transport, water supply, drainage and agriculture.

Today the company is Mozambique's leading manufacturer of plastic (polyester and PVC) pipes; its main competition comes from imports from South Africa. Politejo de Moçambique, Lda uses the Engineering Laboratory of Mozambique for quality control, following European and South African standards. For sewage and sanitation pipes they follow the European standard 1301, while for transporting drinking water they follow the European standard 1201. For pipes carrying waste water they follow the South African standard SABS 966.

Riplex employs 30 people in the production of plastic bottles and containers and plastic film (for packaging). It has a current annual turnover of about US\$1 million.

The owner and founder Rajendra Dhirajal set up a retail clothing business in 1988, operating on a very small scale. In 1992, together with his brother, he set out to raise a loan with the aim of producing bottles for vinegar, which were in such short supply locally, with used beer bottles being used in their place. His efforts to raise finance succeeded in 1993, when the World Bank agreed to advance the brothers a loan of about US\$500,000 over six years.

On travelling to Taiwan to purchase equipment, the brothers realized that this initial capital would allow them to aim at a broader product range than they had envisaged, and in 1996 Riplex was set up as a private company manufacturing a range of plastic bottles and packaging film.

The firm currently imports PET (for soft drinks bottles) and PVC, polyethylene and polypropylene (for bottles for cosmetics and detergents) in granular form from France, Kenya and South Africa. It has facilities for blow moulding, injection moulding and film making. It supplies customized plastic bottles and containers to industrial buyers in the Maputo

area (i.e. the buyers supply the moulds and dies), and it sells packaging film to firms throughout Mozambique.

Riplex has few competitors in this area. The only large plastics company, Topak, is heavily focused on other areas (such as crates for drinks producers), though a few very small (Chinese and Indian) firms have begun informal businesses in recent years.

In 2011 Riplex began to produce labels, using a high-quality 12-colour machine, and it now supplies labels to local producers of international brands.

17.2 Profiles of Major Firms

17.2.1 *Modet – Mozambican Detergent Company Ltd*

Basic details. The company was founded in 1972 by four independent investors. It currently has 89 workers and an annual turnover of about US\$2 million. It manufactures personal care products, domestic and industrial cleaning products, and chemical products for industrial use.

History. The company began production in 1973 with 141 workers, producing solid and liquid detergents and abrasives. It sold to the national market and was a supplier to the Portuguese armed forces. The original partners left in 1975 and the company was nationalized in 1976. In 1995 the company was close to bankruptcy, with unpaid wages and virtually no production.

Following a valuation by the state it was privatized by public tender in 1996 and was acquired by a family business group. It restarted production shortly afterwards.

Following restructuring and rehabilitation, the company introduced new product lines including bleaches, disinfectants, degreasers, deodorizers, air fresheners and a range of products for industrial use.

For its industrial products, the firm faces competition only from imports and from new entrants to the market. It competes effectively on quality with imported brands. Its personal care products compete with products that are packaged in Matola by the multinational Colgate Palmolive. Modet has a market share of around 50% across its product range.

Modet has a laboratory for quality control. It has ISO 9001:2008 certification, and in 2007 it was authorized to use the 'Made in Mozambique – Mozambican Pride' label.

Supply and marketing chain. Modet imports raw materials from South Africa, Portugal, India, China, Bulgaria and the United States as inputs for about 75% of its product lines. The remaining inputs are sourced domestically.

Modet produces packaging for around 30% of its products, using imported polyethylene.

Organization and management. The management team is comprised of members of the owning family. The director general supervises heads of administration, finance and human resources.

17.2.2 Topack Moçambique, SARL

Basic details. Topack Moçambique, SARL produces a wide range of heavy-duty plastic products. It employs 145 people and had a turnover of US\$9.2 million in 2011. It is a member of the Topack group.

History. In September 1995 the state-owned plastics company Emplana was privatized, leading to the formation of five new firms. An 80% stake in the largest of the five was acquired by the Topack group, which traces its origins to the foundation in 1978 of the Portuguese plastic maker Topack-Industria de Plasticos SA. Prior to privatization, the plant and equipment of the state-owned company was largely obsolete; it was sold for scrap when the Topack group acquired the company. The new owners, having purchased the assets for US\$700,000, invested a further US\$4 million in new machinery and equipment, including a machine to make plastic crates for the drinks industry – one of Topack's main product lines – at a cost of US\$1.5 million.³

The Topack group is also active in Angola and is involved in several joint ventures in Latin America and Europe. It is Europe's largest producer of plastic film.

Current activities and products. Topack's product lines fall into five groups.

- Injection molding products include crates for the beverages industry, buckets for industrial use, pallets, garden furniture and household products.
- Extrusion films include packaging film for the food industry and a range of plastic bags for retailers.

³ Pitcher (2002).

- Insufflation products include jerrycans and high-density polyethylene bottles and containers for the food, edible oils and automotive industries.
- Extruded tube products include irrigation pipes and preforms for bottles.

Supply and marketing chain. Raw materials are imported, and all sales of final products are made in the domestic market. Topack's largest clients include Mozambique's leading beverages companies. Topack recycles its own waste, carries out rebuilding and rehabilitation programmes, and does its own vehicle repairs in-house.

Organization and management. The managing director of the company also serves as director of finance and IT; he is assisted by a sales and marketing manager.

Policy context. Topack's expansion was aided by a 1997 increase in the import duty on plastic products from 7.5% to 35%. This rise encouraged Topack to invest in the local manufacture of plastic medicine bottles, for example.⁴

Challenges. Topack's main challenge includes competition from smuggled imports.⁵

⁴ Pitcher (2002).

⁵ *Financial Times*, 26 June 1997.

Chapter 18

PHARMACEUTICALS

18.1 Sector Profile

Background and overview. The Mozambican pharmaceuticals market is dominated by imported generics. A chain of 40 pharmacies belonging to the state-owned FARMAC company now operate in urban areas. Such outlets focus on low-cost generics.

Profiles and lines of business of large firms. The manufacture of pharmaceuticals in Mozambique began in 2000 when a group of investors established the Final Pharmaceuticals company. As described in the next section, this enterprise has since been subsumed into the recently established Sociedade Moçambicana de Medicamentos (SMM), a new manufacturing operation founded under a cooperative arrangement between the governments of Mozambique and Brazil. SMM is currently the only manufacturer of drugs in Mozambique; its primary focus is the supply of antiretrovirals for HIV/AIDS sufferers.¹ SMM is profiled in the next section.

Policy context. Pharmaceutical importing and retailing have been liberalized and are open to domestic and international firms subject to standards and technical supervision. Prices are regulated through a cost-plus system, fixing cost and profit mark-ups for each stage of medicine distribution.

The private sector has been regulated in respect of quality and price since the 1990s. Imported medicines must be licensed and registered by the Pharmaceutical Department, and they are in principle subject to chemical analysis by the National Medicine Quality Control Laboratory. Ministry of Health regulations establish standards, and firms are subject to random inspection visits by the Ministry of Health Inspection Department.

¹ Mozambique has an unusually high incidence of HIV/AIDS. It is estimated that, in spite of programmes supported by a range of donors (including the US government, the humanitarian organization CARE, and Cornell University), only half of HIV/AIDS sufferers receive antiretroviral drugs.

Drug advertising is banned, as is the promotion of brand name drugs through giving free gifts except for objects of insignificant value. Drug prescribers and suppliers are totally forbidden from receiving ‘incentives’ from drug companies.

Challenges.

- Outside Maputo, distribution networks and storage facilities are insufficient.
- Finding skilled personnel (pharmacists and chemists) with relevant experience is difficult.
- There is no effective regulatory system that can monitor illegal imports.

Recent developments. In March 2012 the Bluepharma company, a Portuguese manufacturer of generic drugs, opened a subsidiary in Maputo. The subsidiary is engaged in importing pharmaceuticals, assisting in the registration of new products, and in the provision of consulting services to pharmaceutical firms that intend to establish a presence in Mozambique.

GlaxoSmithKline and Vodafone have recently launched an initiative that uses basic mobile phone technology to raise vaccination rates among children.²

18.2 Profile of a Major Firm

18.2.1 *Sociedade Moçambicana de Medicamentos*

Basic details. SMM is a recently established pharmaceuticals company that began production in July 2012. It was founded by way of an initiative between the governments of Brazil and Mozambique. It currently employs more than 50 people.

History. The initiative to set up SMM began in 2003, following discussions between President Lula of Brazil and President Chissano of Mozambique. In 2008, the Brazilian foundation Fiocruz was designated by the Brazilian Ministry of Health to lead the project, and the Brazilian pharmaceuticals producer Farmanguinhos was appointed to execute the operation. Under the agreed plan, Brazil would donate R\$13 million (which was equivalent to US\$7.2 million at the time) in equipment and would make further

² Business Monitor International. 2013. Mozambique pharmaceuticals and healthcare report Q4 2013: includes 10-year forecasts to 2017. Business Monitor International, London.

investments totalling R\$40 million (US\$22.2 million) between 2008 and 2014, during which period a substantial programme of transfer of pharmaceuticals production technology knowhow would be undertaken by Farmanguinhos.

As part of this initiative the government of Mozambique was responsible for acquiring a production facility, so in 2008 it acquired the Final Pharmaceuticals company. Located in Matola, close to Maputo, Final Pharmaceuticals was established by private Mozambican shareholders in 2000 with the original aim of producing serums. It purchased knowhow and technology from Megkon Limited of South Africa, but in 2002 Megkon entered bankruptcy proceedings and the project was abandoned. In the following year, Final Pharmaceuticals began operations, producing parenteral solutions (physiological and glucose serum).

The acquisition by the Mozambican government of Final Pharmaceuticals, in combination with the technology transfer and investment programme led by Farmanguinhos/Fiocruz, formed the basis of the SMM project.

Current activities and products. SMM's three product lines are large-volume injections, antiretroviral drugs and various basic medications in tablet and capsule form. Its installed capacity is for 3 million large-volume injections and 1.5 billion tablets and capsules. Its products include antibiotic medications for HIV, diseases of the central nervous system, hypertension, diabetes, hematological disorders and nutrition disorders.

Supply and marketing chain. At present, all active ingredients and consumables are imported from Brazil via Farmanguinhos.

Development agenda. Present plans envisage the eventual transfer of technology for 21 products to SMM from Farmanguinhos. Technicians are being trained in Brazil and Mozambique with a view to achieving local production of at least 5 of the 21 products by 2014.

It is envisaged that SMM may, in the future, export products to countries in the sub-Saharan region.

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Mozambique's economy grew rapidly in the first decade of the millennium. Real gross domestic product more than doubled, and this growth was widely spread across sectors: manufacturing output grew even faster than gross domestic product, rising by a factor of 2.3 over the decade.

A key economic question for Mozambique is whether this rate of growth can be sustained for another decade. Achieving this will require, among other things, a substantial advance in the country's industrial sector. It is timely, therefore, to ask some questions about Mozambican industry.

- What are Mozambique's current industrial capabilities?
- Where did these capabilities come from?
- What are the prospects for integrating local companies into the supply chain of the new offshore gas industry?

This volume presents the first general overview of Mozambique's industrial sector, covering manufacturing, agribusiness and construction. It describes each industry in detail, and profiles leading firms, setting out their current capabilities and the way in which these were developed.

This is the fifth volume in John Sutton's 'Enterprise Map' series, which profiles the industrial capabilities of selected countries in sub-Saharan Africa. Volumes on Ethiopia, Ghana, Tanzania and Zambia have already appeared.

