

**Enterprise Development in Mozambique:
Results Based on Manufacturing Surveys Conducted in
2002 and 2006**

**National Directorate of Studies and Policy Analysis
Ministry of Planning and Development**

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List of Abbreviations

| | |
|--------|--|
| CEMPRE | INE Census of Enterprises |
| CLUR | Certificates for Land Use Right |
| CTA | Confederation of Mozambican Business Associations |
| DNEAP | National Directorate of Studies and Policy Analysis (Direcção Nacional de Estudos e Análises de Política) |
| EBA | The EU Everything But Arms trade initiative |
| INE | National Institute of Statistics (Instituto Nacional de Estatística) |
| IRPC | Firm Income Tax |
| IRPS | Personal Income Tax |
| ISIC | International Standard Industrial Classification |
| NGO | Non-Government Organisation |
| NUIT | Individual Tax Payer Number |
| R&D | Research and Development |
| RPED | Regional Programme on Enterprise Development |
| SADC | Southern African Development Community |
| SMEs | Small and Medium Scale Enterprises |
| SOEs | State Owned Enterprises |
| UNDP | United Nations Development Programme |
| VAT | Value Added Tax |

1. Introduction

This report provides an up-to-date descriptive analysis of recent developments in the enterprise sector in Mozambique. Focussing principally on the manufacturing sector, it is the result of a firm-level survey carried out in 2006 which is linked the 2002 Regional Programme on Enterprise Development (RPED) survey (IFC, 2003) to provide a unique panel dataset of Mozambican firms with an extensive range of information on the evolution of firm characteristics and performance measures. To our knowledge, this is the first time that such a dataset has become available in Mozambique, bringing perspective on firm level performance not available from simple cross-sectional datasets.

Firm-level data such as those collected in this survey allow policy analyses to go beyond the limitations of working with the “representative firm”. By dispensing with this notion, policy analyses can investigate issues relating to firm heterogeneity across a wide range of enterprise characteristics, the consequences of which can be considerable in terms of the depth and reliability of the analysis and the subsequent policy implications. Further, by providing firm-level data at two points in time, the panel dataset allows analysis of dynamic aspects of enterprise development, relating firm growth and survival to specific firm types, thus providing a further dimension to the analysis of firms and ultimately a richer understanding of how the private sector operates.

The availability of such a dataset in Mozambique provides new opportunities for enterprise analysis, representing an important step in improving the understanding of the enterprise sector and how its potential for growth and employment opportunities might be better utilised, something which can be reliably used to inform future policy decisions.

This report presents background information and selected summary statistics which result from the 2006 survey, with up-to-date views of enterprise managers on the current business environment in Mozambique. The report also summarizes the constraints enterprises face and their performance, and provides a dynamic vision of the development and performance of the manufacturing sector in Mozambique since 2002. The report also seeks to provide a sound basis for future in-depth policy analyses.

The remainder of this introductory section contextualises the present analysis by providing a brief summary of economic developments in Mozambique. This is followed in Section 2 by a discussion of survey design and the sample used in the survey before Section 3 presents the principal results to

emerge from the 2006 survey. Section 4 then uses the firm-level panel-data from 2002 and 2006 to analyse dynamic issues relating to firm growth and survival in the manufacturing sector before Section 5 summarizes the main results and recommendations for future research.

Since political independence in 1975, Mozambique has experienced dramatic socio-economic changes. These include the demise of the colonial political system in the late 1970s, experimentation with centralised state planning and civil conflict in the 1980s, gradual market liberalisation in the late 1980s and early 1990s, and peace and economic recovery with ever-increasing private-sector participation and high economic rates growth beginning in 1992. Nonetheless, Mozambique remains a poor country with a GDP per capita of around 290 USD (World Bank, 2006).

Although economic growth since 1992 has been driven mainly by the agricultural sector, manufacturing has also played a prominent role along with the tourism and construction sectors (IMF, 2005). Over the period 1996 to 2005 the industrial sector has increased from 16 percent of GDP to 26 percent, while the agricultural share of GDP has declined by eleven percentage points over the same period (INE, 2006). Significant growth in the industrial sector has been driven largely by mega-projects in aluminium, mining and electricity. Some manufacturing sub-sectors such as food processing, beverages and tobacco have also seen relatively high growth rates, while other sectors such as textiles are in decline, falling from 4.4 percent of manufacturing in 1998 to 0.5 percent in 2003 (IMF, 2005). Overall, only a limited number of formal sector jobs have been created in the industrial sector with agriculture continuing to employ 80 percent of the economically active population compared to only five percent in industry (IMF, 2005).

The promotion of broad based economic development with increasing formal sector employment is a key challenge for policy makers in Mozambique as set out in a number of key policy and planning documents. This is so both in urban areas where an increasing share of the population lives and works as well as in the rural economy where diversification, including growth of labour-intensive industry, is crucial to providing sustainable livelihoods. Although small and medium scale enterprises (SMEs) in particular are widely recognised as a dynamic force for promoting labour intensive growth and creating employment, as well as for increasing competition in local markets, supplying much-required goods and generating savings, their potential is yet to be fully tapped. It is now increasingly accepted that SMEs are critically important to rural transformation and the

creation of off-farm employment opportunities and that urban SMEs can play an increasingly important role in economic transformation.

The economic potential of the enterprise sector stands in contrast with the evident lack of understanding of the characteristics, dynamics and constraints of the individual enterprises of which it comprises. In 1994, a World Bank team carried out a survey of 60 enterprises. In 1998, the CTA in collaboration with the World Bank undertook the first Regional Programme on Enterprise Development (RPED) study of 153 manufacturing enterprises (with 146 usable observations) (RPED, 1999), followed by a survey of 193 enterprises in 2002 (with 192 usable observations, 87 of which were also interviewed in 1998) under the auspices of the World Bank's Investment Climate Assessment (IFC, 2003). However, data quality issues regarding the 1998 survey limited the usage of the panel dimension of the data collected in IFC (2003). In fact, only the cross-sectional dimension could be used. This 2006 survey builds on and goes beyond the 2002 survey, establishing a proper panel dimension as highlighted above.

2. Survey Design and Data Overview

The main objective of the 2006 survey was to facilitate policy research on firm dynamics (survival and growth) and to update information on the constraints faced by manufacturing enterprises in Mozambique and the perceptions of firm managers regarding the business environment. Two questionnaires were used: one for previously surveyed and new enterprises (A: Main Questionnaire) and one for enterprises sampled, but closed down (B: Exit Questionnaire). Questionnaire A contains 10 sections, all of which are listed in Table 2.1.²

Table 2.1 Overview of Questionnaire Sections

| | |
|---|---|
| A | General information about the firm |
| B | Employment |
| C | General manager and owner characteristics |
| D | Investment and R&D |
| E | Exports and imports |
| F | Fees, taxes, licenses and informal costs |
| G | Competition |
| H | Access to finance |
| I | Networks, business environment and constraints |
| J | Economic situation and general business environment |

The 2006 questionnaire included a number of alterations to the 2002 questionnaire, principally in order to reduce its size and thus the burden of survey participation. However, the structure of the questions was kept largely unchanged, and the essence remained the same for analytical purposes.

Prior to the actual survey, a pilot survey covering ten enterprises was carried out by staff from DNEAP and CTA in Maputo in order to test the questionnaire. Analysis and discussion of the pilot experience led to some questionnaire revision and provided important inputs for enumerator training. Enumerators were trained over two days in Maputo prior to the implementation of the survey in February 2006, providing an opportunity to identify and clear up remaining ambiguities and potential sources of misinterpretation. As the majority of enumerators had considerable prior survey experience, the training course took the form of a joint discussion and yielded much valuable feedback.

² The results presented in this report refer only to responses to Questionnaire A. Note that section I was introduced as an innovation in the 2006 survey. It is not referred to in this report due to very poor response rates. The issue of business contacts and their use in conducting business clearly remains a sensitive issue for which other alternative research instruments require to be found.

The survey was carried out in February 2006 by seven enumerators employed by CTA with support from a Survey Director and Administrator also employed by CTA, and from the DNEAP. The survey was launched in February 2006, and lasted for six weeks involving personal visits and direct interviews. Initial checking and cleaning of the data was undertaken in the field. Following data entry, a second round of data cleaning was undertaken by DNEAP and the 2006 data was merged with data files from the 2002 surveys to check consistency.

As in the 2002 RPED study, the survey covered six cities (Nampula, Nacala, Guruè, Chimoio, Beira, and Maputo) within five provinces (Nampula, Zambezia, Manica, Sofala, and Maputo) and resulted in 158 completed questionnaires. Table 2.2 presents an overview of the firms interviewed by location and sector.

Table 2.2 2006 Survey: Number of Firms by Location and Sector

| Province | Food processing | Wood/Furniture | Textiles/Garments | Metal/Machinery | Other | Total |
|----------|-----------------|----------------|-------------------|-----------------|--------------|----------------|
| Nampula | 11 (7.0) | 6 (3.8) | 4 (2.5) | 4 (2.5) | 0 (0.0) | 25 (15.8) |
| Zambezia | 1 (0.6) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 1 (0.6) |
| Manica | 1 (0.6) | 4 (2.5) | 1 (0.6) | 1 (0.6) | 2 (1.3) | 9 (5.7) |
| Sofala | 7 (4.4) | 5 (3.2) | 4 (2.5) | 4 (2.5) | 1 (0.6) | 21 (13.3) |
| Maputo | 20 (12.7) | 20 (12.7) | 14 (8.9) | 26 (16.5) | 22 (13.9) | 102 (64.6) |
| Total | 40 (25.3) | 35 (22.2) | 23 (14.6) | 35 (22.2) | 25 (15.8) | 158 (100.0) |

Note: Numbers in parenthesis are in percent.

Given the objective of forming a panel of firm-level data, all firms interviewed in 2002 were approached for participation in the 2006 survey. As such, the sampling procedure was predetermined by that employed in 2002 which in turn attempted to revisit the firms interviewed in the 1998 firm survey. Given the lack of a firm-census in both 1998 and 2002, the 1998 sample had been drawn from a list of firms compiled from a variety of sources and stratified by industry and location using a “bore-hole approach” whereby the probability of being interviewed increases with labour-force size (RPED, 1999). In 2002, replacement and substitute firms were drawn from a semi-random sample of manufacturing firms stratified by sector, size and location and drawn from the National Institute of Statistics (INE) register of business establishments (IFC, 2003).

Firms identified as “exits” in the 2006 survey were replaced by firms selected randomly from the 2002 sample of unused substitute firms. The partial sampling nature of the panel data set and the fact that this was based on a pre-existing sample from 2002 result in a bias against newly established enterprises relative to the population, the data nonetheless provide a rich dataset on which to carry out analyses, particularly on issues of related to firm survival and evolution.

Table 2.3 summarises the relationship between the 2006 survey and the 2002 survey. Of 192 enterprises surveyed in 2002 the survey team was able to locate and interview 137 firms still operating in 2006, giving an annual survival rate of 92 percent.³ That is, it would appear that on average 8 percent of incumbent manufacturing firms exit each year according to the final sample considered, a level comparable to the 9 to 10 percent average exit rate each year cited by Liedholm and Mead (1999) over a range of developing countries.

To confirm this, attempts were made to locate the 60 potential exit firms as definite firm closures rather than reflecting changes in location etc. As can be seen in Table 2.4, 30 firms (55 percent) were actually confirmed as being closed down since the 2002 survey, giving a corrected annual survival rate of 95 percent. The remaining firms represent cases of refusal to participate in the survey, rather than exits. In addition to locating and interviewing 137 of the original firms, 21 replacement firms were also interviewed, giving a total of 158 interviewed firms in 2006.

Table 2.3 Comparing the 2002 and 2006 Enterprise Surveys

| | Surveyed 06 | Confirmed Exits | Total |
|--|-------------|-----------------|-------|
| Initially Surveyed 2002 | 137 | 55 (30) | 192 |
| New Entrants in 2006 (= replacement firms) | 21 | | |
| Total | 158 | | |

Note: In 2002 the RPED report documents that 193 enterprises was interviewed. However, one firm is a double entry and has been excluded in the present analysis. In parenthesis the number of confirmed exit firms.

³ According to the IFC (2003) report 193 firms were interviewed. However, one firm was entered twice: Firm id = 658 and firm id = 828. We therefore end up with 192 observations in the 2002 data.

For comparative purposes, Table 2.4 reports the overall distribution of manufacturing activity in the five provinces according to the INE Census of Enterprises (CEMPRE) from 2002.⁴ Whereas 65 percent of firms surveyed in 2006 are located in Maputo, only 51 percent of the firm census population is reported as being located in Maputo. Consequently the remaining four provinces are somewhat underrepresented in the survey as compared with the 2002 population of firms.

Table 2.4 Census 2002: Number of Firms by Location and Sector

| Province | Food processing | Wood/Furniture | Textiles/Garments | Metal/Machinery | Other | Total Obs. |
|------------|-----------------|----------------|-------------------|-----------------|---------------|------------------|
| Nampula | 122 (5.6) | 48 (2.2) | 18 (0.8) | 13 (0.6) | 7 (0.3) | 208 (9.5) |
| Zambezia | 68 (3.1) | 14 (0.6) | 2 (0.1) | 3 (0.1) | 5 (0.2) | 92 (4.2) |
| Manica | 190 (8.7) | 37 (1.7) | 17 (0.8) | 9 (0.4) | 12 (0.5) | 265 (12.1) |
| Sofala | 282 (12.9) | 81 (3.7) | 84 (3.8) | 28 (1.3) | 25 (1.1) | 500 (22.9) |
| Maputo | 202 (9.2) | 280 (12.8) | 202 (9.2) | 169 (7.7) | 270 (12.3) | 1,123 (51.3) |
| Total Obs. | 864 (39.5) | 460 (21.0) | 323 (14.8) | 222 (10.1) | 319 (14.6) | 2,188 (100.0) |

Note: Numbers in parenthesis are in percent.

In sector terms, Tables 2.2 and 2.4 indicate that Food Processing accounts for 25 percent of the firms sampled, which is below the reported share in the census (40 percent). The sector shares of Wood and Furniture (22 percent) and Textiles and Garments (15 percent) are in basic accordance with the census shares, leaving Metal and Machinery (22 percent) somewhat overrepresented in the 2006 survey. More detailed descriptions of the sample by location, sector, size and ownership form are given in subsequent sections.

⁴ While the CEMPRE provides the best available data on the population of firms in Mozambique for 2002, numbering 28,870 firms in all, it is recognized that this does not in fact cover all firms in existence at that point, with for example some notably large omissions.

3. 2006 Results Summary

This section summarises the main results from the 2006 survey data. Rather than providing an exhaustive account of all the information obtained, it highlights the most interesting issues which emerge in terms of present and future policy debates on enterprise development in Mozambique. Results are unweighted. They reflect “our population of firms” (i.e. the panel). No claim is made that this sample is representative, and no attempt has been made to correct for survey bias.

3.1 General Firm Characteristics

The enterprise size-category definitions employed in this report follow current World Bank definitions. The World Bank SME Department operates with three groups of small and medium-sized enterprises: micro-enterprises have up to 9 employees; small-scale enterprises up to 49 employees; and medium-sized enterprises up to 299. The few enterprises in our data with 300 workers or more are categorized as large enterprises. On this basis, the size distribution of surveyed firms is shown in Table 3.1.

Table 3.1 Geographical Distribution of Firms by Size Category

| | Micro | Small | Medium | Large | Size Unknown | Total |
|------------|------------------|----------------|--------------|-------------|-----------------|-------------------|
| CEMPRE | 24,194 (89.9) | 2,117 (7.9) | 508 (1.9) | 96 (0.4) | | 26,915 (100.0) |
| Maputo | 10 (6.3) | 45 (28.5) | 40 (25.3) | 4 (2.5) | 3 (1.9) | 102 (64.6) |
| Beira | 6 (3.8) | 7 (4.4) | 6 (3.8) | 0 (0.0) | 2 (1.3) | 21 (13.3) |
| Nampula C. | 9 (5.7) | 6 (3.8) | 2 (1.3) | 0 (0.0) | 0 (0.0) | 17 (10.8) |
| Nacala | 2 (1.3) | 2 (1.3) | 3 (1.9) | 1 (0.6) | 0 (0.0) | 8 (5.1) |
| Chimoio | 1 (0.6) | 6 (3.8) | 1 (0.6) | 1 (0.6) | 0 (0.0) | 9 (5.7) |
| Gurue | 0 (0.0) | 0 (0.0) | 0 (0.0) | 1 (0.6) | 0 (0.0) | 1 (0.6) |
| Total | 28 (17.7) | 66 (41.8) | 52 (32.9) | 7 (4.4) | 5 (3.2) | 158 (100.0) |

Note: Numbers in parenthesis are in percent.

The present survey does not as already alluded to capture a nationally representative number of micro and small enterprises. This is highlighted in the first two rows of Table 3.1. Approximately

90 percent of CEMPRE firms are categorised as micro-enterprises compared with only 18.3 percent of interviewed firms in the present survey. As a consequence, small, medium and large firms are clearly over-represented in the present survey.

The distribution of firms across cities appears more representative, with the majority of firms of all size categories concentrated in Maputo (defined for the purposes of this survey to include Matola).

As Table 3.2 shows, surveyed micro-enterprises are mostly concentrated in the garments (42.9 percent) and food sectors (25.0 percent) although the wood and furniture sectors together also form a substantial component (25.0 percent) of micro enterprise activity in the surveyed sample. Small and medium firms are less concentrated in any particular sector while large firms are concentrated in the food sector.

Table 3.2 Sector Distribution of Firms by Size Category

| Sector | Micro | Small | Medium | Large | Size Unknown | No. Firms |
|-------------|--------------|--------------|--------------|--------------|--------------|-----------|
| Food | <i>25.0</i> | <i>25.8</i> | <i>19.2</i> | <i>57.1</i> | <i>40.0</i> | 40 |
| Wood | <i>10.7</i> | <i>15.2</i> | <i>9.6</i> | <i>14.3</i> | <i>0.0</i> | 19 |
| Furniture | <i>14.3</i> | <i>12.1</i> | <i>5.8</i> | <i>0.0</i> | <i>20.0</i> | 16 |
| Textiles | <i>0.0</i> | <i>1.5</i> | <i>3.8</i> | <i>0.0</i> | <i>0.0</i> | 3 |
| Garments | <i>42.9</i> | <i>12.1</i> | <i>5.8</i> | <i>14.3</i> | <i>20.0</i> | 25 |
| Metal/Mach. | <i>7.1</i> | <i>24.2</i> | <i>32.7</i> | <i>0.0</i> | <i>0.0</i> | 35 |
| Other | <i>0.0</i> | <i>9.1</i> | <i>23.1</i> | <i>14.3</i> | <i>20.0</i> | 20 |
| Total | <i>100.0</i> | <i>100.0</i> | <i>100.0</i> | <i>100.0</i> | <i>100.0</i> | |
| No. Firms | 28 | 66 | 52 | 7 | 5 | 158 |

Note: Numbers in italics are in percent

The mean age of firms across sectors is relatively close to the overall mean, as shown in Table 3.3. The average ages range from 20 years to 27 years except in the case of the textile sector, where the average age (of the three firms) is 50 years. Overall, 67 of the firms interviewed were less than 20 years old and 28 less than 10 years old. As stated above, due to the focus on the evolution of firms interviewed in 2002, young firms are under-represented in this survey.

Notably, despite the oft-cited dynamism of the micro and small firm sector, which have higher levels of firm entry and exit (e.g. Sutton, 1997) in comparison with larger establishments, Table 3.4 shows that the mean ages of firms do not in our group of enterprises vary dramatically across firm size groups, ranging from an average of approximately 21 years for small firms to 30 years for medium firms. Indeed, both the mean and median age of (surviving) micro enterprises is greater

than those of small and large firms, with the median age of large firms reported as only 12 years, raising the possibility that micro-firms in Mozambique may be more resilient than larger firms. Although this could be a consequence of bias in the sample, complementary evidence is provided in Section 4.1 in the analysis of firm survival rates.

Table 3.3 Mean Age of Surviving Firms by Sector

| Sector | Mean | Median | S.D. | No. Firms |
|--------------|-------------|-----------|------------|------------|
| Food | 26.7 | 22.5 | 3.1 | 32 |
| Wood | 25.9 | 20.5 | 4.2 | 16 |
| Furniture | 20.4 | 17.0 | 3.6 | 14 |
| Textiles | 50.0 | 46.0 | 8.2 | 3 |
| Garments | 24.4 | 23.5 | 2.5 | 22 |
| Metal/Mach. | 22.3 | 18.0 | 2.8 | 29 |
| Other | 24.2 | 16.0 | 4.6 | 17 |
| Total | 24.8 | 19 | 1.4 | 133 |

Note: S.D.= standard deviation on mean

Table 3.4 Mean Age of Surviving Firms by Size Category

| Firm-Size | Mean Age | S.D. | Median Age | No. Firms |
|--------------|-------------|------------|-------------|------------|
| Micro | 25.4 | 3.0 | 23.0 | 23 |
| Small | 20.6 | 1.8 | 17.0 | 58 |
| Medium | 29.5 | 2.8 | 30.5 | 40 |
| Large | 23.3 | 9.3 | 12.0 | 7 |
| Size Unknown | 35.0 | 5.9 | 33.0 | 5 |
| Total | 24.8 | 1.4 | 19.0 | 133 |

Note: S.D.= standard deviation on mean

Ownership of surveyed enterprises is principally in the form of sole proprietorships and partnerships (39 percent and 44 percent respectively), with limited liability companies representing only 16 percent of sampled firms while 1 percent of firms have some other legal form (e.g. parastatal or productive association), as displayed in Table 3.5. Within these averages, there is clearly some variation across size categories, with 89 percent of micro firms under sole proprietorship. There is a more even split between individual ownership and partnerships for small firms (41 percent and 47 percent respectively). The majority (62 percent) of sampled medium-size firms are partnerships, with large firm ownerships more evenly spread between limited liability firms (43 percent), sole proprietorships (29 percent) and partnerships (29 percent). Whether or not this impacts on firm growth and survival is analysed in Section 4.2.

Table 3.5 Ownership Status of Firms by Size Category

| Firm-Size | Sole Proprietorship | Partnership | Ltd Liability Company | Other | Total | No. Firms |
|-----------|---------------------|-------------|-----------------------|----------|------------|-----------|
| Micro | <i>89</i> | <i>7</i> | <i>4</i> | <i>0</i> | <i>100</i> | 28 |
| Small | <i>41</i> | <i>47</i> | <i>9</i> | <i>3</i> | <i>100</i> | 66 |
| Medium | <i>12</i> | <i>62</i> | <i>27</i> | <i>0</i> | <i>100</i> | 52 |
| Large | <i>29</i> | <i>29</i> | <i>43</i> | <i>0</i> | <i>100</i> | 7 |
| Missing | <i>40</i> | <i>40</i> | <i>20</i> | <i>0</i> | <i>100</i> | 5 |
| Overall | <i>39</i> | <i>44</i> | <i>16</i> | <i>1</i> | <i>100</i> | |
| No. Firms | <i>62</i> | <i>69</i> | <i>25</i> | <i>2</i> | | 158 |

Note: Numbers in italics are in percent

Whether or not a firm was previously government owned is also related to firm-size and is a potential determinant of firm behaviour and/or performance, also a subject of the analysis in Section 4.2. Of 158 firms interviewed in 2006, 56 were previously state-owned and had been privatized, 46 of which were classified as small or medium enterprises in 2002. The size distribution of these firms is presented in Table 3.6, which shows that privatised firms account for only 10.7 percent of the micro-firm sample, 34.8 percent of small firms, 46.2 percent of medium firms and 85.7 percent (six out of seven) of large firms in the sample.

Table 3.6 Privatized and Non-Privatized Firms by Size Categories

| | Micro | Small | Medium | Large | No. Firms |
|------------------------|--------------|--------------|--------------|--------------|-----------|
| Always Privately Owned | <i>89.3</i> | <i>65.2</i> | <i>53.8</i> | <i>14.3</i> | 97 |
| Privatized | <i>10.7</i> | <i>34.8</i> | <i>46.2</i> | <i>85.7</i> | 56 |
| Total | <i>100.0</i> | <i>100.0</i> | <i>100.0</i> | <i>100.0</i> | |
| No. Firms | 28 | 66 | 52 | 7 | 153 |

Note: Always privately owned are firms which were never state owned and therefore not privatised.
Note: Numbers in italics are in percent

Enterprise ownership of surveyed firms is dominated by the domestic private sector which represents an average of 79 percent of the ownership share of surveyed firms. As expected, foreign ownership increases with firm size, representing an average 1.8 percent share of micro-firms, 13.1 percent of small firms, 32.5 percent of medium firms and 41.2 percent of large firms. The state share in surveyed firms is relatively low, representing an average of only 2.2 percent overall, ranging from 0.7 percent of ownership of small firms to a maximum average of 4.2 percent of for medium firms. Firms with state participation are found in Maputo and Beira only.

Table 3.7 Ownership Shares of Firms by Firm Size Category

| Firm-Size | Dom. Private Share | Foreign Share | State Share | Other Share | No. Firms |
|--------------|--------------------|---------------|-------------|-------------|-----------|
| Micro | <i>96.4</i> | <i>1.8</i> | <i>1.8</i> | <i>3.6</i> | 28 |
| Small | <i>86.2</i> | <i>13.1</i> | <i>0.7</i> | <i>1.5</i> | 66 |
| Medium | <i>63.3</i> | <i>32.5</i> | <i>4.2</i> | <i>2.1</i> | 50 |
| Large | <i>55.0</i> | <i>41.2</i> | <i>3.8</i> | <i>0.0</i> | 6 |
| Size Unknown | <i>72.0</i> | <i>24.0</i> | <i>4.0</i> | <i>0.0</i> | 5 |
| Overall | <i>79.0</i> | <i>18.8</i> | <i>2.2</i> | <i>2.0</i> | 155 |

Note: Ownership shares calculated as the mean per size category.

Note: Numbers in italics are in percent

Most surveyed firms produce only one or two goods (at the International Standard Industrial Classification (ISIC) 4-digit classification level), as shown in Table 3.8, with the average firm producing 2.1 goods. The majority of micro-enterprises tend to focus on one good only, as indicated by the median number of goods produced thus increasing their exposure to risk from sudden demand and competition changes within their specific production line. Evidence of this is found in Section 4.2 where product diversification is found to be associated with increased firm survival rates. Interestingly, large firms also have more concentrated production than small and large firms, potentially also increasing the risks faced by these firms.

Table 3.8 Number of Goods Produced by Size Category

| Firm-Size | Mean | S.D. | Median | No. Firms |
|--------------|------|------|--------|-----------|
| Micro | 1.8 | 0.2 | 1.0 | 27 |
| Small | 2.2 | 0.2 | 2.0 | 64 |
| Medium | 2.2 | 0.2 | 2.0 | 49 |
| Large | 1.5 | 0.2 | 1.5 | 6 |
| Size Unknown | 2.4 | 0.4 | 3.0 | 5 |
| Overall | 2.1 | 0.1 | 2.0 | 151 |

Note: Number of goods at the 4-digit ISIC code level.

S.D.= standard deviation on mean

Detailed information was also collected on the characteristics of the general manager in order to gauge whether or not this has an impact on the performance or behaviour of the firm. Given current and growing interest in issues relating to gender, it is noteworthy that in our sample, female managing directors are very much in the minority, managing only 3.4 percent of firms overall and no large firms. Females manage 8 percent of firms in the garments sector, 5.7 percent in the metal/machinery sector and 2.7 percent in the food sector in this sample. Four of the five female led firms are located in Maputo (the other in Chimoio).

Approximately 65 percent of firms surveyed are managed by a Mozambican, with 16.5 percent run by Portuguese and 11.4 percent by people of another non-African, European or Asian nationality. The highest proportion of Mozambican managers is found in the micro-enterprise category, where they represent 89.3 percent of surveyed managers, with Portuguese managers representing 7.1 percent of sampled firms. The share of Mozambican managers decreases with firm size, with 69.7 percent of small firms managed by a Mozambican, 50 percent of medium firms and 42.9 percent of large firms. The same pattern is found for managers of African origin. Some 48.1 percent of sampled general managers are of African origin and 26.6 percent of European origin, implying that a proportion of the Mozambican managers are of European origin. Similarly, 15.2 percent are classified as having Indian origins.

A relatively high proportion of general managers have a university education (31.4 percent) compared to the other education categories although 20.3 percent of managers have incomplete primary education (less than seven years of primary education or no formal education at all).⁵

As Table 3.9 shows, general manager education levels vary considerably within the sample, with micro firms showing a particularly low level of general manager education. No micro firm general manager interviewed had a university education, while only 4 percent had high school education (12th grade). Most micro-firm managers (39 percent) had only a primary education and a quarter of all micro-firms were run by managers with less incomplete primary education. This is in contrast to small, medium and large firms where only 7.6 percent, 5.8 percent and 0.0 percent of managers, respectively, had attained primary education only, although interestingly, a large share of managers in these larger firm categories had either incomplete primary or no formal education at all, representing 18.2 percent of small-firm managers, 21.2 percent of medium-firm managers and 14.3 percent of those from large firms. Of the surveyed firms, medium-sized firms have the largest share of university educated managers (51.9 percent of firms compared with 28.8 percent of small and 28.6 percent of large firms).

⁵ Note that this is probably a result of the change in the education system from colonial to independent times. The criteria used in the survey was number of years of schooling so that those who completed colonial primary education of four years were categorised as having “incomplete primary education” given that primary education currently lasts seven years.

Table 3.9 Educational Levels of General Managers

| Education Level | Micro | Small | Medium | Large | Overall | No. Firms |
|-------------------|--------------|--------------|--------------|--------------|--------------|-----------|
| University | <i>0.0</i> | <i>28.8</i> | <i>51.9</i> | <i>28.6</i> | <i>31.4</i> | 48 |
| High School | <i>3.6</i> | <i>25.8</i> | <i>17.3</i> | <i>28.6</i> | <i>19.0</i> | 29 |
| Secondary | <i>32.1</i> | <i>19.7</i> | <i>3.8</i> | <i>28.6</i> | <i>17.0</i> | 26 |
| Primary | <i>39.3</i> | <i>7.6</i> | <i>5.8</i> | <i>0.0</i> | <i>12.4</i> | 19 |
| Less than Primary | <i>25.0</i> | <i>18.2</i> | <i>21.2</i> | <i>14.3</i> | <i>20.3</i> | 31 |
| Total | <i>100.0</i> | <i>100.0</i> | <i>100.0</i> | <i>100.0</i> | <i>100.0</i> | |
| No. Firms | 28 | 66 | 52 | 7 | 153 | 153 |

Note: High School refers to grade 12 and Secondary to grade 10 while "Less than Primary"

Note: Numbers in italics are in percent

In sector terms, 50.0 percent of general managers of firms in the furniture sector had either incomplete primary or no formal education, the highest proportion of all surveyed sectors. At the other extreme, 66.7 percent of textile firm managers (two out of the three firms) and 51.4 percent of metal/machinery firm managers had university degrees. By providing managers with greater management skills and ability to adopt new techniques and technologies, management education is often considered to have potential implications for firm survival and growth, as discussed further in Section 4.2.

Thirty-two percent of the general managers interviewed had some foreign experience before working for the current firm, a factor which could again potentially result in organisational or technical advantages over other firms. This included 4 percent of micro-firm managers, 34 percent of small firms, 40 percent of medium firms and 71 percent of large firms.

3.2 General Business Environment Perceptions

Firm managers were asked whether or not a list of possible constraints constituted an obstacle to firm performance and growth, and if so to gauge the severity of that obstacle. In this subjective exercise, 0 implies "no constraint", 1 a "slight constraint", 2 a "moderate constraint", 3 a "major constraint" and 4 a "serious obstacle".

Table 3.10, provides a summary of all the aspects on which interviewees were interviewed, with the mean, median and standard deviation of all responses. Although respondents were not asked to put constraints in order, the mean responses imply that overall, firms considered finance costs as the greatest constraint on firm performance and growth, with a mean response of 3.0 and median of 4.0.

This is followed by macroeconomic instability, with a mean of 2.7 and median of 3.0, implicitly due to exchange rate fluctuations and inflation, potentially also related to high finance costs.

Table 3.10 Summary of Constraint Perceptions

| Potential Constraints | No. Firms | Mean | S.D. | Median |
|--|-----------|------|------|--------|
| 1 Telecommunications | 156 | 0.8 | 1.2 | 0.0 |
| 2 Electricity | 157 | 2.1 | 1.6 | 2.0 |
| 3 Transport | 147 | 1.4 | 1.5 | 1.0 |
| 4 Land Access | 71 | 0.8 | 1.5 | 0.0 |
| 5 Tax Rates | 156 | 2.1 | 1.6 | 2.5 |
| 6 Tax Administration | 155 | 1.7 | 1.6 | 2.0 |
| 7 Customs and Trade Regulation Admin. | 142 | 1.7 | 1.7 | 1.0 |
| 8 Labour Regulations | 156 | 2.1 | 1.7 | 2.0 |
| 9 Worker Skills and Education | 156 | 1.7 | 1.5 | 2.0 |
| 10 Business Licensing and Regulations | 139 | 0.9 | 1.2 | 0.0 |
| 11 Domestic Credit Access | 144 | 2.4 | 1.6 | 3.0 |
| 12 Foreign Credit Access | 84 | 1.5 | 1.9 | 0.0 |
| 13 Finance Costs | 144 | 3.0 | 1.5 | 4.0 |
| 14 Economic Policy Uncertainty | 151 | 2.0 | 1.7 | 2.0 |
| 15 Macro Instability | 153 | 2.7 | 1.4 | 3.0 |
| 16 General Corruption | 136 | 2.1 | 1.6 | 2.0 |
| 17 Inspection Corruption | 155 | 1.8 | 1.5 | 2.0 |
| 18 Customs Corruption | 133 | 1.6 | 1.5 | 2.0 |
| 19 Tax corruption | 152 | 1.5 | 1.6 | 1.0 |
| 20 Crime, Theft and Disorder | 156 | 1.8 | 1.5 | 2.0 |
| 21 Anti-competitive Practices | 144 | 1.5 | 1.7 | 0.0 |
| 22 Access to Business Support Services | 147 | 1.4 | 1.5 | 1.0 |
| 23 Access to Market Info | 148 | 1.0 | 1.4 | 0.0 |
| 24 Opening up to International markets | 122 | 1.1 | 1.6 | 0.0 |
| 25 Illegal Import Competition | 130 | 2.3 | 1.8 | 3.0 |

Note: S.D.= standard deviation on mean

Access to domestic credit has the third highest mean constraint rating of 2.4 (median of 3.0), again implying that the perception of firm owners is that credit constraints are holding back their firms' growth and performance. While each aspect is analysed in more depth in the relevant part of this section, more general aspects such as infrastructures and economic policy are analysed here.

Table 3.11 shows that the proportion of firms which did not consider *macroeconomic instability* a constraint to their firm's performance is far higher for micro firms (32 percent) than any other size category. Nonetheless, 46 percent of micro enterprises still classified this aspect as a major or serious constraint. As the table shows, small, medium and large firms were more generally critical of macro instability.

Table 3.11 Macroeconomic Instability as a Constraint by Firm Size

| Level of Constraint | Micro | Small | Medium | Large | Size Unknown | Overall |
|---------------------|-------------|-------------|-------------|-------------|--------------|-------------|
| 0 None | <i>32.1</i> | <i>10.6</i> | <i>7.7</i> | <i>14.3</i> | | <i>13.7</i> |
| 1 Slight | <i>3.6</i> | <i>10.6</i> | <i>7.7</i> | <i>0.0</i> | | <i>7.8</i> |
| 2 Moderate | <i>10.7</i> | <i>15.2</i> | <i>13.5</i> | <i>28.6</i> | | <i>15.0</i> |
| 3 Major | <i>25.0</i> | <i>19.7</i> | <i>34.6</i> | <i>28.6</i> | | <i>26.1</i> |
| 4 Serious | <i>21.4</i> | <i>39.4</i> | <i>36.5</i> | <i>28.6</i> | | <i>37.3</i> |
| NA | <i>7.1</i> | <i>4.5</i> | <i>0.0</i> | <i>0.0</i> | | |
| Mean | 2.0 | 2.7 | 2.8 | 2.6 | 3.6 | 2.7 |
| S.D. | 0.3 | 0.2 | 0.2 | 0.6 | 0.4 | 0.1 |
| Median | 2.5 | 3.0 | 3.0 | 3.0 | 4.0 | 3.0 |
| No. Firms | 26 | 63 | 52 | 7 | 5 | 153 |

Note: Numbers in italics are in percent

Note: S.D.= standard deviation on mean

In sector terms, most impact is apparent in the food sector, where 50 percent of firms cited macroeconomic instability as a serious constraint and only 10 percent of firms responded that it posed no constraint at all. Also, of the three textiles firms all said it was either a major or serious constraint, potentially reflecting production processes which are more vulnerable to inflation and exchange rate shocks.

Although macroeconomic instability is clearly perceived to be a constraint to business, uncertainty relating to economic policy (*Economic Policy Uncertainty*) is less so, with respondents perceiving it on average as only a moderate constraint (2.0) to growth and firm performance. Although generally considered less of a constraint than macroeconomic instability, the pattern across firm-sizes is similar, with 54 percent of micro firms not considering it an obstacle at all compared with 29 percent of small firms, 17 percent of medium firms and 29 percent of large firms.

Regarding *Crime, Theft and Disorder*, the mean response was 1.8, making it a less than moderate constraint on average. Once again, a large proportion of micro-enterprises (50 percent) did not view this aspect as a constraint on business, while 43 percent of large firms viewed it as a serious constraint, resulting in mean perception levels of 1.1 for micro firms and 3.1 for large firms. This stark difference in perception between micro and large firm sizes may potentially reflect organisational differences between differently sized firms which make smaller firms less at risk from theft, or may reflect a targeting of large firms by criminals or theft by employees.

Despite the common and long-running discussion regarding private land ownership and the legal constraints on trading of land-use titles, firm responses from the present survey suggest that *Land Access* is not seen as a major constraint. Indeed, the mean response was 0.8, implying that it

imposes a “slight” constraint on firm practices with the mean micro-firm response being 0, the small firm response 0.7, medium firm 1.3 and large firm response 2, making it a “moderate” constraint for this category only. However, given that the sample of firms does not include any new firms opened since 2002 it is possible that this issue may constitute a more serious constraint for those firms requiring access to land to start a business.

Other potential constraints to business relate to infrastructures. Beginning with *Electricity*, firms reported a mean constraint level of 2.1, implying that issues relating to electricity supply still pose a moderate problem to most firms. Again, the mean for micro firms (1.5) was relatively lower than small (2.1), medium (2.1) and large firms (3.3), potentially reflecting a variation in capital intensity of production and thus varying degrees of dependence on a steady and reliable flow of electricity. The perceived severity of the constraint varied considerably with location, from a low of 1.1 in Nampula to a high of 2.9 and 3.0 in Nacala and Gurue respectively. Indeed the median levels of perceived constraints to business caused by the electricity supply vary from 0 in Nampula, to 1.0 in Chimoio, 2.0 in Maputo, 3.0 in Beira and Gurue and 4.0 in Nacala, implying that locating in Maputo and Beira does not necessarily convey a benefit in this regard.

Transportation is reported as being a “slight” to “moderate” constraint (1.4) to business performance and growth in the surveyed sample, the mean for micro firms of 1.2 increasing to 1.5 for small and medium firms and increasing to 2.0 for large firms. Despite anecdotal evidence of poor transport connections and ensuing high transport costs, the level and variation of transportation as a constraint to business are both relatively low across most firm locations, with one firm in Gurue the only case where it is categorised as posing a serious constraint. For other locations than Gurue the mean perceived constraint is considerably lower at 2.6 for Nacala (reportedly due to port handling issues), 1.4 in Maputo and Beira, 1.3 in Nampula and 0.4 in Chimoio

Finally, *Telecommunications* is not generally seen as a constraint to business with a mean response level of 0.8. Firms in general did not consider telecommunications a constraint to the running of their business.

The remaining constraints from Table 3.10 are described in the following sections. Changes in perceptions since the 2002 RPED survey are also highlighted in Section 4, providing a picture of changes in perceptions, if not constraints.

3.3 Labour, Wages and Social Benefits

The quality of the workforce is clearly a determining factor in the performance of firms. Improved human capital, from the manager down to the workers, through increased levels of education, experience and better health are likely to improve efficiency and output levels, a result found by a variety of authors including Liedholm and Mead (1998, 1999) and McPherson (1996) amongst others. In addition, regulations relating to the hiring and firing of workers may impact on firm performance by introducing inefficiencies into the labour market, thus impeding firms from operating at their most efficient level.

3.3.1 Labour Regulations

How firms interact with the labour market may be affected to a large extent by labour regulations. This issue has been highlighted recently in Mozambique with the government revision of the labour law which ostensibly seeks to increase labour market flexibility.⁶ As shown in Section 4, the perceived severity of labour regulations as a constraint to firm performance and growth has increased since 2002.

Table 3.12 Firm Perceptions of Labour Regulations as a Constraint

| Level of Constraint | Micro | Small | Medium | Large | Size Unknown | Overall |
|---------------------|-------------|-------------|-------------|-------------|--------------|-------------|
| None | <i>60.7</i> | <i>34.8</i> | <i>13.5</i> | <i>14.3</i> | | <i>32.7</i> |
| Slight | <i>3.6</i> | <i>9.1</i> | <i>5.8</i> | <i>0.0</i> | | <i>6.4</i> |
| Moderate | <i>3.6</i> | <i>10.6</i> | <i>19.2</i> | <i>14.3</i> | | <i>12.8</i> |
| Major | <i>0.0</i> | <i>16.7</i> | <i>26.9</i> | <i>14.3</i> | | <i>17.3</i> |
| Serious | <i>28.6</i> | <i>27.3</i> | <i>34.6</i> | <i>57.1</i> | | <i>30.8</i> |
| NA | <i>3.6</i> | <i>1.5</i> | <i>0.0</i> | <i>0.0</i> | | |
| Mean | 1.3 | 1.9 | 2.6 | 3.0 | 1.0 | 2.1 |
| S.D. | 0.4 | 0.2 | 0.2 | 0.6 | 0.7 | 0.1 |
| Median | 0.0 | 2.0 | 3.0 | 4.0 | 0.0 | 2.0 |
| No. Firms | 27 | 65 | 52 | 7 | 5 | 156 |

Note: Numbers in italics are in percent
Note: S.D.= standard deviation on mean

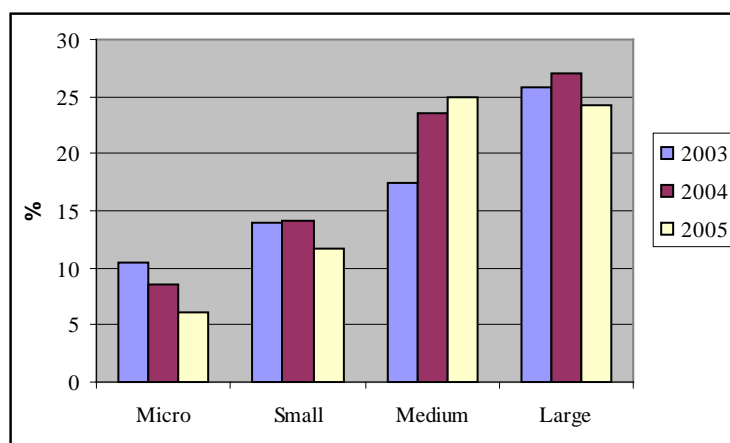
Restricting analysis here to the 2006 survey, Table 3.12 shows the severity with which firms view labour regulation as a constraint and how this again varies with firm size. The majority of micro-firms (60.7 percent) are apparently unconcerned about labour regulation while 57.1 percent of large firms consider it a serious obstacle. Nonetheless, those micro-enterprises who consider it some kind

⁶ This has been studied in an analysis by DNEAP in conjunction with the World Bank.

of obstacle tend to see it as a large one, a similar pattern seen across the firm sizes. This may imply that perceptions are led more by individual firm experience of whether they have “had to” worry about it as a constraint or not due to inspections etc., in particular given the oft-cited uneven application of government regulations.

As a further measure of the constraints posed by current labour regulations, a high ratio of temporary to permanent workers may imply that hiring and firing costs are prohibitive, thus encouraging greater use of short-term contracts which is anecdotally currently the case in much of the enterprise sector.⁷

Figure 3.1 Proportion of Temporary to Total Employees by Size



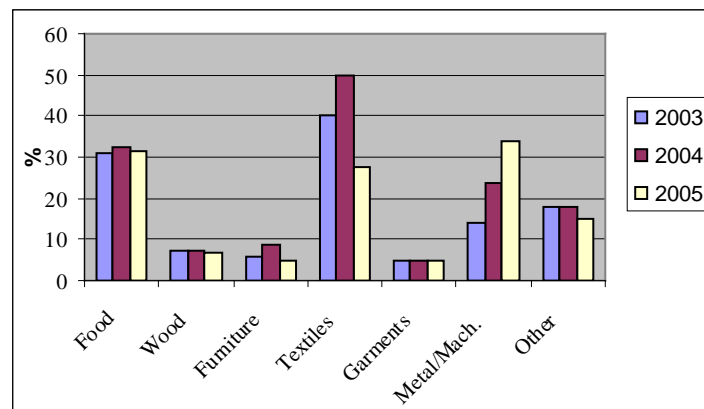
As Figure 3.1 illustrates, workers on temporary contracts in surveyed firms increase as a proportion of total workers as firm size increases. The rise is from 6 percent for micro firms in 2005 to 25 percent and 24 percent of the total workforce for medium and large firms in the same year. The relative number of short-term contracts thus increases with perceptions of labour regulations as a constraint. Although not conclusive, this may again be a reflection of differing regulatory conditions for different sized firms.

Although the use of temporary contracts may be linked to labour regulations, it may also relate to seasonal occupations. As Figure 3.2 illustrates, the breakdown of temporary and permanent workers varies considerably between sectors, with food and textiles demonstrating a far higher dependence

⁷ Data does not exist on other issues relating to labour regulations such as labour inspections etc (although information is collected on inspections in general in section 3.4).

on temporarily contracted workers than other sectors and indeed the size-category averages, implying that sector characteristics may be more important determinants of temporary or permanent contract use.⁸ A case in point is the food sector which upon closer inspection of the underlying data appears to be driven to a large extent by the tea sector which employs a large number of seasonal workers.

Figure 3.2 Proportion of Temporary to Total Employees by Sector



While this report seeks to highlight some potential relationships rather than establish causality, it is interesting to note that according to Table 3.13, the only firms hiring substantial numbers of new employees are large firms, implying greater and more frequent dealings with labour regulations and thus perhaps a higher level of perceived constraint. As the table indicates, micro enterprises hired an average of 0.2 workers in 2005, compared to 1.3 for small firms, 5.5 for medium firms and 34.8 for large firms. The variation of employment growth between firm-sizes is further discussed in Section 4.2.

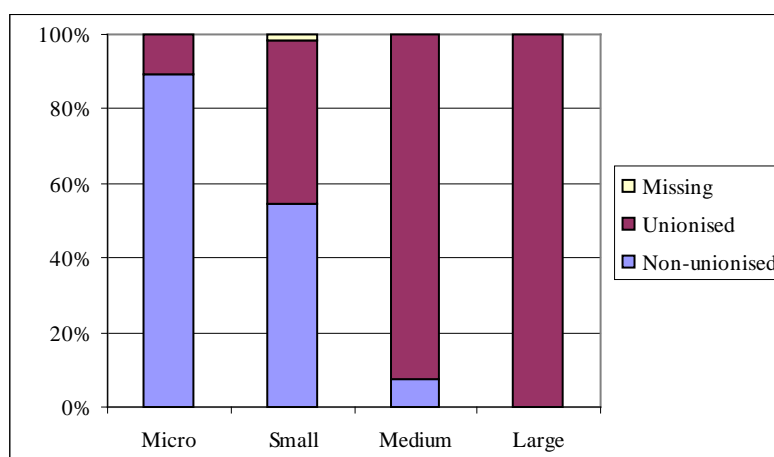
Finally, as Figure 3.3 illustrates, the number of firms whose workers are unionised also varies with firm size, with the workers of all large and most medium firms unionised, while only a minority of micro-firm workers belong to a union.

⁸ Proportions were calculated based on the mean number of temporary workers as a proportion of total workers by firm category.

Table 3.13 Number of Newly Hired Workers in 2005

| Firm-Size | Mean | S.D. | Median | No. Firms |
|--------------|------|------|--------|-----------|
| Micro | 0.2 | 0.1 | 0.0 | 28 |
| Small | 1.3 | 0.2 | 0.0 | 64 |
| Medium | 5.5 | 1.4 | 1.0 | 51 |
| Large | 34.8 | 12.4 | 26.5 | 6 |
| Size Unknown | 5.3 | 5.9 | 1.0 | 3 |
| Overall | 3.9 | 0.8 | 0.0 | 152 |

Note: S.D.= standard deviation on mean

Figure 3.3 Proportion of Firms with Unionised Workers by Firm Size

3.3.2 Human Resources

Asked whether or not they found worker skill and education levels to be a constraint to firm operations, 67.9 percent of micro-firms generally reported that worker qualifications and education levels posed no constraint, while responses were more varied for larger firms, as shown in Table 3.14. Nonetheless, the overall average response of 1.7 implies that this is perceived as a slight to moderate constraint to business growth and performance.

Despite the apparent satisfaction with worker education, firm education levels, illustrated in Figure 3.4 clearly show that a large proportion of the workforce in all firm sizes has a rather low level of education, not having completed seven years of primary education.⁹ In particular, 78 percent of employees in micro-enterprises either received no formal education at all or did not complete seven

⁹ Note that the principal criteria used for measuring attained education level was based on the current system where primary education consists of seven years of education. Thus, workers who completed primary education under the colonial system, with a duration of only four years, were classified as having incomplete primary education only.

years of primary education, compared with 40 percent of the workforce in small firms, 46 percent in medium firms and 52 percent in large firms.

Table 3.14 Perception of Worker Skills and Education as a Constraint

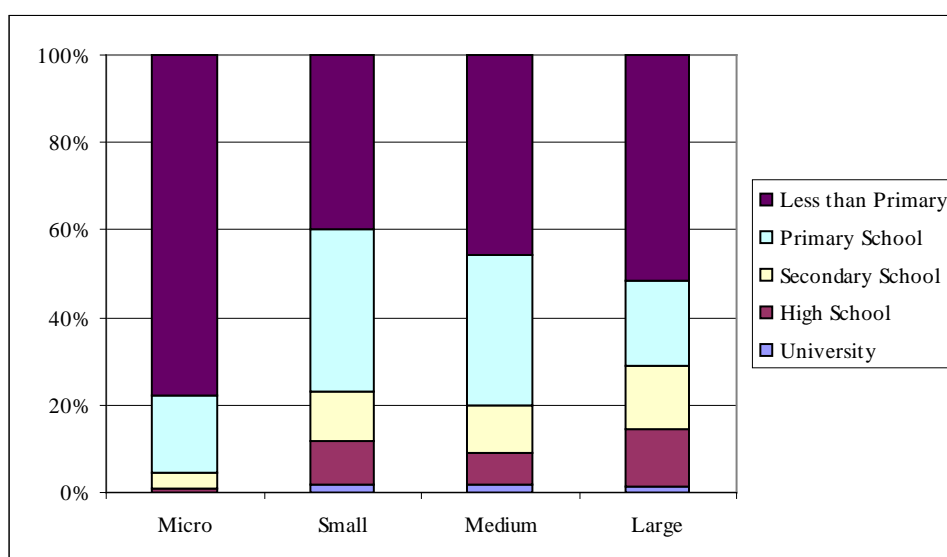
| Level of Constraint | Micro | Small | Medium | Large | Size Unknown | Overall |
|---------------------|-------------|-------------|-------------|-------------|--------------|--------------|
| None | <i>67.9</i> | <i>40.9</i> | <i>13.5</i> | <i>28.6</i> | | <i>35.9</i> |
| Slight | <i>3.6</i> | <i>16.7</i> | <i>11.5</i> | <i>0.0</i> | | <i>11.54</i> |
| Moderate | <i>7.1</i> | <i>15.2</i> | <i>21.2</i> | <i>28.6</i> | | <i>17.31</i> |
| Major | <i>17.9</i> | <i>12.1</i> | <i>30.8</i> | <i>14.3</i> | | <i>19.23</i> |
| Serious | <i>3.6</i> | <i>13.6</i> | <i>21.2</i> | <i>28.6</i> | | <i>16.03</i> |
| NA | <i>0.0</i> | <i>1.5</i> | <i>1.9</i> | <i>0.0</i> | | |
| Mean | 0.9 | 1.4 | 2.4 | 2.1 | 2.4 | 1.7 |
| S.D. | 0.3 | 0.2 | 0.2 | 0.7 | 0.8 | 0.1 |
| Median | 0.0 | 1.0 | 3.0 | 2.0 | 2.0 | 2.0 |
| No. Firms | 28 | 65 | 51 | 7 | 5 | 156 |

Note: Numbers in italics are in percent

Note: S.D.= standard deviation on mean

University educated workers represent a very small proportion of the workforce in all firm size categories, while large firms have the highest proportion of high school graduates of 13 percent of employees. Thus, despite a general consideration that education levels do not constrain business, it is clear that the majority of workers in the sample have only a very basic level of schooling. The implications of varying education levels of the workforce are again analysed in Section 4.2.

Figure 3.4 Education Levels by Firm Size



Worker recruitment is reportedly carried out primarily through allocations by local authorities, with 77 percent of firms reporting this as one of their principal recruitment methods. Recommendations from workers, friends and family were also a principal method for 65 percent of firms. Across size categories, 70 percent of micro firms classed friend and worker recommendations as a principal mechanism for hiring workers, declining to a still substantial 46 percent for large firms. These two recruitment methods were considerably more popular than other possibilities such as unsolicited CVs (used by 38 percent of firms), personal contacts of the general manager (35 percent) newspaper adverts etc. (23 percent) and labour exchange with other firms (8 percent).

Most firms denied that it would be considered normal for an individual to offer money in order to be given a job although some firms did admit that this is a real possibility. Of those firms, all were concentrated in small and medium firms, potentially implying that conditions in micro and large firms would not allow this to occur.

3.3.3 HIV/AIDS

Given the extent of the HIV/AIDS pandemic in Mozambique, it is important to gauge the impact of the illness on business conditions at the firm level. However, despite the widely acknowledged high adult prevalence rate (estimated by United Nations Development Programme(UNDP) (2005) to be 13 percent), general manager impressions on the whole implied that HIV/AIDS has yet to have a notable impact on the operations of (the surveyed) firms. As the following figure indicates, the vast majority of all firms interviewed said that HIV/AIDS did not have a notable effect on operations.

Perhaps as a consequence of this apparent low impact (or lack of knowledge or denial of the impact), a relatively small number of surveyed firms had organised worker activities relating to HIV/AIDS awareness (30.0 percent), although a higher proportion (54.6 percent) had participated by allowing visits to take place from Non-Government Organisations (NGOs) and unions who carried out awareness activities. As Table 3.15 illustrates, organisation appears significantly related to firm-size while participation is negatively related to firm-size.

Although not necessarily due to HIV/AIDS and related illnesses, absenteeism was cited as a real problem for a large number of firms. Almost 30 percent of micro-firms claimed that absenteeism had been a problem in 2005, increasing to 86 percent for large firms. While some may be due to general lack of discipline, anecdotal evidence suggests that a large amount of absenteeism results

from illness and attending the funerals of family and extended family members, a potential indirect result of the HIV/AIDS pandemic.

Figure 3.5 Does HIV/AIDS Have a Notable Impact on Firm Operations?

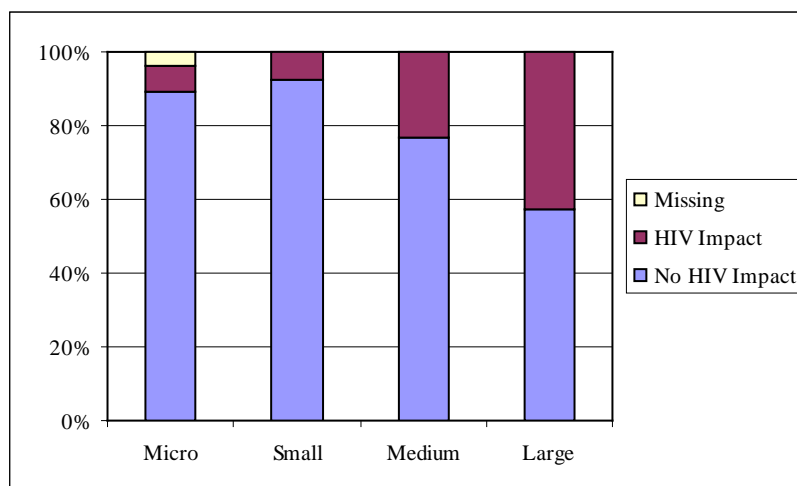


Table 3.15 Firms Organising or Participating in HIV/AIDS Awareness Activities

| | Micro | Small | Medium | Large | Overall | No. Firms |
|--------------------------------------|--------------|--------------|--------------|--------------|--------------|-----------|
| Firm Organised HIV Activities | <i>17.9</i> | <i>26.2</i> | <i>35.3</i> | <i>83.3</i> | <i>30.0</i> | 45 |
| Firm Did Not Org. HIV Activities | <i>82.1</i> | <i>73.8</i> | <i>64.7</i> | <i>16.7</i> | <i>70.0</i> | 105 |
| Total | <i>100.0</i> | <i>100.0</i> | <i>100.0</i> | <i>100.0</i> | <i>100.0</i> | 150 |
| Firm Participated in HIV Activities | <i>78.6</i> | <i>49.2</i> | <i>26.9</i> | <i>14.3</i> | <i>54.6</i> | 69 |
| Firm Did Not Part. in HIV Activities | <i>21.4</i> | <i>50.8</i> | <i>73.1</i> | <i>85.7</i> | <i>45.4</i> | 83 |
| Total | <i>100.0</i> | <i>100.0</i> | <i>100.0</i> | <i>100.0</i> | <i>100.0</i> | 152 |

Note: Numbers in italics are in percent

3.3.4 Worker Wages

Forty-nine percent of surveyed firms set wage rates using some function of the minimum wage as the principal criteria (though not necessarily paying the minimum wage itself). Thirty-two percent of firms also cited worker experience and qualifications as being a principal wage-setting determinant while only 5 percent of firms claimed to consider wages paid in other local firms and 7 percent stated that individual and collective negotiation were a fundamental factor.

This implies that the annual tripartite discussions between government, the unions and the private sector regarding the minimum wage have more far-reaching consequences than just those at the bottom of the income distribution.

The share of workers actually receiving the minimum wage varies from 48 percent of employees in micro-enterprises to 19 percent in large enterprises. Interestingly, the share of workers receiving the minimum wage is considerably lower in firms with foreign ownership participation than those with only domestic ownership (17 percent of workers compared with 31 percent).

3.4 Fees, Taxes and Informal Costs

Business regulation, taxation and corruption are fundamental in any discussion of private sector development and the business environment in developing countries. High formal sector entry costs, high health, labour and other regulatory compliance costs and punitive tax rates can push firms to operate informally, foregoing legal recognition in order to reduce operating costs. The ability of a firm to reduce or avoid these costs also relates to the corruptibility of public officials. Corruption may also exist due to predatory public officials working to extract private rents for fictitious infractions or questionable interpretations of the rules. The issues of bureaucracy, taxation and corruption have potentially differing impacts on heterogeneous firms, in particular in terms of firm size, a factor which has already proven to be important.

3.4.1 Government Regulation

As a basic indicator of the regulatory costs of business in Mozambique, the World Bank's (2005) "Doing Business" survey ranked it 139 out of 155 countries surveyed in terms of regulatory costs (although the representative firm used may not truly reflect the Mozambican context).¹⁰

Despite this, and perhaps as a reflection of the lack of new firms in the sample, only 42 percent of firms interviewed considered "Business Licensing and Regulations" to be a constraint to the operations and growth of the firm, giving a mean constraint level of 0.9, just below the category of "slight constraint". Although low for all size categories, there is a potential size effect with micro firms viewing registration and licences as only a slight constraint (0.5), small and medium as a slightly more serious constraint (0.8 and 1.0, respectively) and large firms viewing it as more of a moderate constraint (1.8). While perceptions might be expected to change for firms of different

¹⁰ The representative firm employed by the World Bank is 100% domestically owned with five owners, operating in the most populous city, with 10 times per capita income as start-up capital, performing general industrial or commercial activities, receiving no investment benefits, with 201 employees (or 50 employees one month after opening) (World Bank, 2005).

ages, the response of firms was relatively stable across age categories, varying between 0.5 for firms aged between 20 and 30 years and 1.0 for firms younger than ten years old and between 10 and 20 years old. Again, however, this does not include firms which have been through the registration process since 2002, during which time considerable progress has reportedly been made to simplify procedures.

The average time taken to acquire the most important license was reported as 75.7 days, the maximum being 94.8 days for firms aged between 20 and 30 years, with firms of less than ten years still reporting a high 76.1 days. Importantly, these refer only to the “most important operating licence” and are in fact lower to these numbers found in the World Bank’s “Doing Business Survey”, which indicate that it took 14 steps, 153 days and \$237 to start a business in Mozambique in 2005, following all the official channels.

On-going bureaucratic regulation also impacts differently on differently sized firms. Managers of micro-firms used 4.9 percent of their time on dealing with government regulations as compared to 12.4 percent of medium enterprises. As Table 3.16 shows, micro firms report spending only 1.5 days per month dealing with bureaucracy, including inspections, tax forms, licensing etc in 2005, while small firms spent more than an additional full day, and medium firms spent 4.3 days. Interestingly, large firms reported spending only two days dealing with bureaucratic necessities, suggesting that on this count the relative burden of bureaucracy lies more with small and especially medium-sized firms, perhaps due to certain economies of scale in bureaucracy for firms above a certain size and income.

Table 3.16 Man-Days per Month Spent on Bureaucracy by Firm Size

| Firm-Size | Mean | S.D. | Median | No. Firms |
|--------------|------|------|--------|-----------|
| Micro | 1.5 | 0.4 | 1.0 | 26 |
| Small | 2.6 | 0.5 | 1.0 | 62 |
| Medium | 4.3 | 0.8 | 3.0 | 47 |
| Large | 2.0 | 0.7 | 2.0 | 7 |
| Size Unknown | 3.2 | 1.8 | 2.0 | 5 |
| Overall | 2.9 | 0.3 | 2.0 | 147 |

Note: Bureaucracy includes taxes, licenses, inspections, dealing with authorities etc.

Note: S.D.= standard deviation on mean

Despite the lower cost in terms of time, firm size and number of inspection visits appears to be positively correlated, with micro firms reporting an average of just over two inspection visits in

2005 while large firms report five visits. Nonetheless, the relative costs in terms of time required to comply with bureaucratic procedures is likely to be higher for micro and small firms.

3.4.2 Taxation

Seventy-one percent of firms considered tax rates a constraint to their operations and growth while 63 percent considered tax administration a constraint. Tax rates were considered more of a constraint (2.1) than tax administration (1.7), although tax policy makers might be more concerned by constraints posed by tax administration, given that firms might be expected to complain about tax rates no matter what the conditions.

In response to whether or not the firm had an Individual Tax Payer Number (NUIT), introduced in 2003, only four micro-sized firms from the sample did not, implying that these firms do not pay taxes. Of those firms which do pay taxes, their burden can in principle be reduced via two main channels: either through legal exemptions or through the underreporting of sales or income.

The size distribution of firms and their reported tax exemptions is provided in Table 3.17. This shows that, three out of five firms claiming to have personal income tax (IRPS) exemptions are micro while the other two firms are small. Notably no medium or large firms claim this exemption. Reported firm income tax (IRPC) exemptions are more common in medium-sized firms (half of those claiming to have exemptions) while small and large firms are equally likely to be exempt, a potential fiscal benefit under the investment law.

Table 3.17 Reported Tax Exemptions by Firm Size

| Firm-Size | IRPS | IRPC | VAT (imp) | VAT (Dom) | Duties | Total |
|--------------|----------|-----------|-----------|-----------|-----------|-----------|
| Micro | 3 | 1 | 0 | 4 | 0 | 8 |
| Small | 2 | 2 | 0 | 4 | 2 | 10 |
| Medium | 0 | 5 | 5 | 3 | 8 | 21 |
| Large | 0 | 2 | 0 | 0 | 1 | 3 |
| Size Unknown | 0 | 0 | 1 | 1 | 1 | 3 |
| Total | 5 | 10 | 6 | 12 | 12 | 45 |

Note: VAT (dom) is Value Added Tax on domestic transactions and VAT (imp) is Value Added Tax on imports

Value Added Tax (VAT) on domestic transactions has the highest number of firms claiming exemption, where only large firms appear to be poorly represented. Five out of the six firms

claiming to have VAT exemption on imports are medium-sized, with three of these belonging to the food processing sector while customs duties exemptions again appear to accrue to medium-sized firms more than others.

While a number of firms claim to have exemptions and therefore did not report paying these taxes, implicit tax evasion can be imputed for those firms not claiming exemption and not paying taxes.¹¹ As Table 3.18 shows, no firms in the sample are apparently evading IRPS while two micro firms are potentially evading IRPC. Controlling for firms which do actually use (directly) imported goods, a high number of micro and small firms appear to be evading VAT on their imports.

Table 3.18 Implied Tax Evasion by Firm Size

| Tax Category | Micro | Small | Medium | Large | Total |
|--------------|-------|-------|--------|-------|-------|
| IRPS | 0 | 0 | 0 | 0 | 0 |
| IRPC | 2 | 0 | 0 | 0 | 2 |
| VAT (imp) | 9 | 12 | 2 | 0 | 23 |
| VAT (Dom) | 4 | 1 | 0 | 0 | 5 |
| Duties | 8 | 12 | 3 | 1 | 24 |
| None | 5 | 41 | 47 | 6 | 99 |
| Total | 28 | 66 | 52 | 7 | 153 |

Note: VAT (dom) is value added tax on domestic transactions and VAT (imp) is value added tax on imports

Firms can also reduce tax payments through the false declaration of sales values to the tax authority. By asking about what a firm regards as the percentage declared by the “typical” firm of their size and sector, an indirect indication of under-declaration can also be found. As Table 3.19 shows, the level again varies with firm size category, although contrary to what might be expected, the largest average undeclared sales are for medium-sized firms, followed by small, large and then micro firms.

The low reported level of undeclared sales for micro firms may be a result of the limited tax obligations for micro firms, which mean that they have less incentive to underreport, while medium firms bear the brunt of revenue-raising efforts, thus increasing their incentive to hide output.

¹¹ This method was also used in the case of Cameroon by Gauthier & Gersowitz (1997)

Table 3.19 Proportion of Sales Undeclared for Tax Purposes

| Firm-Size | Mean | S.D. | Median | No. Firms |
|--------------|------|------|--------|-----------|
| Micro | 7.6 | 3.6 | 0.0 | 19 |
| Small | 15.2 | 4.1 | 0.0 | 44 |
| Medium | 18.8 | 5.2 | 0.0 | 32 |
| Large | 15.0 | 17.3 | 0.0 | 4 |
| Size Unknown | 40.0 | 28.3 | 30.0 | 4 |
| Overall | 15.9 | 2.7 | 0 | 103 |

Note: S.D.= standard deviation on mean

3.4.3 Corruption and Bribery

Regulation and taxation are potentially closely related to bribery and corruption, and they are prominent components of the “business environment” in a developing country. Seventy five percent of responding firms (126) viewed “General Corruption” as a constraint to business operations and growth, with a mean of 2.1, more than those for corruption relating to inspections (69 percent), corruption relating to customs activities (65 percent) or corruption relating to taxation (59 percent). This implies that other aspects of government behaviour, through activities other than inspections, customs and tax, are creating obstacles to firm performance.

In a similar vein to the findings on hidden output and firm size, for the period from 2002 to 2005, medium-sized firms reported having bribed an official more than firms from other size categories. More specifically, 44 percent of medium-sized responding firms had done so compared with only 24 percent of small firms, 14 percent of large firms and 7 percent of micro firms. This may again reflect a lower level of regulatory attention on micro firms thus reducing corrupt or tax-evading opportunities or necessities.

Table 3.20 Proportion of Firms Which Paid a Bribe in 2002-2005

| | Micro | Small | Medium | Large | Overall | No. Firms |
|---------------|-------------|-------------|-------------|-------------|-------------|-----------|
| Bribed | <i>7.1</i> | <i>22.7</i> | <i>44.2</i> | <i>14.3</i> | <i>26.8</i> | 109 |
| Did Not Bribe | <i>92.9</i> | <i>72.7</i> | <i>55.8</i> | <i>85.7</i> | <i>71.2</i> | 41 |
| No Response | <i>0.0</i> | <i>4.5</i> | <i>0.0</i> | <i>0.0</i> | <i>2.0</i> | 3 |
| No. Firms | 28 | 63 | 52 | 7 | | 153 |

Note: Numbers in italics are in percent

This interpretation also corresponds with the responses of the 44 firms who claimed not to have bribed, where the proportion of firms where a bribe was solicited is also high for medium-sized firms (31 percent), although slightly below the 33 percent for large firms.

Table 3.21 Proportion of Firms Where Bribe Not Paid But Solicited

| | Micro | Small | Medium | Large | Overall | No. Firms |
|---------------------|-------------|-------------|-------------|-------------|-------------|-----------|
| Bribe Solicited | <i>7.1</i> | <i>13.6</i> | <i>17.3</i> | <i>28.6</i> | <i>14.4</i> | 87 |
| Bribe Not Solicited | <i>85.7</i> | <i>59.1</i> | <i>38.5</i> | <i>57.1</i> | <i>56.9</i> | 22 |
| No response | <i>7.1</i> | <i>27.3</i> | <i>44.2</i> | <i>14.3</i> | <i>28.8</i> | 44 |
| No. Firms | 28 | 66 | 52 | 7 | | 153 |

Note: Numbers in italics are in percent

The main purposes of both bribes paid and solicited were for “Service Connections” (23 percent of the 61 respondents) and “Licensing etc.” (21 percent), followed by Customs (16 percent), Tax Issues and Labour Inspections (both 13 percent), the awarding of public contracts (10 percent) and finally to receive state payments for services rendered (3 percent).

Table 3.22 Estimated Average Proportion of Sales Paid in Bribes Annually For Bribing Firms

| Firm-Size | Mean | S.D. | Median | No. Firms |
|--------------|------|------|--------|-----------|
| Micro | 5.5 | 1.9 | 2.0 | 17 |
| Small | 4.7 | 1.0 | 1.0 | 38 |
| Medium | 7.0 | 2.0 | 5.0 | 25 |
| Large | 15.0 | 7.1 | 15.0 | 2 |
| Size Unknown | 4.3 | 3.6 | 3.0 | 3 |
| Overall | 5.7 | 0.8 | 5.0 | 85 |

Note: S.D.= standard deviation on mean

The sizes of bribes clearly depend on a variety of factors, in particular the size of the business concerned. Two large firms which paid bribes estimated that on average 15 percent of sales is paid in bribes annually, the highest of all the size categories. Both micro and small firms estimated a value of around 5 percent of sales, with medium firms estimating a slightly higher 7 percent of sales value, thus constituting a significant additional operating cost for firms which may also affect firm growth and survival.

3.5 Finance and Credit

Access to investment credit is perhaps the most widely cited constraint to private sector development in developing countries. Given the combination of weak financial systems and high levels of investment risk, punitive interest rates are generally thought to lead to credit rationing, to the detriment of a credit-starved private sector.

Opinions from the surveyed sample appear to uphold this view, with 76 percent and 85 percent of interviewed firms respectively judging domestic credit access and financing costs (interest rates) to be a constraint to firm performance and growth. This is supported by the data in Table 3.23 which show that only 25.5 percent of firms have access to a bank loan and 22.2 percent of firms have access to an overdraft. Access to informal loans is also shown for comparative purposes, indicating that an even lower proportion of firms have credit through this channel, implying that this does not serve as a substitute for formal loans and overdrafts.

Table 3.23 Firm Access to Overdraft Facility, Formal and Informal Loans

| Credit Status | Micro | Small | Medium | Large | Overall | No. Firms |
|------------------|--------------|--------------|--------------|--------------|--------------|-----------|
| Bank Loan | <i>17.9</i> | <i>16.7</i> | <i>38.5</i> | <i>42.9</i> | <i>25.5</i> | 39 |
| No Bank Loan | <i>82.1</i> | <i>78.8</i> | <i>61.5</i> | <i>57.1</i> | <i>72.5</i> | 111 |
| No Response | <i>0.0</i> | <i>4.5</i> | <i>0.0</i> | <i>0.0</i> | <i>2.0</i> | 3 |
| Total | <i>100.0</i> | <i>100.0</i> | <i>100.0</i> | <i>100.0</i> | <i>100.0</i> | 153 |
| Overdraft | <i>7.1</i> | <i>19.7</i> | <i>32.7</i> | <i>28.6</i> | <i>22.2</i> | 34 |
| No Overdraft | <i>89.3</i> | <i>77.3</i> | <i>67.3</i> | <i>57.1</i> | <i>75.2</i> | 115 |
| No Response | <i>3.6</i> | <i>3.0</i> | <i>0.0</i> | <i>14.3</i> | <i>2.6</i> | 4 |
| Total | <i>100.0</i> | <i>100.0</i> | <i>100.0</i> | <i>100.0</i> | <i>100.0</i> | 153 |
| Informal Loan | <i>7.1</i> | <i>12.1</i> | <i>32.7</i> | <i>14.3</i> | <i>18.3</i> | 28 |
| No Informal Loan | <i>92.9</i> | <i>83.3</i> | <i>63.5</i> | <i>71.4</i> | <i>77.8</i> | 119 |
| No Response | <i>0.0</i> | <i>4.5</i> | <i>3.8</i> | <i>14.3</i> | <i>3.9</i> | 6 |
| Total | <i>100.0</i> | <i>100.0</i> | <i>100.0</i> | <i>100.0</i> | <i>100.0</i> | 153 |

Note: Numbers in italics are in percent

Although access to overdrafts and formal loans remains low for all firm sizes, it tends to increase with firm-size category as might be expected. Thus, 42.9 percent of large firms have bank loans compared with 17.9 percent of micro firms. Although medium firms have the greatest access to overdraft facilities (32.7 percent), 28.8 percent of large firms have overdraft facilities compared with only 7.1 percent of micro-firms.

For those firms with loans, loan conditions vary quite dramatically from firm to firm, with a mean annual interest rate of 17.4 percent which ranges from 6 percent to 42 percent per annum. Providing a rationale for the lower levels of loan use by micro-firms, interest rates are substantially higher for this size-category (23.0 percent), falling to 15.8 percent and 17.1 percent for small and medium firms, respectively and a low of 8.0 percent for large firms.

Loan amortisation periods range from one year to 10 years with a mean of 4.4 years as shown in Table 3.24 although here there is less apparent variation with firm-size.

Table 3.24 Interest Rates and Amortisation Periods for Firms by Size Category

| Firm Size | <i>Interest Rate (percent p.a.)</i> | | | | <i>Amortisation Period (years)</i> | | | |
|-----------|-------------------------------------|------|--------|-----------|------------------------------------|------|--------|-----------|
| | Mean | S.D. | Median | No. Firms | Mean | S.D. | Median | No. Firms |
| Micro | 23.0 | 7.7 | 23.0 | 5 | 5.8 | 1.9 | 6.0 | 5 |
| Small | 15.8 | 3.9 | 13.5 | 8 | 3.4 | 0.9 | 3.0 | 11 |
| Medium | 17.1 | 2.9 | 15.0 | 15 | 4.3 | 0.7 | 4.0 | 12 |
| Large | 8.0 | 0.0 | 8.0 | 1 | 6.5 | 2.1 | 6.5 | 2 |
| Overall | 17.4 | 2.2 | 15.0 | 29 | 4.4 | 0.5 | 3.5 | 30 |

Note: S.D.= standard deviation on mean

The above results appear to support the widely held belief that credit is rationed in Mozambique to the exclusion of higher-risk smaller firms, with larger firms receiving the few loans and credits which exist due to their greater capacity for satisfying the collateral and bureaucratic requirements. However, it is extremely important to account for those firms which do not have a loan. Indeed, of the 111 firms surveyed which reported not having a loan, 103 firms had not applied for a loan, while only eight firms had a loan application refused.

The principal reason given overall for not applying for a loan or overdraft was the need for collateral (26.6 percent of respondents), followed by the complicated procedures involved (26.0 percent) and the fact that the firm in question had no need for a loan (22.1 percent). As Table 3.25 shows, this pattern of reasons is broadly the same for all firm-size categories and implies that the view of credit rationing as a constraint on business may only be part of the story. Many firms choose not to contract a loan and for other firms the issue may be more perceptions of difficulty involved rather than failed attempts. Of the nine firms which reported having had a loan application rejected, this was due to a lack of collateral for three of these, unfeasibility of the investment project for five and an un-stated reason for one firm.

Table 3.25 Reason for Not Applying for a Loan by Firm Size Category

| Firm-Size | No need | Religion | Procedures | Collateral | Corruption | Other | Total |
|--------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|
| Micro | <i>21.7</i> | <i>8.7</i> | <i>26.1</i> | <i>21.7</i> | <i>0.0</i> | <i>21.7</i> | <i>100.0</i> |
| Small | <i>22.5</i> | <i>4.2</i> | <i>22.5</i> | <i>28.2</i> | <i>7.0</i> | <i>15.5</i> | <i>100.0</i> |
| Medium | <i>20.5</i> | <i>2.3</i> | <i>34.1</i> | <i>29.5</i> | <i>0.0</i> | <i>13.6</i> | <i>100.0</i> |
| Large | <i>20.0</i> | <i>20.0</i> | <i>20.0</i> | <i>20.0</i> | <i>0.0</i> | <i>20.0</i> | <i>100.0</i> |
| Size Unknown | <i>27.3</i> | <i>0.0</i> | <i>18.2</i> | <i>18.2</i> | <i>18.2</i> | <i>18.2</i> | <i>100.0</i> |
| Overall | <i>22.1</i> | <i>4.5</i> | <i>26.0</i> | <i>26.6</i> | <i>4.5</i> | <i>16.2</i> | <i>100.0</i> |
| No. Firms | 34 | 7 | 40 | 41 | 7 | 25 | 154 |

Note: Numbers in italics are in percent

As is widely established, firms which are either unable to get loans or do not wish to apply can often resort to informal loans. As was illustrated in Table 3.23, 147 firm responses, 28 firms in the sample had an informal loan of some kind, representing almost 18.3 percent of firms overall. Of these firms, 17 were medium-sized firms, 7 were small firms and only 2 were micro firms, implying that informal loan use is not restricted to use by micro-enterprises.

No particular reason for resorting to informal loans dominates any others although, notably, only one of the twenty-five responding firms said that it was due to being unable to get a formal sector loan. For all other firms, informal loans reportedly provided a simpler financing option either due to the lack of need for collateral, more flexible payback conditions, easier formalities or a more favourable interest rate.

Given that the purpose of contracting loans is also ostensibly to carry out investment spending, Table 3.26 compares the figures for formal and informal loan acquisition and whether or not the firm carried out any investments in the period from 2002 to 2005. As the table shows, of the firms that invested in that period, only 29 percent had a formal loan, and 25 percent an informal loan (possibly in addition to a formal loan) indicating that a large percentage of firms that invested managed to do so without either formal or informal credit, as further analysed in the following section.¹²

¹² The alternative case of firms which had loans but did not invest is interpreted as being cases of bridging loans for seasonal activities or those where a certain level of inputs are required to allow any production to take place.

Table 3.26 Formal and Informal Loans by Firm Investment or Not

| Loan Status | Investment | No Investment |
|------------------|------------|---------------|
| Formal Loan | <i>29</i> | <i>18</i> |
| No Formal Loan | <i>71</i> | <i>82</i> |
| Total | <i>100</i> | <i>100</i> |
| No. Firms | 105 | 50 |
| Informal Loan | <i>25</i> | <i>8</i> |
| No Informal Loan | <i>75</i> | <i>92</i> |
| Total | <i>25</i> | <i>8</i> |
| No. Firms | 101 | 51 |

Note: Numbers in italics are in percent

3.6 Investments, Technology and R&D

Access to technology and investment in research and development (R&D) is an important factor in creating conditions for both aggregate economic and firm-level growth. Investment patterns can provide an indication of the future performance and the competitiveness of firms and the private sector in general. While investment might be expected to be driven by access to finance (Table 3.26), many firms carried out investment in the 2002 to 2005 period using retained earnings only.

As with many other factors, investment appears as shown in Table 3.27 positively related to firm size. Thus, while 46 percent of micro firms from the sample made investments in the period from 2002 to 2005, 60 percent of small, 83 percent of medium and 100 percent of large firms carried out some form of investment in the same period.

Table 3.27 Proportion of Investing Firms by Firms by Size

| | Micro | Small | Medium | Large | No. Firms |
|----------------|------------|------------|------------|------------|-----------|
| Invested | <i>46</i> | <i>60</i> | <i>83</i> | <i>100</i> | 102 |
| Did not Invest | <i>54</i> | <i>40</i> | <i>17</i> | <i>0</i> | 50 |
| Total | <i>100</i> | <i>100</i> | <i>100</i> | <i>100</i> | |
| No. Firms | 28 | 65 | 52 | 7 | 152 |

Note: Numbers in italics are in percent

Whether a firm invested or not appears to bear some relation to firm age. Seventy-five percent of firms younger than ten years old invested in the period from 2002 to 2005 compared with 66 percent of the 10-20 year old category and 59 percent in the 20 to 30 and 30 to 40 year old categories. Unusually, this rises again to 67 percent for firms more than 40 years old.

Investment varies more between sectors as indicated in Table 3.28, possibly reflecting the differing levels of dynamism between sectors and thus the requirement to invest in new equipment in order to compete. Thus, in the furniture sector, relatively labour-intensive production processes employing more basic tools and equipment may explain the low investment rate with only 40 percent of interviewed firms in that sector carrying out investments between 2002 and 2005. Similarly, relatively few firms operating in the garments sector (of which approximately 40 percent are micro) carried out any investment. The highest proportion of investing firms (from an admittedly small sample of three firms) was the textiles sector with all firms investing in the period 2002 to 2005.

Table 3.28 Proportion of Investing Firms by Firms by Sector

| | Food | Wood | Furniture | Textiles | Garments | Metal/Mach. | Other | No. Firms |
|----------------|------------|------------|------------|------------|------------|-------------|------------|-----------|
| Invested | <i>68</i> | <i>63</i> | <i>40</i> | <i>100</i> | <i>56</i> | <i>77</i> | <i>85</i> | 106 |
| Did not Invest | <i>33</i> | <i>37</i> | <i>60</i> | <i>0</i> | <i>44</i> | <i>23</i> | <i>15</i> | 51 |
| Total | <i>100</i> | <i>100</i> | <i>100</i> | <i>100</i> | <i>100</i> | <i>100</i> | <i>100</i> | |
| No. Firms | 40 | 19 | 15 | 3 | 25 | 35 | 20 | 157 |

Note: Numbers in italics are in percent

Predictably, the value of investments for those firms which invested also increases with firm size, as indicated in Table 3.29, with micro firms investing on average \$3,500 over the period 2002 to 2005, small firms \$72,100 over the same period, medium firms \$701,000 and large firms \$2,812,500.¹³ Given the high level of variation in investment levels, it is instructive to take into account the considerably lower median values of investment of \$1,200, \$40,000, \$200,000 and \$600,000 for micro, small, medium and large firms respectively, which perhaps provide a more accurate reflection of investment levels over these three years.

Table 3.29 Value of Investment by Firm Size (thousand \$)

| Firm-Size | Mean | S.D. | Median | No. Firms |
|--------------|---------|---------|--------|-----------|
| Micro | 3.5 | 1.6 | 1.2 | 13 |
| Small | 72.1 | 19.1 | 40.0 | 35 |
| Medium | 701.5 | 229.4 | 200.0 | 39 |
| Large | 2.812.5 | 2.770.9 | 600.0 | 4 |
| Size Unknown | 1.266.7 | 1.371.7 | 300.0 | 3 |
| Overall | 478.5 | 147.2 | 69.6 | 94 |

Note: One Outlier removed from "large" category.

Note: S.D.= standard deviation on mean

¹³ The results for large firms were skewed by one large outlier, which was removed. Its inclusion increases the average value of large-firm investment to \$18,250,000.

In terms of firm-age, investment value follows an unusual pattern, with the youngest and oldest firms investing the largest amount at a mean of \$665,700 and \$628,100 respectively, as shown in Table 3.30., with considerably lower average investments for firms aged between 10 and 30 years.

Table 3.30 Value of Investment by Firm Age Category (thousand \$)

| Age in Years | Mean | S.D. | Median | No. Firms |
|--------------|-------|-------|---------|-----------|
| 0-10 | 665.7 | 507.7 | 62.5 | 20 |
| 10-20 | 214.6 | 87.9 | 50.0 | 21 |
| 20-30 | 117.9 | 82.0 | 1.0 | 12 |
| 30-40 | 492.8 | 459.4 | 81.7 | 8 |
| 40+ | 628.1 | 282.6 | 200.0 | 15 |
| Age Unknown | 687.7 | 453.9 | 120.0 | 18 |
| Overall | 478.5 | 147.2 | 1.419.3 | 94.0 |

Note: One outlier removed from category "10-20"

Note: S.D.= standard deviation on mean.

As implied in Section 3.5, investments in our sample were overwhelmingly financed using own resources (81.9 percent overall), with bank loans representing an average of 10.2 percent of investment finance. Nonetheless, 45.8 percent of investment for large firms was financed by bank loans. Interestingly, no micro-firm investment was financed using credit from family or friends or any channel other than own resources, bank loans and leasing programmes, countering the view that informal loans form the major part of micro-enterprise financing. Small and medium enterprises appear to have a more varied range of sources of finance although own resources also form a substantial contribution, representing an average of 85 percent and 80 percent of the investment values for those categories, respectively.

Table 3.31 Average Sources of Investment Finance by Firm-Size Category

| Firm-Size | Own Resources | Capital from family/friend | Bank Loan | Leasing | Other | Total | No. Firms |
|--------------|---------------|----------------------------|-------------|------------|------------|--------------|-----------|
| Micro | <i>84.6</i> | <i>0.0</i> | <i>7.7</i> | <i>7.7</i> | <i>0.0</i> | <i>100.0</i> | 13 |
| Small | <i>85.0</i> | <i>2.6</i> | <i>6.2</i> | <i>1.6</i> | <i>4.6</i> | <i>100.0</i> | 38 |
| Medium | <i>80.2</i> | <i>1.6</i> | <i>10.4</i> | <i>2.4</i> | <i>5.3</i> | <i>100.0</i> | 43 |
| Large | <i>54.2</i> | <i>0.0</i> | <i>45.8</i> | <i>0.0</i> | <i>0.0</i> | <i>100.0</i> | 6 |
| Size Unknown | <i>100.0</i> | <i>0.0</i> | <i>0.0</i> | <i>0.0</i> | <i>0.0</i> | <i>100.0</i> | 4 |
| Overall | <i>81.8</i> | <i>1.6</i> | <i>10.2</i> | <i>2.5</i> | <i>3.9</i> | <i>100.0</i> | 104 |

Note: Numbers in italics are in percent

More than 95.0 percent of the investment value of all firm-size categories was in construction and equipment as shown in Table 3.32, with construction representing the largest component for firms of all size categories (72.0 percent overall). Equipment investments for micro-enterprises were proportionally greater than for any other size group, representing 35.4 percent of investment value compared with 18.4 percent for small, 22.6 percent for medium and 27.9 percent for large firms. The higher ratio of equipment to construction investment for micro and large firms perhaps represents the high relative cost of equipment for micro firms operating in very basic installations, and the more capital-intensive nature of larger firms. Micro firms reported no investment costs for land, while a marginal amount was reported by small, medium and large firms.

Table 3.32 Average Investment Type

| | Land | Equipment | Construction | Other | Total | No. Firms |
|--------------|------------|-------------|--------------|------------|--------------|-----------|
| Micro | <i>0.0</i> | <i>35.4</i> | <i>64.6</i> | <i>0.0</i> | <i>100.0</i> | 13 |
| Small | <i>2.5</i> | <i>18.4</i> | <i>77.5</i> | <i>1.6</i> | <i>100.0</i> | 37 |
| Medium | <i>1.2</i> | <i>22.6</i> | <i>69.8</i> | <i>6.5</i> | <i>100.0</i> | 42 |
| Large | <i>2.1</i> | <i>27.9</i> | <i>65.7</i> | <i>4.3</i> | <i>100.0</i> | 7 |
| Size Unknown | <i>0.0</i> | <i>20.0</i> | <i>80.0</i> | <i>0.0</i> | <i>100.0</i> | 4 |
| Overall | <i>1.5</i> | <i>23.0</i> | <i>72.0</i> | <i>3.5</i> | <i>100.0</i> | 103 |

Note: Numbers in italics are in percent

In sector terms, construction represented the highest level of investment for the food sector (82.0 percent) which invested only 9.0 percent of total investments in equipment. The metal/machinery sector also invested a relatively large proportion in construction (74.9 percent). Those sectors investing least in construction were textiles (58.0 percent) and furniture (60.8 percent), the furniture sector also representing the highest proportion of equipment investment of all the sectors. Whether or not these investments lead to improved firm performance is dealt with in Section 4.2.

Forty-four percent of investments in equipment were reported as being new, 24 percent used and 32 percent a mixture of new and used, while 56 percent was imported directly by the investing firm, 44 percent was indirectly imported through other agents and no equipment at all was produced domestically. Thirty-three percent of all investing firms stated that their investment was in order to introduce new technology, while 15.7 percent cited investing in order to improve the quality of their output. 10.8 percent of respondents stated production of a new product as a reason for investing while 7.8 percent invested to improve safety for their workers.

Table 3.33 Average Age of Machinery

| Firm Size | <5 Years | 5-10 Years | 10-20 Years | >20 Years | Total | No. Firms |
|--------------|-------------|-------------|-------------|-------------|------------|-----------|
| Micro | <i>7.8</i> | <i>17.0</i> | <i>34.3</i> | <i>40.9</i> | <i>100</i> | 27 |
| Small | <i>14.3</i> | <i>20.3</i> | <i>41.7</i> | <i>23.1</i> | <i>100</i> | 64 |
| Medium | <i>19.3</i> | <i>23.1</i> | <i>22.8</i> | <i>36.1</i> | <i>101</i> | 47 |
| Large | <i>62.6</i> | <i>16.0</i> | <i>8.6</i> | <i>12.9</i> | <i>100</i> | 7 |
| Size Unknown | <i>13.0</i> | <i>25.0</i> | <i>44.0</i> | <i>18.0</i> | <i>100</i> | 5 |
| Overall | <i>16.9</i> | <i>20.5</i> | <i>32.9</i> | <i>29.8</i> | <i>100</i> | 150 |

Note: Numbers in italics are in percent

Overall, the majority of machinery is more than 10 years old, with almost 30 percent more than 20 years old. Although 35.4 percent of micro-enterprise investment in 2002 to 2005 was in equipment, the fact that much of this was purchased used contributes to the result that an average of 40.9 percent of micro-enterprise machinery is more than 20 years old and 34.3 percent is between 10 and 20 years old. Only 7.8 percent of machinery in micro firms is less than five years old. Similarly for small and medium firms, the majority of machinery is more than 10 years old, representing an average of 65.0 percent and 59.9 percent of all machinery, respectively.

For large firms (where higher levels of investment have also taken place in recent years) the majority of machinery is less than five years old, representing an average of 62.6 percent of machinery (median 70 percent). The reasons for this stark contrast may be due to the need for large firms to keep up to date with new machinery in order to compete and stay large, although other factors may include easier credit access either through formal loans or “own finance” from mother companies or other aspects which make facilitate conditions for large firms, thus allowing these to maintain more up to date machinery than smaller firms. The implications of this include the possibility that large firms are better positioned to compete with imported goods and smaller firm produce, unless of course these compete in separate markets.

Further support of the above interpretation is provided by responses to whether or not the firm had introduced new technology in the period from 2002 to 2005. Although more than one third of firms did introduce new technology, as Table 3.34 shows, only 14.3 percent of all micro-enterprises did compared with 25.8 percent of small firms, 50.0 percent of medium firms and 85.7 percent of large firms. Again, technological differences between firms appear to be strongly correlated with firm size and will potentially impact on firm growth and survival.

Table 3.34 Share of Firms Introducing New Technology in 2002-2005 by Firm Size

| | Micro | Small | Medium | Large | Overall | No. Firms |
|-------------------|--------------|--------------|--------------|--------------|--------------|-----------|
| New Technology | <i>14.3</i> | <i>25.8</i> | <i>50.0</i> | <i>85.7</i> | <i>34.6</i> | 53 |
| No New Technology | <i>85.7</i> | <i>72.7</i> | <i>50.0</i> | <i>14.3</i> | <i>64.7</i> | 99 |
| No Response | <i>0.0</i> | <i>1.5</i> | <i>0.0</i> | <i>0.0</i> | <i>0.7</i> | 1 |
| Total | <i>100.0</i> | <i>100.0</i> | <i>100.0</i> | <i>100.0</i> | <i>100.0</i> | |
| No. Firms | 28 | 65 | 52 | 7 | | 153 |

Note: Numbers in italics are in percent

The vast majority (60.3 percent) of newly introduced technology was embedded in purchased equipment, with only 14.7 percent a result of reverse engineering, 8.8 percent a result of copying directly from others and from in-house development, while 1.5 percent of new technology introduced was done so by the mother company (5.9 percent via other channels).¹⁴

Consistent with the data on investment and technology, a familiar pattern emerges relating to innovation in terms of the introduction of new products, as illustrated in Table 3.34. Again, the difference in dynamism between differing firm-sizes is apparent with no interviewed micro-enterprises introducing new products in the period 2002 to 2005, and an increasing proportion of small, medium and large firms, reaching the level of 57 percent for large firms.

Table 3.35 Proportion of Firms Introducing New Products by Firm Size

| | Micro | Small | Medium | Large | Overall | No. Firms |
|-----------------|------------|------------|------------|------------|------------|-----------|
| New Products | <i>0</i> | <i>21</i> | <i>33</i> | <i>57</i> | <i>23</i> | 35 |
| No New Products | <i>100</i> | <i>77</i> | <i>67</i> | <i>43</i> | <i>76</i> | 117 |
| No Response | <i>0</i> | <i>2</i> | <i>0</i> | <i>0</i> | <i>1</i> | 1 |
| Total | <i>100</i> | <i>100</i> | <i>100</i> | <i>100</i> | <i>100</i> | |
| No. firms | 28 | 65 | 52 | 7 | | 153 |

Note: Numbers in italics are in percent

Forty-seven percent of firms who introduced a new product did so to take advantage of a new market opportunity, while 20.6 percent were introducing a complementary product to those they already produced. Only 11.8 percent of respondents introduced their new product as a result of new technology introduced while 8.8 percent were combating a fall in demand for their old product and 5.9 percent were compelled to introduce a new product in order to deal with competition.

¹⁴ Reverse engineering is the process of discovering the technology or process behind a good, a piece of equipment or some machinery through the breakdown of its structure and component parts.

Table 3.36 Share of Firms Improving Products by Firm Size

| | Micro | Small | Medium | Large | Overall | No. Firms |
|-----------------|--------------|--------------|--------------|--------------|-------------|-----------|
| Improvements | <i>21.4</i> | <i>42.4</i> | <i>53.8</i> | <i>100.0</i> | <i>45.1</i> | 69 |
| No Improvements | <i>75.0</i> | <i>56.1</i> | <i>44.2</i> | <i>0.0</i> | <i>52.9</i> | 81 |
| No Response | <i>3.6</i> | <i>1.5</i> | <i>1.9</i> | <i>0.0</i> | <i>2.0</i> | 3 |
| Total | <i>100.0</i> | <i>100.0</i> | <i>100.0</i> | <i>100.0</i> | | |
| No. Firms | 28 | 66 | 52 | 7 | | 153 |

Note: Numbers in italics are in percent

A larger share of each firm-size category reported substantially improving products, with large firms again apparently most dynamic of all categories. Clearly this potentially relates both to the dynamism of the firm and the sector. However, in addition to capital investments, firms also have the option of investing in human capital through employee training. Firms were asked whether or not their workers had received some form of professional training during 2005, the results of which are displayed in Table 3.37. These indicate again that employee training increases with firm size, from only 18 percent of micro firms offering training to 71 percent of large firms.

Table 3.37 Share of Firms Providing Worker Training in 2005

| | Micro | Small | Medium | Large | Overall | No. Firms |
|-------------------|--------------|--------------|--------------|--------------|--------------|-----------|
| Staff Training | <i>17.9</i> | <i>31.8</i> | <i>50.0</i> | <i>71.4</i> | <i>37.3</i> | 94 |
| No Staff Training | <i>82.1</i> | <i>66.7</i> | <i>48.1</i> | <i>28.6</i> | <i>61.4</i> | 57 |
| No Response | <i>0.0</i> | <i>1.5</i> | <i>1.9</i> | <i>0.0</i> | <i>1.3</i> | 2 |
| Total | <i>100.0</i> | <i>100.0</i> | <i>100.0</i> | <i>100.0</i> | <i>100.0</i> | 0 |
| No. firms | 28 | 65 | 51 | 7 | | 153 |

Note: Numbers in italics are in percent

3.7 Competition and Sales

Regardless of investment levels or new technologies employed, the performance of the individual firm ultimately depends on its ability to compete with other firms, the size of the market and its share of that market. Developing country markets are often considered to be distorted and segregated, with poor access to market information and business support services. However, only 44 percent of sample firms considered access (or the lack of it) to market information as a constraint and 54 percent considered access to business services as a constraint to their business performance

although these results may also stem from a lack of awareness of what market information or business services might include.

Table 3.38 Estimated Market Shares by Firm Size

| Firm-Size | Mean | S.D. | Median | No. Firms |
|----------------|-------------|------------|-------------|-----------|
| Micro | 17.3 | 4.7 | 15.0 | 11 |
| Small | 30.1 | 3.8 | 25.0 | 40 |
| Medium | 36.7 | 4.9 | 30.0 | 31 |
| Large | 64.3 | 12.1 | 55.0 | 7 |
| Size Unknown | 9.0 | 4.6 | 10.0 | 3 |
| Overall | 32.7 | 2.8 | 27.5 | 92 |

Note: S.D.= standard deviation on mean

Firm market shares vary according to the boundaries of what they consider their market. Nonetheless, as might be expected the mean estimated market shares increase with firm size as shown in Table 3.37.

Closely related to market share of a firm is the level of competition which it faces, here measured in terms of the number of individual firms considered as competitors. As illustrated in Table 3.39, micro firms have on average around 15 domestic private competitor firms, while large firms have only 2, with the average number of competitors reducing steadily with firm size as would normally be expected. As would also be expected, micro firms, generally considered to operate in different markets to larger firms, have a lower number of foreign firm competitors.

Table 3.39 Number of Competitor Firms by Size

| | <i>Private Domestic Firms</i> | | | | <i>Foreign Firms</i> | | | |
|----------------|-------------------------------|------------|------------|------------|----------------------|------------|------------|------------|
| | Mean | S.D. | Median | No. Firms | Mean | S.D. | Median | No. Firms |
| Micro | 15.3 | 6.6 | 6.0 | 16 | 0.7 | 0.5 | 0.0 | 19 |
| Small | 9.3 | 4.2 | 4.0 | 48 | 1.5 | 0.5 | 0.0 | 45 |
| Medium | 5.5 | 0.9 | 5.0 | 42 | 1.6 | 0.5 | 0.0 | 31 |
| Large | 2.2 | 1.4 | 2.0 | 5 | 1.3 | 1.4 | 0.0 | 4 |
| Size Unknown | 9.3 | 4.3 | 10.0 | 3 | 1.0 | 1.2 | 0.0 | 3 |
| Overall | 8.4 | 2.0 | 4.0 | 114 | 1.4 | 0.3 | 0.0 | 102 |

Note: S.D.= standard deviation on mean

A further characteristic which may provide interesting insights for further work is that, according to the sample, previously state-owned firms are likely to face less competition than those which have

never been state-owned, facing a mean of 4.2 domestic firm competitors compared with 10.8 and 1.2 compared to 1.5 foreign firms.

Table 3.40 Number of Competitor Firms by Privatised or Not

| | <i>Private Domestic Firms</i> | | | | <i>Foreign Firms</i> | | | |
|----------------|-------------------------------|------|--------|-----------|----------------------|------|--------|-----------|
| | Mean | S.D. | Median | No. Firms | Mean | S.D. | Median | No. Firms |
| Always Private | 10.8 | 3.1 | 5.0 | 73 | 1.5 | 0.4 | 0.0 | 65 |
| Privatised | 4.2 | 0.8 | 4.0 | 41 | 1.2 | 0.4 | 0.0 | 37 |
| Overall | 8.4 | 2.0 | 4.0 | 114 | 1.4 | 0.3 | 0.0 | 102 |

Note: S.D.= standard deviation

Where firms were able to provide the number of clients to whom their goods were sold, as the following Table 3.41 shows, these again varied by firm size, with micro firms generally serving a considerably smaller number of clients than all larger firms. As the medians imply, the mean number of clients for each firm size category is skewed by one or two firms with very large client-bases, implying that for the majority of firms, the client base is relatively concentrated.

Table 3.41 Reported Number of Clients by Firm-Size Category

| | Mean | S.D. | Median | No. Firms |
|--------------|------|------|--------|-----------|
| Micro | 24.7 | 9.8 | 10.0 | 17 |
| Small | 53.5 | 15.7 | 20.0 | 50 |
| Medium | 58.3 | 13.9 | 30.0 | 37 |
| Large | 45.7 | 29.2 | 18.0 | 6 |
| Size Unknown | 28.5 | 17.8 | 26.0 | 4 |
| Overall | 49.5 | 8.5 | 17.5 | 114 |

Note: S.D.= standard deviation on mean

Firms were also asked to specify the nature of their principal client according to a number of categories. The principal client for the sample as a whole is the domestic private sector although this represents only one-third of firms, while 25.5 percent of firms have some other principal client (including private individuals). As Table 3.42 also shows, medium and large firms are more likely than micro and small firms to have the government as their principal client and large firms are considerably more likely to have a foreign firm abroad as principal client.

Table 3.42 Principal Client by Firm Size and No. of Employees

| Principal Client | Micro | Small | Medium | Large | Overall | No. Firms |
|-----------------------------|--------------|--------------|--------------|--------------|--------------|-----------|
| Government | <i>3.6</i> | <i>16.7</i> | <i>21.2</i> | <i>14.3</i> | <i>15.7</i> | 24 |
| State Enterprise | <i>3.6</i> | <i>6.1</i> | <i>0.0</i> | <i>0.0</i> | <i>3.3</i> | 5 |
| Parastatal Enterprise | <i>0.0</i> | <i>1.5</i> | <i>0.0</i> | <i>0.0</i> | <i>0.7</i> | 1 |
| Domestic Private Sector | <i>17.9</i> | <i>33.3</i> | <i>42.3</i> | <i>28.6</i> | <i>33.3</i> | 51 |
| Foreign Private firm in Moz | <i>0.0</i> | <i>4.5</i> | <i>17.3</i> | <i>0.0</i> | <i>7.8</i> | 12 |
| Foreign Private Firm Abroad | <i>3.6</i> | <i>3.0</i> | <i>7.7</i> | <i>28.6</i> | <i>5.9</i> | 9 |
| NGO/Donor organisation | <i>3.6</i> | <i>3.0</i> | <i>1.9</i> | <i>0.0</i> | <i>2.6</i> | 4 |
| Other | <i>67.9</i> | <i>25.8</i> | <i>1.9</i> | <i>28.6</i> | <i>25.5</i> | 39 |
| No Response | <i>0.0</i> | <i>6.1</i> | <i>7.7</i> | <i>0.0</i> | <i>5.2</i> | 8 |
| Total | <i>100.0</i> | <i>100.0</i> | <i>100.0</i> | <i>100.0</i> | <i>100.0</i> | |
| No. Firms | 28 | 66 | 52 | 7 | | 153 |

Note: Numbers in italics are in percent

The destination of sales again varies notably according to firm size. As Table 3.43 reports, micro-firms sell 73.4 percent of their goods to individuals compared to only 30.9 percent for small firms and 11.8 percent for medium-sized firms. In contrast, micro-sized firms sell a much smaller proportion of their output as inputs to other private firms, only 12.7 percent compared with 40.5 percent and 44.6 percent of sales for small and medium-sized firms. While sales to state firms indicate no particular pattern, sales to government authorities appear to represent a gradually increasing proportion of sales for micro, small and finally medium-sized firms, representing 7.9 percent, 11.2 percent and 13.7 percent of sales respectively.

Large firms appear to follow another pattern, selling more of their output than even medium-sized firms to individuals, markedly less as intermediate inputs to other private firms, the highest proportion of all firm sizes to state firms and by far the largest proportion in exports, which represent an average of 36.5 percent of total sales.

Table 3.43 Client Shares of Sales by Firm Size

| | Individuals | Dom. Private Firms | State Firms | Gov. Authorities | Tourists | Exports | For. Invest. Firms | Others | Total | No. Firms |
|------------|-------------|--------------------|-------------|------------------|------------|-------------|--------------------|------------|--------------|-----------|
| Micro | <i>73.4</i> | <i>12.7</i> | <i>2.1</i> | <i>7.9</i> | <i>0.2</i> | <i>0.0</i> | <i>0.2</i> | <i>3.6</i> | <i>100.0</i> | 28 |
| Small | <i>30.9</i> | <i>40.5</i> | <i>8.6</i> | <i>11.2</i> | <i>0.7</i> | <i>2.7</i> | <i>1.9</i> | <i>3.4</i> | <i>100.0</i> | 63 |
| Medium | <i>11.8</i> | <i>44.6</i> | <i>7.3</i> | <i>13.7</i> | <i>0.0</i> | <i>9.8</i> | <i>8.2</i> | <i>4.5</i> | <i>100.0</i> | 46 |
| Large Size | <i>16.2</i> | <i>24.0</i> | <i>13.3</i> | <i>1.7</i> | <i>0.0</i> | <i>36.5</i> | <i>0.0</i> | <i>8.3</i> | <i>100.0</i> | 6 |
| Unknown | <i>5.0</i> | <i>37.0</i> | <i>8.0</i> | <i>19.0</i> | <i>0.0</i> | <i>29.0</i> | <i>2.0</i> | <i>0.0</i> | <i>100.0</i> | 5 |
| Overall | <i>31.5</i> | <i>35.8</i> | <i>7.1</i> | <i>11.2</i> | <i>0.3</i> | <i>6.7</i> | <i>3.5</i> | <i>3.7</i> | <i>100.0</i> | 148 |

Note: Numbers in italics are in percent

Finally in this section, according to the sample, firms overwhelmingly set the prices of their goods as a fixed margin above production costs, with only some attention paid to other competitor pricing and an element of individual client negotiation.

3.8 Trade

Closely related to the previous section and potentially a key factor in firm performance is firm integration into the world trading system, both in terms of access to imported inputs and access to export markets for outputs. According to recent academic literature, increased trade can potentially also permit greater access to technology through imported inputs, and improved standards, working practices and greater efficiency through the process of producing for exports.

In terms of constraints posed by the current trade policy environment, some 37 percent of sample firms considered the opening up of markets to international competition through initiatives such as the Southern Africa Development Community(SADC) Trade Protocol as a constraint to their business. In contrast, and although both relate to firm ability to compete with foreign firms, 66 percent of interviewed firms considered competition from illegal imports as some form of constraint. Indeed, this solicited a mean response of 2.3, representing a “moderate” to “major” constraint.

Of the 139 firms which responded to the question, 98 firms (71 percent) were recorded as firms which used imported inputs, whether these were imported directly or indirectly. The number of firms using imported goods increases with size although even 43 percent of micro-enterprises report using imported inputs. This compares with 70 percent of small firms, 86 percent of medium firms and 100 percent of large firms. In sector terms, 100 percent of textile firms import, 84 percent of metal/machinery firms and 70 percent of garments firms. Even in the food sector, 69 percent of firms use imported inputs, in contrast with the 50 percent and 43 percent of firms in the wood and furniture sectors respectively.

Table 3.44 presents firm input sources in terms of their proportions of primary (raw materials) and intermediate (services and processed inputs) inputs respectively. These are disaggregated into direct and indirect imports, those from SADC and elsewhere, and those sourced domestically for each

firm-size category.¹⁵ As the results indicate, input origin patterns vary considerably between firms of different size categories. Micro-firms are reported as sourcing the majority of both primary and intermediate inputs domestically (77 percent and 63 percent respectively), with almost all remaining inputs imported indirectly from non-SADC countries (18 percent of primary and 25 percent of intermediate).

Table 3.44 Source of Inputs by Firm Size

| | <i>Primary Inputs</i> | | | | | | <i>Intermediate Inputs</i> | | | | | | No. Firms |
|--------------|-----------------------|-------------|------------|-------------|-------------|--------------|----------------------------|-------------|-------------|-------------|-------------|--------------|-----------|
| | Direct | | Indirect | | Domestic | Total | Direct | | Indirect | | Domestic | Total | |
| | SADC | Other | SADC | Other | | | SADC | Other | SADC | Other | | | |
| Micro | <i>1.1</i> | <i>0.0</i> | <i>3.6</i> | <i>18.2</i> | <i>77.1</i> | <i>100.0</i> | <i>1.1</i> | <i>0.0</i> | <i>11.1</i> | <i>25.0</i> | <i>62.9</i> | <i>100.0</i> | 28 |
| Small | <i>21.1</i> | <i>8.6</i> | <i>8.1</i> | <i>8.4</i> | <i>53.8</i> | <i>100.0</i> | <i>17.0</i> | <i>9.6</i> | <i>11.6</i> | <i>12.5</i> | <i>49.2</i> | <i>100.0</i> | 65 |
| Medium | <i>37.5</i> | <i>6.7</i> | <i>6.5</i> | <i>7.9</i> | <i>41.9</i> | <i>100.0</i> | <i>31.4</i> | <i>10.3</i> | <i>8.0</i> | <i>10.2</i> | <i>40.3</i> | <i>100.0</i> | 48 |
| Large | <i>21.7</i> | <i>17.5</i> | <i>8.3</i> | <i>36.7</i> | <i>15.8</i> | <i>100.0</i> | <i>4.0</i> | <i>32.0</i> | <i>8.0</i> | <i>32.0</i> | <i>24.0</i> | <i>100.0</i> | 6 |
| Unknown Size | <i>2.5</i> | <i>22.5</i> | <i>0.0</i> | <i>50.0</i> | <i>25.0</i> | <i>100.0</i> | <i>7.5</i> | <i>0.0</i> | <i>0.0</i> | <i>25.0</i> | <i>67.5</i> | <i>100.0</i> | 4 |
| Overall | <i>22.1</i> | <i>7.1</i> | <i>6.6</i> | <i>12.3</i> | <i>52.1</i> | <i>100.0</i> | <i>17.6</i> | <i>8.5</i> | <i>10.0</i> | <i>15.2</i> | <i>48.8</i> | <i>100.0</i> | 151 |

Note: Numbers in italics are in percent

For small firms, domestic inputs represent a substantially lower share of primary and intermediate inputs (54 percent and 49 percent respectively) with a substantial share of directly imported inputs from SADC for both primary and intermediate inputs (21 percent and 17 percent, respectively). This trend of falling domestic inputs and increasing direct inputs from SADC continues to medium and large firms, the latter of which depend on locally produced inputs for only 16 percent of primary inputs and 24 percent of intermediate inputs, and have relatively high levels of total direct and indirect imports of both primary and intermediate inputs (although lower than for medium-size firms). The high levels of dependence on imported inputs provide an indication of why firms express concern regarding macro-stability, given the potential detrimental effects of exchange rate fluctuations.

The number of exporting firms in Mozambique is very low, thus representing only 13 percent of surveyed firms. Only 4 percent and 3 percent of interviewed small and micro-enterprises export, compared with 25 percent of medium and 43 percent of interviewed large firms. Twenty-three

¹⁵ SADC is the Southern African Development Community and includes South Africa, Botswana, Lesotho, Namibia, Swaziland, Angola, DRC, Malawi, Mauritius, Tanzania, Zambia, Zimbabwe and Mozambique. Mozambique is currently subscribed to and implementing the SADC trade protocol to promote regional trade with the view to forming a customs union with a common external tariff by 2010.

percent of firms in the food sector export while 67 percent (two of only three) of textiles firms also export. From the sample, the lowest share of exporting firms occurs in the wood sector (5 percent) followed by the furniture (7 percent), garments (8 percent) and metal/machinery (14 percent) sector. Anecdotally, for many exporting firms the principal if not only client was the parent company.

Table 3.45 Exporters by Firm Size Category

| | Micro | Small | Medium | Large | Overall | No. Firms |
|------------------|------------|------------|------------|------------|------------|-----------|
| Export Firms | <i>4</i> | <i>3</i> | <i>25</i> | <i>43</i> | <i>12</i> | 19 |
| Non-export Firms | <i>96</i> | <i>95</i> | <i>75</i> | <i>57</i> | <i>87</i> | 133 |
| No response | <i>0</i> | <i>2</i> | <i>0</i> | <i>0</i> | <i>1</i> | 1 |
| Total | <i>100</i> | <i>100</i> | <i>100</i> | <i>100</i> | <i>100</i> | |
| No. Firms | <i>28</i> | <i>66</i> | <i>52</i> | <i>7</i> | | 153 |

Note: Numbers in italics are in percent

The average proportion of sales exported varies considerably between firm-size categories. As Table 3.46 shows, of those firms which exports, small firms exported a relatively high average of 85.0 percent of total sales while medium firms exported only 48.4 percent. The small number of large exporting firms exported an average of 73.0 percent of sales.

Table 3.46 Mean Export Share of Sales by Firm-Size Category

| Firm-Size | Mean | S.D: | Median | No. Firms |
|--------------|-------------|-------------|-------------|-----------|
| Micro | <i>0.0</i> | <i>0.0</i> | <i>0.0</i> | 1 |
| Small | <i>85.0</i> | <i>21.2</i> | <i>85.0</i> | 2 |
| Medium | <i>48.4</i> | <i>13.9</i> | <i>35.0</i> | 12 |
| Large | <i>73.0</i> | <i>32.5</i> | <i>99.0</i> | 3 |
| Size Unknown | <i>48.3</i> | <i>32.9</i> | <i>35.0</i> | 3 |
| Overall | <i>53.1</i> | <i>9.8</i> | <i>60.0</i> | 21 |

Note: Numbers in italics are in percent

Note: S.D.= standard deviation on mean

Although based on only a small sample of exporters, the principal export destinations are in line with those of the country as a whole, with the main part going to the European Union (on average 17 percent of sales) and South Africa (an average of 14 percent of total sales), as illustrated in Table 3.47. Both small and medium exporting firms export a similar amount to South Africa and the EU (around 33 percent and 14 percent of sales respectively). Large firm exports are concentrated in

other African countries (33 percent of sales). The average number of clients for all exporting firms is 3.8.

Table 3.47 Mean Export Share of Sales by Firm-Size Category

| | South Africa | Other SADC | Other Africa | EU | USA | Other | No. Firms |
|--------------|-----------------|---------------|-----------------|-------------|-------------|-------------|--------------|
| Micro | <i>0.0</i> | <i>0.0</i> | <i>0.0</i> | <i>0.0</i> | <i>0.0</i> | <i>0.0</i> | 0 |
| Small | <i>33.0</i> | <i>12.0</i> | <i>0.0</i> | <i>35.0</i> | <i>0.0</i> | <i>5.0</i> | 2 |
| Medium | <i>13.4</i> | <i>1.4</i> | <i>0.0</i> | <i>15.3</i> | <i>7.1</i> | <i>12.5</i> | 12 |
| Large | <i>16.7</i> | <i>3.3</i> | <i>33.3</i> | <i>0.0</i> | <i>13.3</i> | <i>6.3</i> | 3 |
| Size Unknown | <i>3.3</i> | <i>11.7</i> | <i>0.0</i> | <i>33.3</i> | <i>0.0</i> | <i>0.0</i> | 3 |
| Overall | <i>13.7</i> | <i>4.2</i> | <i>5.0</i> | <i>16.9</i> | <i>5.9</i> | <i>8.4</i> | 20 |

Note: Numbers in italics are in percent

Of the 22 exporting firms interviewed by this survey, 18 firms reported receiving export orders and having long-term relations with export buyers. Of those firms receiving orders, 15 were given product specifications and 16 were given specific standards criteria to meet, while only five received designs from their clients and six received input materials.

Some fifteen firms reported having been requested certification of procedures and/or products while 21 reported having certificates of origin. Only 12 firms were aware of export preference regimes of any kind such as the EU Everything but Arms (EBA) trade initiative, while only seven firms actually used these preferences. Reasons for not using these preferences included the costs of obtaining licences and non-tariff barriers although four firms suggested it was for other unspecified reasons. Only three firms reported using legal advisers when entering into export contracts.

Finally, it is instructive to look at those firms which do not produce for exportation. Of those firms, 49 percent responded that exporting was not part of the firm strategy, thus implying a focus on the domestic market. Other reasons given were the high quality standards required (10 percent of respondents), the high levels of risk involved (7 percent) and a lack of knowledge of prospective markets and distribution channels (both cited by 5 percent of firms). This might suggest some room for benefits from greater technical assistance to promote exports.

3.9 Performance and Capacity Utilization

Having looked at a number of factors which potentially influence firm behaviour and performance, and prior to looking at growth and survival characteristics of firms between 2002 and 2006, the present section presents a summary of performance measures from the 2006 survey.¹⁶

Table 3.48 provides the short-run revenue growth figures across different firm sizes for the periods 2003 to 2004 and 2004 to 2005, illustrating the very large variation in growth rates across different firm sizes and also between years. According to the reported data, growth in the year to 2004 was positive for all firm-sizes and averaged 22.3 percent across all firms. Within this high average growth rate, micro-firm real revenues grew by only 2.0 percent while large firm revenues grew by a very large 48.7 percent. Importantly, despite positive average real revenue growth over all firms, all except large firms had negative median real revenue growth rates, implying that real revenues actually decreased for the majority of micro, small and medium firms, but that growth for those with positive growth was far higher.

In contrast, the year to 2005 saw a real reduction in revenues for all firms except large firms, whose real revenues grew at an even faster rate than in the previous year (54.1 percent). This is in contrast to micro, small and large firms which on average saw negative revenue growth. This is contrary to the literature on industrial organisation (e.g. Caves 1998) which generally finds higher growth rates for micro firms and lower growth rates as firms become larger although the results presented here cover only a short-time horizon. Longer term growth is discussed in Section 4.

Table 3.48 Real Revenue Growth Rates by Firm Size

| | 2003-04 | | | | 2004-05 | | | |
|--------------|-------------|-------------|-------------|-----------|--------------|-----------|--------------|-----------|
| | Mean | S.D. | Median | No. Firms | Mean | S.D. | Median | No. Firms |
| Micro | <i>2.0</i> | <i>13.6</i> | <i>-0.1</i> | 18 | <i>-8.4</i> | <i>6</i> | <i>-2.2</i> | 16 |
| Small | <i>42.4</i> | <i>27.6</i> | <i>-7.9</i> | 40 | <i>-1.2</i> | <i>10</i> | <i>-7.9</i> | 31 |
| Medium | <i>10.0</i> | <i>9.1</i> | <i>-3.3</i> | 41 | <i>-4.7</i> | <i>8</i> | <i>-5.1</i> | 26 |
| Large | <i>48.7</i> | <i>39.4</i> | <i>79.2</i> | 3 | <i>54.1</i> | <i>70</i> | <i>54.1</i> | 2 |
| Size Unknown | <i>3.2</i> | <i>0.0</i> | <i>3.2</i> | 1 | <i>-28.7</i> | <i>0</i> | <i>-28.7</i> | 1 |
| Overall | <i>22.3</i> | <i>12</i> | <i>-3.3</i> | 103 | <i>-2.8</i> | <i>5</i> | <i>-6.5</i> | 76 |

Note: Numbers in italics are in percent

Note: S.D.= standard deviation on mean

¹⁶ This is based on financial data provided by firms during survey interviews which are potentially affected by reporting bias. Additionally, a significant number of surveyed firms do not keep official financial accounts, which could lead to doubts about the quality of the financial accounts data in the survey due to error. Financial data reported in the survey were therefore compared with information collected by INE (2002) and KPMG (various years) on the same firms. The same was done for the RPED 2002 given that it suffers from the same problem. In most cases discrepancies in the survey data was due to reporting figures in Meticaís or in million Meticaís instead of *in contos* (1,000 Meticaís).

Variation in revenue growth rates is also substantial across sectors and between the two years, with only the garments sector showing positive growth in both years (of 15.4 percent), a sector in which half of the sampled firms are micro firms. Across age-groups, there is no discernible pattern of revenue growth, while in location terms, only firms in Beira show positive revenue growth rates for both 2003-04 and 2004-05.

In terms of other firm characteristics, it is interesting to note that revenue growth rates are higher in both years for firms with foreign ownership participation and which have been privatised. However, although not conclusive, firms that did not invest in 2002-05 also have higher short-term revenue growth rates than those that did.

A further measure of firm performance which is more closely related to efficiency and productivity is given by the growth in revenue per employee. As Table 3.49 shows, although revenue per employee growth rates are broadly in line with those of real revenue growth, with positive average rates in 2003-04 and negative growth overall in 2004-05, they are higher for micro-firm revenue per employee than for real revenue, implying increasing labour productivity in these firms. The same is true for small firms but reversed for both medium and large firms where revenue per employee has grown at a lower rate than real revenue for both years 2003-04 and 2004-05, suggesting that increases in revenue growth may also be related to increased numbers of workers.

Table 3.49 Growth Rates of Revenue per Employee

| | 2003-04 | | | | 2004-05 | | | |
|---------|-----------|-----------|-----------|------------|-----------|-----------|-----------|-----------|
| | Mean | S.D. | Median | No. Firms | Mean | S.D. | Median | No. Firms |
| Micro | <i>7</i> | <i>14</i> | <i>4</i> | <i>18</i> | <i>-4</i> | <i>6</i> | <i>-1</i> | <i>16</i> |
| Small | <i>50</i> | <i>29</i> | <i>1</i> | <i>40</i> | <i>5</i> | <i>11</i> | <i>4</i> | <i>31</i> |
| Medium | <i>8</i> | <i>9</i> | <i>-3</i> | <i>39</i> | <i>-2</i> | <i>8</i> | <i>-6</i> | <i>26</i> |
| Large | <i>46</i> | <i>50</i> | <i>47</i> | <i>3</i> | <i>39</i> | <i>75</i> | <i>39</i> | <i>2</i> |
| Overall | <i>26</i> | <i>12</i> | <i>-1</i> | <i>100</i> | <i>2</i> | <i>6</i> | <i>-1</i> | <i>75</i> |

Note: Numbers in italics are in percent

Note: S.D.= standard deviation on mean

Further confirmation of these results can be found by looking at capacity utilization, which is also likely to be affected by a number of factors such as the level of competition a firm faces, the level of demand for its good, investment levels and other firm-specific conditions.¹⁷ Table 3.50 suggests that mean capacity utilization is relatively low for the sample as a whole but has generally increased

¹⁷ Capacity Utilization is defined as “the ratio of the level of production in relation to the maximum which could be produced given a fixed level of inputs”.

in the years from 2003 to 2005, averaging 54.5 percent overall in 2003, 57.5 percent in 2004 and 59.1 percent in 2005.

Table 3.50 Capacity Utilisation by Size

| | 2003 | 2004 | 2005 | No. Firms |
|--------------|-------------|-------------|-------------|-----------|
| Micro | <i>61.5</i> | <i>62.2</i> | <i>58.5</i> | 26 |
| Small | <i>51.5</i> | <i>54.3</i> | <i>56.9</i> | 63 |
| Medium | <i>54.2</i> | <i>56.8</i> | <i>57.8</i> | 48 |
| Large | <i>48.6</i> | <i>65.3</i> | <i>82.6</i> | 7 |
| Size Unknown | <i>67.0</i> | <i>68.0</i> | <i>71.0</i> | 5 |
| Overall | <i>54.5</i> | <i>57.5</i> | <i>59.1</i> | 149 |

Note: Numbers in italics are in percent

This increasing capacity utilisation through time is broadly repeated for each size category although as the table shows, micro firms had above average capacity utilization in 2003 and 2004 with a drop to below average in 2005. All other size categories are seen to have increased capacity utilization over the same period with large firms, in particular, increasing average utilization from only 48.6 percent in 2003 to 82.6 percent in 2005, a potential indicator of why revenue growth has also experienced high positive growth rates over the same period.

At the sector level, two separate groups of sectors can be discerned, with food, wood, garments and metal/machinery sectors all increasing capacity utilization over the period 2003 to 2005, and furniture and textiles experiencing falling capacity utilization, dramatically so in the case of textiles where average utilization fell from 66.7 percent in 2003 to 50.0 percent in 2005. This latter result is expected in the context of difficulties in the textiles sector in Mozambique.

Table 3.51 Capacity Utilisation (Percent) by Sector

| | 2003 | 2004 | 2005 | No. firms |
|-----------------|-------------|-------------|-------------|-----------|
| Food | <i>52.1</i> | <i>57.2</i> | <i>59.5</i> | 38 |
| Wood | <i>49.7</i> | <i>57.9</i> | <i>59.9</i> | 19 |
| Furniture | <i>60.3</i> | <i>57.9</i> | <i>55.1</i> | 15 |
| Textiles | <i>66.7</i> | <i>53.3</i> | <i>50.0</i> | 3 |
| Garments | <i>53.6</i> | <i>59.8</i> | <i>64.1</i> | 22 |
| Metal/Machinery | <i>51.9</i> | <i>55.2</i> | <i>58.0</i> | 34 |
| Other | <i>63.4</i> | <i>59.3</i> | <i>58.4</i> | 18 |
| Overall | <i>54.5</i> | <i>57.5</i> | <i>59.1</i> | 149 |

Note: Numbers in italics are in percent

Although causality is not shown, it is interesting to look at relationships between capacity utilization and certain other firm characteristics. Table 3.52 shows that for the sample, capacity utilisation is considerably lower for firms which were privatized. The reason for this is unclear without further investigation, but may relate to the legacy of unproductive equipment due to installed capacity for demand levels which no longer exist.

Table 3.52 Capacity Utilisation by Privatisation Status

| | 2003 | 2004 | 2005 | No. Firms |
|----------------|-------------|-------------|-------------|-----------|
| Always Private | <i>60.7</i> | <i>61.4</i> | <i>62.0</i> | 96 |
| Privatised | <i>43.2</i> | <i>50.5</i> | <i>54.0</i> | 53 |
| Overall | <i>54.5</i> | <i>57.5</i> | <i>59.1</i> | 149 |

As might be expected, capacity utilization is markedly higher for those firms which invested in the period 2002 to 2005 than those which did not (although revenue growth was lower), as shown in Table 3.53.

Table 3.53 Capacity Utilisation (Percent) and Investment

| | 2003 | 2004 | 2005 | No. Firms |
|--------------------|-------------|-------------|-------------|-----------|
| Investment 2002-05 | <i>56.1</i> | <i>60.7</i> | <i>63.2</i> | 100 |
| No Investment | <i>51.2</i> | <i>50.9</i> | <i>50.8</i> | 49 |
| Overall | <i>54.5</i> | <i>57.5</i> | <i>59.1</i> | 149 |

Note: Numbers in italics are in percent

Finally, it is of interest to look at profit shares of revenues for sampled firms. As Table 3.54 shows, for those firms for which data exist, the mean profit share by firm size is relatively consistent among firms of different sizes, increasing marginally with firm size and relatively stable over the period 2003 to 2005. However, if these data are accurate, these profit rates represent a relatively high return to these firms.

Looking at the same measure across sectors provides more discernible differences with the “others” sector (this includes paper products, rubber and plastics) consistently showing the highest profit share in 2003, 2004 and 2005. The wood sector also displays a fairly consistent profit share, averaging around 15.0 percent in every year while other sectors appear more volatile, although this may also be related to the inclusion of data from fewer firms in 2004 and 2005.

Table 3.54 Profits as a Share of Revenue by Firm Size

| Firm-Size | 2003 | | | | 2004 | | | | 2005 | | | |
|-----------|-------------|------------|-------------|-----------|-------------|------------|-------------|-----------|-------------|------------|-------------|-----------|
| | Mean | S.D. | Median | No. Firms | Mean | S.D. | Median | No. Firms | Mean | S.D. | Median | No. Firms |
| Micro | <i>11.4</i> | 8.2 | 9.2 | 11 | <i>13.1</i> | 4.7 | 9.9 | 11 | <i>12.3</i> | 3.5 | <i>10.4</i> | 13 |
| Small | <i>11.7</i> | 4.5 | <i>10.8</i> | 25 | <i>15.6</i> | 4.4 | <i>10.6</i> | 21 | <i>14.2</i> | 3.5 | <i>13.9</i> | 17 |
| Medium | <i>16.5</i> | 4.7 | <i>13.7</i> | 23 | <i>15.1</i> | 4.2 | 9.3 | 22 | <i>20.0</i> | 5.7 | <i>20.0</i> | 10 |
| Large | <i>0.0</i> | <i>0.0</i> | <i>0.0</i> | 0 | 5.9 | <i>0.0</i> | 5.9 | 1 | <i>26.4</i> | <i>0.0</i> | <i>26.4</i> | 1 |
| Overall | <i>13.5</i> | 3.0 | <i>10.6</i> | 59 | <i>14.7</i> | 2.5 | <i>10.1</i> | 55 | <i>15.3</i> | 2.2 | <i>14.2</i> | 41 |

Note: Numbers in italics are in percent
Note: S.D.= standard deviation on mean

Table 3.55 Profits as a Share of Revenue by Sector

| | 2003 | | | | 2004 | | | | 2005 | | | |
|-------------|-------------|-------------|-------------|-----------|-------------|-------------|-------------|-----------|-------------|-------------|-------------|-----------|
| | Mean | S.D. | Median | No. Firms | Mean | S.D. | Median | No. Firms | Mean | S.D. | Median | No. Firms |
| Food | 7.8 | 6.2 | 9.2 | 15 | <i>17.7</i> | 5.8 | <i>15.5</i> | 15 | <i>18.9</i> | 5.4 | <i>25.4</i> | 10 |
| Wood | <i>14.6</i> | <i>11.0</i> | <i>18.0</i> | 7 | <i>15.2</i> | 4.3 | <i>13.0</i> | 9 | <i>14.9</i> | 4.2 | <i>13.2</i> | 6 |
| Furniture | <i>18.4</i> | <i>12.8</i> | <i>13.7</i> | 5 | 5.5 | <i>16.2</i> | 3.9 | 4 | <i>17.6</i> | 4.4 | <i>14.2</i> | 3 |
| Textiles | <i>1.8</i> | <i>0.0</i> | <i>1.8</i> | 1 | 9.2 | <i>0.0</i> | 9.2 | 1 | <i>22.7</i> | <i>0.0</i> | <i>22.7</i> | 1 |
| Garments | <i>19.1</i> | 8.6 | <i>10.5</i> | 7 | <i>15.6</i> | 5.6 | <i>10.5</i> | 7 | <i>13.8</i> | 4.5 | <i>13.4</i> | 10 |
| Metal/Mach. | <i>11.6</i> | 5.1 | <i>10.6</i> | 17 | <i>11.3</i> | 5.2 | 9.2 | 13 | <i>5.4</i> | 3.3 | <i>4.6</i> | 8 |
| Other | <i>22.0</i> | <i>10.3</i> | <i>20.5</i> | 7 | <i>20.2</i> | 9.0 | <i>19.5</i> | 6 | <i>31.2</i> | <i>16.5</i> | <i>29.3</i> | 3 |
| Overall | <i>13.5</i> | 3.0 | <i>10.6</i> | 59 | <i>14.7</i> | 2.5 | <i>10.1</i> | 55 | <i>15.3</i> | 2.2 | <i>14.2</i> | 41 |

Note: Numbers in italics are in percent.
Note: S.D.= standard deviation on mean

Without further analyses, it is difficult to conjecture what might be driving these substantial differences in profit share. However, further data from the survey provides some clues. For example, as Table 3.56 illustrates, profit shares for privatised firms are markedly higher than non-privatised firms for 2003 and 2005. Although by no means proving causality, similar results are also shown for exporting firms compared to non-exporting firms, with exporters having profit shares of 18 percent, 16 percent and 19 percent for 2003 to 2005, respectively, while non-exporters display profit shares of only 2 percent, 10 percent and 8 percent for the same years.

Finally, in connection with corruption, the data provided by the survey show a potential incentive for corruption. As Table 3.57 shows, according to reported data, those firms which reported having paid bribes in the period from 2002 to 2005 have a consistently higher mean profit share than those which did not bribe. This may be a mere coincidence but suggests a path for further investigation.

Table 3.56 Profit Share by Privatised and Non-Privatised Firms

| | 2003 | | | | 2004 | | | | 2005 | | | |
|----------------|-------------|------------|-------------|-----------|-------------|------------|-------------|-----------|-------------|------------|-------------|-----------|
| | Mean | S.D. | Median | No. Firms | Mean | S.D. | Median | No. Firms | Mean | S.D. | Median | No. Firms |
| Always Private | <i>10.7</i> | <i>3.8</i> | <i>8.1</i> | 38 | <i>15.4</i> | <i>3.1</i> | <i>10.1</i> | 39 | <i>12.6</i> | <i>2.1</i> | <i>11.3</i> | 27 |
| Privatized | <i>18.6</i> | <i>4.8</i> | <i>20.5</i> | 21 | <i>13.2</i> | <i>3.8</i> | <i>10.0</i> | 16 | <i>20.6</i> | <i>3.5</i> | <i>21.2</i> | 14 |
| Overall | <i>14</i> | <i>0.4</i> | <i>11</i> | 59 | <i>15</i> | <i>0.3</i> | <i>10</i> | 55 | <i>15</i> | <i>0.3</i> | <i>14</i> | 41 |

Note: Numbers in italics are in percent

Note: S.D.= standard deviation on mean

Table 3.57 Profit Share of Revenue by Bribing and Non-Bribing Firms

| | 2003 | | | | 2004 | | | | 2005 | | | |
|----------------|-------------|------------|-------------|-----------|-------------|------------|-------------|-----------|-------------|------------|-------------|-----------|
| | Mean | S.D. | Median | No. Firms | Mean | S.D. | Median | No. Firms | Mean | S.D. | Median | No. Firms |
| No Bribe 02-05 | <i>9.7</i> | <i>3.4</i> | <i>6.3</i> | 40 | <i>12.1</i> | <i>2.6</i> | <i>9.8</i> | 39 | <i>13.3</i> | <i>2.0</i> | <i>14.2</i> | 31 |
| Bribe 02-05 | <i>21.6</i> | <i>5.6</i> | <i>14.0</i> | 19 | <i>21.1</i> | <i>5.2</i> | <i>20.3</i> | 16 | <i>21.5</i> | <i>3.9</i> | <i>15.4</i> | 10 |
| Overall | <i>14.3</i> | <i>2.0</i> | <i>15.5</i> | 12 | <i>9.3</i> | <i>1.2</i> | <i>9.9</i> | 11 | <i>8.2</i> | <i>0.9</i> | <i>6.2</i> | 9 |

Note: Numbers in italics are in percent

Note: S.D.= standard deviation on mean

4. Firm Dynamics: Combining the 2002 and 2006 Surveys

This section provides summary statistics generated by combining data from the 2006 and 2002 surveys, beginning by looking at the perceptions by firms of the problems faced when doing business and how these have changed over the time between the two surveys. Given that the questions regarding constraints faced by the firm were posed in exactly the same way in both surveys, we are able to give an indication of the evolution of the Mozambican business environment from the manager point of view.¹⁸

In 2002, difficulties in obtaining finance was cited as the most serious problem and, as shown in Table 4.1, it is clear that “cost of credit” is still on average perceived as the largest problem among firm managers. There has been a major improvement but cost of credit is still on average considered a major or severe constraint by 58 percent of firm managers.

Table 4.1 Developments in Perceived Constraints

| | 2002 Survey | | | | 2006 Survey | | | | Combined |
|---------------------------------|-------------|------|-----------------------|---------------------------------|-------------|------|-----------------------|---------------------------------|---------------------|
| | No. Firms. | Mean | No obstacle (percent) | Major/Severe obstacle (percent) | No. Firms. | Mean | No obstacle (percent) | Major/Severe obstacle (percent) | Difference in means |
| a) Telecommunications | 182 | 1.28 | 42 | 20 | 156 | 0.76 | 66 | 14 | -0.52 |
| b) Electricity | 187 | 2.65 | 18 | 64 | 157 | 2.06 | 29 | 46 | -0.59 |
| c) Transportation | 183 | 1.43 | 42 | 27 | 147 | 1.44 | 42 | 26 | 0.01 |
| d) Access to land | 161 | 1.24 | 57 | 27 | 71 | 0.82 | 75 | 18 | -0.42 |
| e) Tax rates | 184 | 2.45 | 17 | 55 | 156 | 2.15 | 29 | 50 | -0.30 |
| f) Tax administration | 184 | 2.19 | 22 | 48 | 155 | 1.74 | 37 | 35 | -0.45 |
| g) Customs | 167 | 2.11 | 29 | 49 | 142 | 1.70 | 40 | 38 | -0.41 |
| h) Labour regulations | 182 | 1.80 | 34 | 38 | 156 | 2.07 | 33 | 48 | 0.27 |
| i) Skills/education of workers | 183 | 1.79 | 27 | 34 | 156 | 1.68 | 36 | 35 | -0.11 |
| j) Business registration | 180 | 1.44 | 43 | 28 | 139 | 0.86 | 58 | 10 | -0.58 |
| k) Access to domestic credit | 173 | 3.08 | 13 | 75 | 144 | 2.42 | 24 | 58 | -0.66 |
| l) Access to foreign credit | 120 | 2.93 | 21 | 73 | 84 | 1.55 | 57 | 38 | -1.38 |
| m) Cost of credit | 177 | 3.28 | 10 | 84 | 144 | 3.00 | 15 | 72 | -0.28 |
| n) Unpredictability of policies | 179 | 2.58 | 13 | 58 | 151 | 2.03 | 31 | 44 | -0.55 |
| o) Macroeconomic instability | 181 | 2.75 | 13 | 63 | 153 | 2.65 | 14 | 63 | -0.10 |
| p) General corruption | 181 | 2.76 | 14 | 64 | 136 | 2.11 | 25 | 46 | -0.65 |
| q) Crime, theft and disorder | 182 | 2.47 | 14 | 54 | 156 | 1.79 | 28 | 35 | -0.68 |
| r) Anti-competitive practices | 164 | 2.59 | 22 | 60 | 144 | 1.45 | 52 | 32 | -1.14 |

Note: Based on firm judgements on whether or not the following factors are problematic for the operation and growth of your business. (0 = no obstacle, 1 = slight, 2 = moderate, 3 = major, and 4 = serious obstacle). It should also be noted that looking at the 137 survival firms only do not change the picture reported in Table 4.1.

¹⁸ Recall that data exist for both 2002 and 2006 for a maximum of 137 surviving and successfully interviewed firms (may be less depending on the variable) as opposed to the 158 firms used for analysis in Section 3.

Notably, on almost all counts firm managers perceive that the environment for doing business has improved from 2002 to 2006. Only in the case of labour regulations do perceptions reflect a worsening of the situation since 2002, as referred to in Section 3. Besides access to credit, major improvements have also occurred within the predictability of policies, corruption, crime and infrastructure areas such as telecommunications and electricity. As previously highlighted, a policy concern is that 63 percent of firm managers in 2006 perceive macroeconomic instability as a major or severe obstacle to firm growth and development, the same figure as in 2002, implicitly as a consequence of exchange rate fluctuations.

4.1 Firm Survival and Growth: The Usual Suspects

Although the business environment generally appears to have improved from the firm manager point of view, it is clearly important to improve our understanding of the factors driving dynamic changes in the enterprise sector and its component parts. This section provides a preliminary analysis of the connection between observed owner and firm-characteristics and the survival and growth performance of manufacturing Mozambican firms. A number of characteristics are commonly associated with firm survival and growth, in particular location, size, sector and legal ownership form, all of which proxy for variations in market characteristics and/or firm organisation. Tables 4.2 to 4.4 show different tabulations of survival rates of firms according to these different characteristics.¹⁹

As illustrated in Table 4.2, the average annual survival rate is in our sample similar in Maputo, Nampula and Chimoio, whereas firms located in Beira have had a somewhat lower survival probability between 2002 and 2006, where one in ten firms close down each year. Looking at sector sub-categories, survival rates are around 90 percent in food processing (ISIC 2-digit classification code: 15), wood products (ISIC: 20), furniture (ISIC: 36), textiles (ISIC: 17) and garments (ISIC: 18), whereas firms in the metal and machinery sector (ISIC: 27, 28, 29, 30, 31, 32, 33, 34 and 35) have a relatively high survival probability (98 percent).

¹⁹ Other distributional splits based on the categories mentioned are listed in Appendix B

Table 4.2 Number of Firms by Location and Sector

| | Year | Maputo | Beira | Nampula | Nacala | Chimoio | Other | Missing | No. | | Survivors | Survival rate |
|------------------------------|------|--------|-------|---------|--------|---------|-------|---------|-------|---------|-----------|---------------|
| | | | | | | | | | Firms | Percent | | |
| Food processing | 2002 | 26 | 7 | 11 | 0 | 1 | 1 | 1 | 47 | 24.5 | 32 | 90.8 |
| | 2006 | 20 | 7 | 6 | 5 | 1 | 1 | 0 | 40 | 25.3 | | |
| Wood Products/Furniture | 2002 | 21 | 6 | 8 | 1 | 3 | 0 | 0 | 39 | 20.3 | 25 | 89.5 |
| | 2006 | 20 | 5 | 4 | 2 | 4 | 0 | 0 | 35 | 22.2 | | |
| Textiles/Garments | 2002 | 17 | 5 | 4 | 0 | 2 | 0 | 0 | 28 | 14.6 | 19 | 90.8 |
| | 2006 | 14 | 4 | 3 | 1 | 1 | 0 | 0 | 23 | 14.6 | | |
| Metal/Machinery | 2002 | 21 | 5 | 5 | 0 | 2 | 0 | 0 | 33 | 17.2 | 30 | 97.6 |
| | 2006 | 26 | 4 | 4 | 0 | 1 | 0 | 0 | 35 | 22.2 | | |
| Other | 2002 | 28 | 3 | 1 | 0 | 2 | 0 | 0 | 34 | 17.7 | 23 | 90.7 |
| | 2006 | 22 | 1 | 0 | 0 | 2 | 0 | 0 | 25 | 15.8 | | |
| Missing | 2002 | 5 | 3 | 2 | 0 | 0 | 0 | 1 | 11 | 5.7 | 8 | 92.3 |
| | 2006 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 | | |
| Total | 2002 | 118 | 29 | 31 | 1 | 10 | 1 | 2 | 192 | 100.0 | 137 | |
| | 2006 | 102 | 21 | 17 | 8 | 9 | 1 | 0 | 158 | 100.0 | | |
| Percent | 2002 | 61.5 | 15.1 | 16.1 | 0.5 | 5.2 | 0.5 | 1.0 | 100.0 | | | |
| | 2006 | 64.6 | 13.3 | 10.8 | 5.1 | 5.7 | 0.6 | 0.0 | 100.0 | | | |
| Survivors | | 87 | 19 | 23 | 0 | 7 | 1 | 0 | 137 | | | |
| Annual average survival rate | | 92.7 | 90.0 | 92.8 | 0.0 | 91.5 | 100.0 | 0.0 | | | | |

Note: The "Other" category regarding location includes Guruè. Due to a mix-up of production categories in 2002 we had to put wood products and furniture in the same category.

Turning to analysis of firm size, Sutton (1997), Caves (1998), and Audretsch and Klepper (2000) summarise the existing theoretical and empirical insights about size and firm dynamics, finding that small firms have a lower likelihood of survival.²⁰ However, as Table 4.3 shows, the average annual survival rates for surveyed firms by location and size suggest that micro firms (1 to 9 employees) have the highest probability of survival (97 percent) among the four size categories. Explanations for this unexpected result could be that some micro firms produce where the owner resides (home production) and formally does not close down even if production fails. Alternatively it may be related to the stylised fact that micro firms change sector more frequently or simply that there are inherent benefits to smallness in Mozambique in terms of the business environment in which they operate. In any case, despite this unusual finding, differences in survival rates are not large,

²⁰ The empirically observed positive relationship between firm size and the likelihood of survival can be interpreted theoretically within the framework of noisy selection introduced by Jovanovic (1982). This contribution can be characterized as a passive learning model in which information is gathered at no cost. Entrants do not know their own cost structure and assuming that firms differ with regard to efficiency, they incur different costs when producing the same levels of output. Since entrants do not know their exact abilities their performance is unknown, so each participant has to go through a learning process, accumulating information from actual market experience. Entrepreneurs gradually discover whether their abilities are good enough to meet prior expectations, and if not they will typically exit the industry. Consequently, in the model of Jovanovic (1982) efficient firms survive and experience growth, whereas over-optimistic firms eventually close down. The longer a firm has been in the market the more knowledge it has about its own abilities, so in this model the probability of survival is positively related to firm age. In sum, Jovanovic predicts that firm survival increases with size and age.

small firms (10 to 49 employees) having only a marginally lower probability of survival (91 percent) than their medium sized (50 to 300 employees) counterparts (93 percent).

Table 4.3 Number of Firms by Location and Size

| | Year | Maputo | Beira | Nampula | Nacala | Chimoio | Other | Missing | No. | | Survivors | Survival rate |
|------------------------------|------|--------|-------|---------|--------|---------|-------|---------|-------|---------|-----------|---------------|
| | | | | | | | | | Firms | Percent | | |
| Micro | 2002 | 11 | 4 | 8 | 0 | 1 | 0 | 0 | 24 | 12.5 | 21 | 96.7 |
| | 2006 | 10 | 6 | 9 | 2 | 1 | 0 | 0 | 28 | 17.7 | | |
| Small | 2002 | 46 | 10 | 14 | 1 | 4 | 0 | 0 | 75 | 39.1 | 51 | 90.8 |
| | 2006 | 45 | 7 | 6 | 2 | 6 | 0 | 0 | 66 | 41.8 | | |
| Medium | 2002 | 52 | 14 | 6 | 0 | 5 | 1 | 0 | 78 | 40.6 | 57 | 92.5 |
| | 2006 | 40 | 6 | 2 | 3 | 1 | 0 | 0 | 52 | 32.9 | | |
| Large | 2002 | 8 | 0 | 3 | 0 | 0 | 0 | 0 | 11 | 5.7 | 8 | 92.3 |
| | 2006 | 4 | 0 | 0 | 1 | 1 | 1 | 0 | 7 | 4.4 | | |
| Missing | 2002 | 1 | 1 | 0 | 0 | 0 | 0 | 2 | 4 | 2.1 | 0 | 0.0 |
| | 2006 | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 5 | 3.2 | | |
| Total | 2002 | 118 | 29 | 31 | 1 | 10 | 1 | 2 | 192 | 100.0 | 137 | |
| | 2006 | 102 | 21 | 17 | 8 | 9 | 1 | 0 | 158 | 100.0 | | |
| Percent | 2002 | 61.5 | 15.1 | 16.1 | 0.5 | 5.2 | 0.5 | 1.0 | 100.0 | | | |
| | 2006 | 64.6 | 13.3 | 10.8 | 5.1 | 5.7 | 0.6 | 0.0 | 100.0 | | | |
| Survivors | | 87 | 19 | 23 | 0 | 7 | 1 | 0 | 137 | | | |
| Annual average survival rate | | 92.7 | 90.0 | 92.8 | 0.0 | 91.5 | 100.0 | 0.0 | | | | |

Note: Micro: 1-9 employees; Small: 10-49 employees; Medium; 50-299 employees; Large: 300 employees and above (World Bank definition).

Table 4.4 Number of Firms by Location and Legal Ownership Form

| | Year | Maputo | Beira | Nampula | Nacala | Chimoio | Other | Missing | No. | | Survivors | Survival rate |
|----------------------------------|------|--------|-------|---------|--------|---------|-------|---------|-------|---------|-----------|---------------|
| | | | | | | | | | Firms | Percent | | |
| Sole proprietorship/private firm | 2002 | 38 | 10 | 17 | 1 | 4 | 0 | 0 | 70 | 36.5 | 54 | 93.7 |
| | 2006 | 34 | 9 | 8 | 6 | 5 | 0 | 0 | 62 | 39.2 | | |
| Partnership | 2002 | 12 | 10 | 7 | 0 | 0 | 0 | 0 | 29 | 15.1 | 23 | 94.4 |
| | 2006 | 50 | 8 | 7 | 0 | 4 | 0 | 0 | 69 | 43.7 | | |
| Limited liability | 2002 | 58 | 5 | 6 | 0 | 6 | 1 | 0 | 76 | 39.6 | 52 | 90.9 |
| | 2006 | 16 | 4 | 2 | 2 | 0 | 1 | 0 | 25 | 15.8 | | |
| Other | 2002 | 6 | 3 | 0 | 0 | 0 | 0 | 0 | 9 | 4.7 | 5 | 86.3 |
| | 2006 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1.3 | | |
| Missing | 2002 | 4 | 1 | 1 | 0 | 0 | 0 | 2 | 8 | 4.2 | 3 | 78.3 |
| | 2006 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 | | |
| Total | 2002 | 118 | 29 | 31 | 1 | 10 | 1 | 2 | 192 | 100.0 | 137 | |
| | 2006 | 102 | 21 | 17 | 8 | 9 | 1 | 0 | 158 | 100.0 | | |
| Percent | 2002 | 61.5 | 15.1 | 16.1 | 0.5 | 5.2 | 0.5 | 1.0 | 100.0 | | | |
| | 2006 | 64.6 | 13.3 | 10.8 | 5.1 | 5.7 | 0.6 | 0.0 | 100.0 | | | |
| Survivors | | 87 | 19 | 23 | 0 | 7 | 1 | 0 | 137 | | | |
| Annual avg survival rate | | 92.7 | 90.0 | 92.8 | 0.0 | 91.5 | 100.0 | 0.0 | | | | |

Note: The "Other" category regarding ownership form includes: Parastatal Corporations, subsidiary of Mozambican firms and subsidiary of Multinational firms. Note that some firms in 2002 were registered legally as a private firm, partnership or limited liability company and had 100 percent government ownership.

Table 4.4 shows the sample distribution by location and legal ownership form. Unsurprisingly, the “Other” category (which includes Parastatal Corporations) has the lowest probability of survival. Moreover, private firms and partnerships have a higher probability of survival in our sample than limited liability companies.

The long-run growth rates of employment and real revenue per employee for surviving firms are shown in Table 4.5, by location, sector, legal ownership form, size and age.²¹ Overall, firms experienced an average employment increase of 26.6 percent. Given the nature of the financial data in 2002, there are only 68 observations for real revenue per employee. For these firms there is a remarkable average increase of 134.9 percent, indicating a significant increase in labour productivity during the beginning of the millennium in Mozambican manufacturing.

Moreover, note that despite mostly positive mean employment growth, the median employment growth within most sub-categories is negative. This shows that over half the firms considered here have reduced their labour force and thus that those firms which do grow are providing more jobs than are being lost. This combined with the fact that most firms have experienced positive developments in real revenue per employee reinforces the labour productivity result given above. There are, of course exceptions to the rule: the sample firms in Chimoio (few observations) and micro-enterprises experienced a median increase in employment and a similar decrease in revenue per worker.

As Table 4.5 also shows, food processing experienced the largest average increase in the number of employees and revenue per employee among the sectors sampled. Moreover, the sample of metal and machinery firms did relatively well with non-negative medians in both employment growth and revenues per employee. The employment growth column in Table 4.5 therefore appears to confirm the firm life cycle theories stating that smaller firms tend to grow more rapidly. Micro firms have over the four year period experienced an average growth of 41.2 percent, compared with 34.5 percent and 25.7 percent for small and medium sized enterprises, respectively. This contrasts with the findings for the Mozambican manufacturing sector in RPED (1999) based on the developments from 1992 to 1997, where large firms were creating almost all new jobs in manufacturing. That is, employment creation by smaller firms is potentially increasing in importance in the new millennium

²¹ By long-run growth is meant the growth rate in the variable under consideration between the 2002 and 2006 data. We use reported figures from year 2000 (2002 survey) and from year 2004 (2006 survey), due to the fact that some firms did not finish their financial accounts for the years 2001 and 2005, respectively, when the surveys took place. A consumer price index from INE is used as deflator in the revenue series.

than in the 1990s, implying that the importance of SMEs for policy makers should also be on the increase.

Table 4.5 Firm Long-run Growth

| | | Employment Growth | | | Growth in Real Revenue per Employee | | | | |
|-----------|----------------------------------|-------------------|--------|-------|-------------------------------------|-----------|-------|-------|--------|
| | | No. Firms. | Mean | S.D. | Median | No. Firms | Mean | S.D. | Median |
| Total | | 132 | 0.266 | 0.156 | -0.065 | 68 | 1.349 | 0.358 | 0.167 |
| Location | Maputo | 83 | 0.042 | 0.073 | -0.088 | 47 | 0.468 | 0.217 | 0.005 |
| | Beira | 17 | 0.100 | 0.195 | -0.182 | 3 | 0.869 | 0.714 | 0.807 |
| | Nampula | 16 | 0.870 | 0.870 | -0.015 | 8 | 4.477 | 1.562 | 3.858 |
| | Nacala | 8 | -0.089 | 0.220 | -0.146 | 6 | 3.310 | 1.574 | 2.131 |
| | Chimoio | 7 | 1.985 | 1.897 | 0.429 | 3 | 3.759 | 4.316 | -0.207 |
| | Other | 1 | 2.860 | 0.000 | 2.860 | 1 | 0.211 | 0.000 | 0.211 |
| Sector | Food processing | 33 | 0.558 | 0.452 | -0.068 | 16 | 1.864 | 0.963 | 0.161 |
| | Wood Products and Furniture | 30 | 0.433 | 0.449 | -0.065 | 16 | 1.007 | 0.579 | 0.083 |
| | Textiles and Garments | 19 | 0.122 | 0.157 | -0.100 | 11 | 1.337 | 0.905 | 0.108 |
| | Metal/Machinery | 29 | 0.130 | 0.117 | 0.000 | 15 | 1.857 | 0.888 | 0.370 |
| | Other | 21 | -0.111 | 0.083 | -0.150 | 10 | 0.324 | 0.254 | 0.162 |
| Ownership | Sole proprietorship/private firm | 47 | 0.280 | 0.292 | 0.000 | 24 | 2.552 | 0.580 | 0.501 |
| | Partnership | 64 | 0.291 | 0.233 | -0.058 | 33 | 0.856 | 0.343 | 0.233 |
| | Limited liability | 19 | 0.208 | 0.214 | -0.150 | 9 | 0.249 | 0.240 | 0.108 |
| | Other | 2 | -0.274 | 0.107 | -0.274 | 2 | 0.004 | 0.366 | 0.004 |
| Size | Micro | 21 | 0.412 | 0.235 | 0.111 | 10 | 1.454 | 1.094 | -0.173 |
| | Small | 49 | 0.345 | 0.228 | 0.000 | 27 | 1.843 | 0.708 | 0.250 |
| | Medium | 54 | 0.257 | 0.262 | -0.157 | 29 | 0.810 | 0.364 | 0.020 |
| | Large | 8 | -0.533 | 0.110 | -0.586 | 2 | 1.975 | 0.866 | 1.975 |
| Age | Under 10 years old | 10 | 0.039 | 0.223 | -0.150 | 6 | 2.062 | 1.430 | 0.034 |
| | 10 - 19 years old | 46 | 0.015 | 0.072 | 0.000 | 20 | 0.900 | 0.362 | 0.229 |
| | 20 - 29 years old | 20 | 0.678 | 0.682 | -0.185 | 9 | 2.817 | 1.566 | 0.878 |
| | 30 - 39 years old | 15 | 0.035 | 0.111 | 0.033 | 9 | 2.610 | 1.516 | 0.309 |
| | 40 years old and above | 40 | 0.505 | 0.372 | -0.065 | 24 | 0.523 | 0.367 | 0.092 |

Note: Location, sector, ownership and age is based on the figures in 2006. In the "Size" category we use 2002 numbers as threshold. Some 5 observations are missing in the size category in the raw data. An additional 4 observations (two in each end of the distribution) are outliers and are excluded in the present analysis. Micro: 1-9 employees; Small: 10-49 employees; Medium: 50-299 employees; Large: 300 employees and above (World Bank definition).

Note: S.D.= standard deviation on mean

A further way of illustrating the dynamics of firms is to look at employment transition matrices, an illustrative tool often used to evaluate economic mobility. Table 4.6 gives employment transitions for micro-, small- medium- and large enterprises from 2000 to 2006. The data presented indicate quite clearly that despite high employment growth rates presented in Table 4.5, micro firms with 1 to 9 employees have tended to stay small, with some two-thirds of the firms in this category in 2002 remaining there in 2006. Moreover, those firms which did increase in size graduated to the small category only, with no micro firms making the transition to become medium or large enterprises between 2002 and 2006. This combined with the high survival rate of micro firms may again suggest inherent benefits to smallness and the potential existence of firm-size thresholds.

Among other firm-size categories, there is also a tendency for small and medium enterprises to stay within their size category over the four year period, indeed size category transitions are lower than those found for comparable data on South East Asia (see Hansen, Rand and Tarp, 2006). This may provide confirmation of the general conclusion in Collier and Gunning (1999) that African firms do not necessarily grow rapidly despite making healthy profits.

Table 4.6 Employment Transition Matrix

| | Micro 06 | Small 06 | Medium 06 | Large 06 | Total |
|-----------|--------------|--------------|--------------|-------------|----------------|
| Micro 02 | 14 (66.7) | 7 (33.3) | 0 (0.0) | 0 (0.0) | 21 (100.0) |
| Small 02 | 6 (12.2) | 39 (79.6) | 4 (8.2) | 0 (0.0) | 49 (100.0) |
| Medium 02 | 1 (1.9) | 10 (18.5) | 40 (74.1) | 3 (5.6) | 54 (100.0) |
| Large 02 | 1 (12.5) | 0 (0.0) | 4 (50.0) | 3 (37.5) | 8 (100.0) |
| Total | 22 (16.7) | 56 (42.4) | 48 (36.4) | 6 (4.5) | 132 (100.0) |

Note: Transitions in number of firms. Numbers in parenthesis are in percent

4.2 Firm Survival and Growth: Other Characteristics

In addition to the typical firm level characteristics might firm dynamics such as location, sector, legal ownership, size and age discussed above, additional firm characteristics may help explain the growth and survival of firms. These relate to education and managerial skills, foreign ownership, trade participation and production characteristics amongst others, as discussed below.

4.2.1 Education and Managerial Skills

Owner and manager characteristics related to gender and education (managerial skills) is often included in analysis explaining firm dynamics. For example, Liedholm and Mead (1998, 1999) find that labour force characteristics and the gender of the entrepreneur are important determinants of firm survival and growth in the African region. McPherson (1996) studies five African countries and also finds that that the level of human capital and gender are important determinants of growth while Liedholm (2002) in his investigation of the determinants of survival and growth of SMEs in Africa.

Tables 4.7 to 4.9 present some general characteristics of the workforce and firm managers from the surveyed sample of firms from 2002 and 2006.²² Table 4.7 shows that the average educational level of surveyed firms has increased, with more employees with secondary or higher education in 2006 than in 2002. Moreover, the average educational level among surviving firms was generally higher than in non-surviving firms, an association which merit further investigation.

Table 4.7 Educational Level of the Workforce

| | No. Firms | Education 1 | Education 2 | Education 3 | Education 4 |
|---|-----------|-------------|-------------|-------------|-------------|
| Year 2002 | 75 | 28.2 | 63.7 | 7.5 | 0.6 |
| Year 2006 | 116 | 46.7 | 33.3 | 18.4 | 1.5 |
| Non-Survivors | 18 | 37.4 | 58.9 | 3.7 | 0.1 |
| Survivors | 57 | 25.3 | 65.2 | 8.8 | 0.7 |
| Above average employment growth | 12 | 31.7 | 60.7 | 7.7 | 0.0 |
| Above average growth revenue per employee | 11 | 39.1 | 55.8 | 5.1 | 0.0 |

Note: There were differences in the questionnaire regarding education categories. This may give some problems with regards the split between education categories.

The educational level of the manager is often considered as a proxy for the general managerial skills in the company. Table 4.8 shows that the proportion of managers with secondary or higher education increased from 74 percent in 2002 to 81 percent in 2006 although it is difficult to establish a direct link between survival/growth and manager education.

Table 4.8 Educational Level of the General Manager

| | No. Firms | Education 1 | Education 2 | Education 3 | Education 4 |
|---|-----------|-------------|-------------|-------------|-------------|
| Survey 2002 | 191 | 2.6 | 23.0 | 50.8 | 23.6 |
| Survey 2006 | 129 | 3.9 | 14.7 | 43.4 | 38.0 |
| Non-survivors | 54 | 1.9 | 18.5 | 53.7 | 25.9 |
| Survivors | 137 | 2.9 | 24.8 | 49.6 | 22.6 |
| Above average employment growth | 28 | 0.0 | 32.1 | 46.4 | 21.4 |
| Above average growth revenue per employee | 19 | 5.3 | 31.6 | 42.1 | 21.1 |

²² Due to differences in the education categories between the surveys in 2002 and 2006 care should be taken when interpreting the differences. The education categories are as follows: Education 1: No education and did not finish primary education; education 2: Primary education; education 3: Secondary education and high school; and education 4: University degree. Also, note that additional tables regarding workforce unionization and firm participation in HIV related activities are included in the Appendix B.

Other characteristics of the firm manager linked with firm growth are documented in Table 4.9. The gender result found in other African countries is difficult to confirm using this data, given the low level of variation in the gender variable since the vast majority of firms are male run. However, the data do lend some support to the hypothesis that male-run firms grow faster. Moreover, nationality and ethnic origin may also play an important role in the firm growth process, with enterprises managed by Portuguese/Europeans performing less well than firms led by a Mozambican manager.

Table 4.9 General Manager Characteristics and Firm Growth

| | | Employment Growth | | | Revenue per Employee Growth | | |
|-------------|------------|-------------------|--------|--------|-----------------------------|-------|--------|
| | | No. Firms | Mean | Median | No. Firms | Mean | Median |
| Gender | Male | 123 | 0.283 | -0.053 | 62 | 1.450 | 0.222 |
| | Female | 4 | 0.014 | -0.081 | 2 | 0.169 | 0.169 |
| Nationality | Mozambican | 84 | 0.377 | -0.063 | 44 | 1.834 | 0.094 |
| | Portuguese | 25 | -0.060 | -0.068 | 13 | 0.667 | 0.347 |
| | Other | 11 | 1.030 | 0.926 | 5 | 0.590 | 0.513 |
| Ethnic | African | 59 | 0.139 | 0.000 | 29 | 1.573 | -0.036 |
| | European | 37 | -0.009 | -0.106 | 19 | 0.484 | 0.347 |
| | Indian | 22 | 1.183 | -0.108 | 11 | 2.430 | 0.878 |
| | Other | 8 | 0.082 | 0.069 | 6 | 1.225 | 1.028 |

4.2.2 Privatization, Foreign Ownership and Trade

The academic literature has often found positive effects of foreign ownership and privatization on firm performance and productivity (Brown *et al.*, forthcoming). From a theoretical point of view, arguments for privatization are based on the premise that harmful effects of state intervention have greater impact under state ownership than under state regulation (Megginson and Netter, 2001), that is, the effects of privatization depend on the degree of market failure. Moreover, ownership structure affects the ease with which governments can intervene in firm operations. Many countries have experienced a situation where the inefficiency in state owned enterprises stems from inefficient State Owned Enterprises (SOEs) being allowed to rely on the government for funding, operating under "soft" budget constraints. Privatization can thereby also impact efficiency and thus firm survival and growth through its effect on government fiscal conditions.

Tables 4.10 and 4.11 give summary statistics for ownership structure and privatization, respectively. Around 80 percent of surveyed firms were privately owned in both 2002 and 2006. However, there is a change in ownership form from state to foreign ownership between 2002 and 2006. Moreover,

somewhat surprisingly, private (domestic) firms have experienced larger growth both in terms of employment and real revenue as compared to firms dominated by foreign ownership.

Table 4.10 Share of Private, Government and Foreign Ownership

| | No. Firms | Private | State | Foreign |
|--|-----------|-------------|-------------|------------|
| Survey 2002 | 183 | <i>84.8</i> | <i>12.7</i> | <i>2.5</i> |
| Survivors 02/06 | 130 | <i>81.8</i> | <i>16.5</i> | <i>1.7</i> |
| Survey 2006 | 155 | 79.0 | 2.2 | 18.8 |
| Survivors 02/06 | 134 | 77.8 | 1.8 | 20.4 |
| Employment growth if share larger than 50 percent | | 31.6 | 0.0 | 14.5 |
| Number of observations | | 99 | 0 | 25 |
| Real revenue per employee growth if share larger than 50 percent | | 159.5 | 0.0 | 45.1 |
| Number of observations | | 48 | 0 | 15 |

Note: The financial data suffers from lack of consistency. We are left with 68 firms that report financial records in both 2002 and 2006.
Note: Numbers in italics are in percent.

As stated in Castel-Branco *et al.* (2001) privatization has been at the core of the Mozambican transition process, although the benefits/costs from privatization have never been fully addressed. Given that very few of the firms sampled in 2006 are SOEs (most firms privatized) it is difficult to assess the effect of privatization. However, Table 4.11 suggests that firms previously owned by the state do not perform worse than firms that have always been privately owned, in line with results obtained in RPED (1999).

Table 4.11 Privatization

| | | Yes | No | Missing | Total |
|----------------------------------|-----------|--------|--------|---------|-------|
| Previously state owned | No. Firms | 57 | 115 | 20 | 192 |
| Annual average survival rate | Percent | 92.1 | 91.0 | 96.0 | |
| Previously state owned | No. Firms | 40 | 76 | 16 | 132 |
| Employment growth | Mean | 0.344 | 0.083 | 0.945 | |
| | S.D. | 0.356 | 0.071 | 0.875 | |
| | Median | -0.158 | -0.013 | -0.046 | |
| Previously state owned | No. Firms | 22 | 38 | 8 | 68 |
| Real revenue per employee growth | Mean | 1.333 | 1.169 | 2.252 | |
| | S.D. | 0.689 | 0.433 | 1.294 | |
| | Median | 0.048 | 0.241 | 0.161 | |

Note: S.D.= standard deviation on mean

A number of papers have studied the hypothesis that trade (exporting) might impact on firm dynamics and performance. Bigsten *et al.* (2004) find significant efficiency gains from exporting in

Cameroon, Ghana, Kenya and Zimbabwe, controlling for the fact that well-performing firms might self-select in to the export market. That is, firms learn by exporting.

Table 4.12 summarises the data on surveyed manufacturing firms which engage in export markets, indicating that the proportion of surveyed firms which export has increased from 11 to 14 percent. In addition, the share of exporting firms has increased for all firm-size categories except for small firms, with large firms having the highest probability of exporters which has increased from 30 percent to 42.0 percent between 2002 and 2006. However, it is not clear from Table 4.12 whether exporting firms have performed better or worse than their non-exporting counterparts.

Table 4.12 Exports

| | | 2002 | 2006 |
|-----------------------|--------------|-------|-------|
| Does your firm export | Yes | 11.5 | 13.9 |
| | | (22) | (22) |
| | No | 80.2 | 85.4 |
| | | (154) | (135) |
| Missing | 8.3 | 0.6 | |
| | | (16) | (1) |
| Export by size | Micro | 0.0 | 3.6 |
| | | (0) | (1) |
| | Small | 1.4 | 3.1 |
| | | (1) | (2) |
| | Medium | 25.7 | 25.0 |
| | (18) | (13) | |
| | Large | 30.0 | 42.9 |
| | | (3) | (3) |
| Survival rate | Export 02 | | 68.2 |
| | No export 02 | | 72.1 |
| Revenue growth | Export 02 | | 99.0 |
| | No export 02 | | 157.8 |

Note: Figures in percentages (Number of observations in parenthesis).

The low incidence of exporting firms combines with high levels of dependence on imports of intermediate inputs and raw materials, as illustrated in Table 4.13. Over two thirds of surveyed firms import (excluding missing observations) inputs with import reliance increasing with size. In addition, there are indications that import reliance has also increased for all firm-size categories over the period from 2002 to 2006 for all firm sizes. As implied from manager perceptions of firm constraints, this leaves firms highly vulnerable to macroeconomic shocks (exchange rate fluctuations). Changes in relative prices of imported goods may affect production costs and hence

the profitability over time. Moreover, difficulties in securing timely delivery of needed inputs due to administrative burdens with customs may disrupt production processes.

Table 4.13 Imports

| | | 2002 | 2006 |
|-------------------------|-----------|--------------|---------------|
| Does your firm import | Yes | 43.2 (83) | 63.9 (101) |
| | No | 24.0 (46) | 26.6 (42) |
| | Missing | 32.8 (63) | 9.5 (15) |
| Import by size | Micro | 14.3 (2) | 42.9 (12) |
| | Small | 60.4 (29) | 70.3 (45) |
| | Medium | 75.7 (44) | 85.7 (36) |
| | Large | 88.9 (8) | 100.0 (5) |
| Survival rate (4 years) | Import | | 75.9 |
| | No import | | 69.6 |
| Revenue growth | Import | | 83.0 |
| | No import | | 37.4 |

Note: Figures in percentages (Number of observations in parenthesis)

4.2.3 Production Characteristics

Product diversification is a further characteristic often linked with improvements in the probability of survival. Gaining market power, avoiding risk, having access to funds, making products compatible and reaping efficiency gains are, in the view of Jovanovic (1993), some of the potential benefits from diversification.

Table 4.14 gives some support to this idea, showing that some 94 percent of the firms that produced more than one product (different ISIC 2 digit level products) survived as compared to 86 percent in the no diversification group. In contrast, employment growth rates among firms specialising in production of one good only are larger in our sample. This may relate to the fact that the number of surveyed firms with diversified production decreased between the two surveys, from 78.6 percent of firms in 2002 to 60.1 percent of firms in 2006.

Table 4.14 Diversification

| | Diversified production | | | Total |
|--------------------|------------------------|--------------|-------------|----------------|
| | Yes | No | Missing | |
| Survey 2002 | 78.6 (151) | 14.6 (28) | 6.8 (13) | 100.0 (192) |
| Survey 2006 | 60.1 (95) | 35.4 (56) | 4.4 (7) | 100.0 (158) |
| Survivors | 93.6 | 85.6 | 82.4 | 132 |
| Empl. Growth 02-06 | 15.9 | 5.07 | -8.5 | |

Note: Figures in percentages (Number of observations in parenthesis).

It has also been suggested that firm level innovations should be considered as a potential driving force behind firm growth and survival. Jovanovic and MacDonald (1994) find that experienced firms are more capable of pursuing innovations, and, during the process of technological change. Technological laggards exit because successful innovators force down prices. Moreover, Klepper (1996) argues that firm size and the ability to appropriate returns from innovations may be related. He highlights the importance of firm size in appropriating returns from innovations and, in his analytical framework, price declines eventually limit further entry so that older firms with the best innovative capabilities get larger shares of the industry output. This would confirm the findings in Section 3 regarding the increased introduction of new technologies by large firms.

Table 4.15 Innovation

| | | 2002 | 2006 |
|--|----------------|--------------|---------------|
| Introduced new product in the last 3 years | Yes | 25.5 (49) | 23.4 (37) |
| | No | 46.4 (89) | 75.9 (120) |
| | Missing | 28.1 (54) | 0.6 (1) |
| Innovation by size | Micro | 21.4 | 0.0 |
| | Small | 27.3 | 21.5 |
| | Medium | 44.8 | 32.7 |
| | Large | 33.3 | 57.1 |
| Survival rate | Innovators | | 83.7 |
| | Non-innovators | | 69.7 |

Note: Figures in percentages (Number of observations in parenthesis).

As shown in Table 4.15, a similar proportion of firms had introduced new products in the three years prior to the survey in both 2002 and 2006 (25.5 percent and 23.4 percent, respectively). As

indicated in industrial theory, larger and more experienced firms have a higher probability of engaging in innovative processes. Moreover, there is a clear difference in the survival rate of innovative and non-innovative enterprises. Innovative firms have a higher probability of survival.

As mentioned in RPED (1999), increased capacity utilisation was probably the most important source of growth in the early and mid 1990s. Looking at Table 4.16, the average capacity utilization has apparently continued to increase in the new millennium from 51.2 percent in 2002 to 59.1 percent in 2006 (and from 48 percent in 1998 – See RPED, 1999). Moreover, there is an apparent tendency for increasing capacity utilization increasing with firm size, as shown in Table 4.16.

Table 4.16 Capacity Utilization

| | | 2002 | 2006 |
|----------------------|---------------------|---------------|---------------|
| Capacity Utilization | Observations | 51.2 (186) | 59.1 (150) |
| By Size | Micro | 48.8 | 58.5 |
| | Small | 48.0 | 56.9 |
| | Medium | 53.1 | 57.8 |
| | Large | 63.1 | 82.6 |
| By employment growth | Above median growth | | 63.3 |
| | Below median growth | | 55.8 |

Note: Figures in percentages (Number of observations in parenthesis).

4.2.4 Investments and Credit

Table 4.17 indicates that increasing numbers of firms have invested over the period from 1999 to 2006:²³ 54 percent of manufacturing enterprises invested in the 2002 survey as compared to 67 percent in 2006. Moreover (and as expected), larger firms invest more frequently than their smaller counterparts. However, there are no significant revenue growth differences between investing and non-investing firms.

As in 2002 most firms still finance new investments using retained earnings, with around 80 percent of investments financed by internal funds in both surveys. This is often a clear indication of malfunctioning credit markets and could suggest that the credit availability situation has not improved over the period under analysis.

²³ This question relates to whether the firm has made any new investments the past three years.

Table 4.17 New Investments and Internal Finance

| | | 2002 | 2006 |
|-----------------------------|-------------------|-------|-------|
| New investment | Yes | 53.6 | 67.1 |
| | | (103) | (106) |
| | No | 16.1 | 32.3 |
| | | (31) | (51) |
| Missing | 30.2 | 0.6 | |
| | | (58) | (1) |
| Percent internal finance | | 79.6 | 81.8 |
| | | (103) | (104) |
| New investment by size | Micro | 66.7 | 46.4 |
| | Small | 64.7 | 60.0 |
| | Medium | 91.2 | 82.7 |
| | Large | 77.8 | 100.0 |
| Revenue per employee growth | New investment | | 71.7 |
| | OBEs. | | (36) |
| | No new investment | | 78.6 |
| | OBEs. | | (15) |

Note: Figures in percentages (Number of observations in parenthesis).

Table 4.18 presents data on bank loans and overdraft facilities and their use between 2002 and 2006. There are no major changes in the percentage of firms having a bank loan, with around 1 firm in 4 having no access to bank credit. Interestingly, this is a drop from the mid-1990s when one firm in three had a bank loan RPED (1999). In contrast, the proportion of firms with access to an overdraft facility almost doubled, from 12 percent of firms in 2002 to 23.4 percent of firms in 2006. While not resolving potential investment constraints for firms, this result at least implies that liquidity problems may have been reduced for an increased number of firms.

Perhaps the most significant change between the survey in 2002 and the 2006 survey in terms of credit is a large increase in the number of firms reporting that audited statements are needed in order to obtain bank credit. In 2002 only 10 percent of the firms stated that this was the case, whereas 69 percent of the firms in 2006 said that audited statements is a requirement from the bank in order to obtain loans.

Although Table 4.18 presents a very low level of access to bank loans, as referred to in Section 3.5, a high proportion of firms did not apply for a loan. Indeed, the share of firms which did not apply for a loan increased from 72.4 percent of firms in 2002 to 93.1 percent in 2006.

Table 4.18 Bank Loans and Overdraft Facility

| | | 2002 | 2006 |
|---------------------------------------|-------------------------------|---------------|---------------|
| Bank loan | Yes | 28.6 (55) | 24.7 (39) |
| | No | 69.8 (134) | 73.4 (116) |
| | Missing | 1.6 (3) | 1.9 (3) |
| If no bank loan, why? | Did not apply | 72.4 | 93.1 |
| | Application turned down | 14.9 | 6.9 |
| | Missing | 12.7 | 0.0 |
| Audited statements needed to get loan | Yes | 10.4 | 69.0 |
| | No | 46.4 | 13.3 |
| | Don't know and not applicable | 43.2 | 17.7 |
| Overdraft facility | Yes | 12.0 | 23.4 |
| | No | 86.5 | 74.1 |
| | Missing | 1.5 | 2.5 |
| Survival rate | Firms with loan in 02 | | 81.8 |
| | Firms without loan in 02 | | 67.9 |
| Revenue growth rate | Firms with loan in 02 | | 27.4 |
| | Firms without loan in 02 | | 176.0 |

Note: Figures in percentages (Number of observations in parenthesis).

Table 4.19 documents the reasons why the firms did not apply. Approximately 30 percent of firms in both 2002 and 2006 did not need a loan, while remaining firms claim that application procedures are too cumbersome or collateral requirements too stringent, although these appear less frequently in 2006 as constraints than in 2002.

Table 4.19 Bank Loans and Overdraft Facility (in percent)

| | 2002 | 2006 |
|---|-------------|------|
| | Not Applied | |
| Do not need loan | 31.3 | 33.3 |
| Against my religion | 26.3 | 6.9 |
| Appl. Procedures too cumbersome | 49.0 | 39.2 |
| Collateral requirements too stringent | 51.0 | 40.2 |
| Corruption in the allocation of bank credit | 12.3 | 6.9 |
| | Turned Down | |
| Lack of collateral | 40.0 | 37.5 |
| Incompleteness of application | 5.0 | 0.0 |
| Perceived lack of feasibility of project | 0.0 | 62.5 |
| Other | 42.1 | 12.5 |

The land market, property rights and credit access are often closely related, and land titling often increases efficiency. Certificates for Land Use Right (CLUR) can be used as collateral to obtain credit, and insufficient access to finance is arguably one of the main constraints to business development in Mozambique. Table 4.20 shows that more firms have obtained formal property rights in 2006 than had in 2002, something which could help access to credit in formal credit institutions although in 2006 it is still under half of the firms that have a CLUR.

Table 4.20 Certificate for Land Use Right (CLUR)

| | | 2002 | 2006 |
|--------------------|---------|--------------|--------------|
| Do you have a CLUR | Yes | 15.1 (29) | 43.7 (69) |
| | No | 45.3 (87) | 32.9 (52) |
| | Missing | 39.6 (76) | 23.4 (37) |

Note: Figures in percentages (Number of observations in parenthesis)

4.2.5 Red Tape, Bribes and Tax Evasion

This final section focuses on the variation between 2002 and 2006 of the administrative difficulties faced by firms and how these are related to firm growth and survival. Table 4.21 provides the average time spent dealing with government regulations and requirements, which has been slightly reduced from 2002 to 2006.

While IFC (2003) established that red tape differs between regions, Table 4.21 suggests that there may also be a connection between size and bureaucratic burdens, as previously raised in Section 3.4. However, it is difficult to find a clear connection between bureaucratic burden and firm survival and growth.

Turning to the level of bribes paid by firms Table 4.22 shows that nearly 50 percent of firms do not wish to respond to this sensitive question.²⁴ Of the firms answering, 56 percent of firms in 2002 and 65 percent in 2006, state that they pay bribes and the average payment lies between 6.4 and 8.7 percent of total sales, respectively (and these numbers do not change much between size and regions, not reported). As compared to Uganda (see Svensson, 2003) the number of firms paying

²⁴ The question was posed both indirectly and directly to the respondent. Whether the indirect or direct method was used did not change the figures reported significantly.

bribes are somewhat lower, but the amount paid is quite similar. We find no average differences in the survival rate of bribe paying and non-bribing firms.

Table 4.21 Management Time Used on Government Regulations

| | | 2002 | 2006 |
|----------------|--------------|-------|-------|
| All firms | | 11.1 | 9.1 |
| | | (142) | (146) |
| By size | Micro | 10.8 | 4.9 |
| | | (17) | (26) |
| | Small | 12.3 | 8.6 |
| | | (52) | (62) |
| | Medium | 10.3 | 12.4 |
| | | (64) | (46) |
| | Large | 10.1 | 6.7 |
| | | (8) | (7) |
| Survival rate | Above median | 70.0 | |
| | Below median | 76.4 | |
| Revenue growth | Above median | 116.9 | |
| | Below median | 93.3 | |

Note: Figures in percentages (Number of observations in parenthesis)

Table 4.22 Bribe Payments

| | | 2002 | 2006 |
|-------------------------|-------------------|------|------|
| Do you pay bribes | Yes | 29.7 | 35.4 |
| | | (57) | (56) |
| | No | 22.9 | 18.4 |
| | | (44) | (29) |
| | Missing | 47.4 | 46.2 |
| | | (91) | (73) |
| Bribe payments | Percent of sales | 6.4 | 8.7 |
| Survival rate (4 years) | Pay bribe | 73.7 | |
| | Do not pay bribes | 70.5 | |

Note: Figures in percentages (Number of observations in parenthesis)

Tax evasion is often seen in economies with a high degree of informality, weak legal foundation and enforcement and weak administration. From Table 4.23 we first of all see that the average number of tax forms that a firm has to fill out in a year has been reduced significantly between 2002

and 2006. This could indicate that the administrative burdens facing the firm from the tax authorities has been somewhat reduced.

Table 4.23 Tax Evasion

| | | 2002 | 2006 |
|--|--------------|---------------|---------------|
| Average number of tax forms in a year | Mean | 9.3 (142) | 2.8 (151) |
| | No. of zeros | 4.9 (7) | 6.0 (9) |
| How much of total sales do you report for tax purposes | Percent | 65.6 (117) | 84.1 (103) |
| | No. of 100% | 41.9 (49) | 60.2 (62) |
| | No. of zeros | 16.2 (19) | 1.9 (2) |
| Percent of tax returns that have been challenged | | 6.0 (164) | 14.3 (153) |

Note: Figures in percentages (Number of observations in parenthesis)

The amount that firms report for tax purposes has gone up from 2002 to 2006. The number of firm reporting all sales to the authorities has gone up combined with a large reduction in firms never reporting sales to the tax authorities. Moreover, it seems as if tax enforcement has increased. More tax returns have been challenged by the authorities according to the most recent survey.

5. Final Comments and Policy Issues

This report documents the findings from an enterprise survey conducted in 2006 in Mozambique. Given the structure of the survey instrument, much of the data collected is directly comparable to an IFC/World Bank survey carried out in 2002, thus providing a unique and rich dataset on Mozambican manufacturing enterprises. This permits (i) an up-to-date analysis of recent developments in the business environment from the point of view of the enterprise sector, (ii) comparisons with previously found results, and (iii) the establishment of basic associations between firm characteristics and firm growth and survival rates.

A series of interesting statistics and policy-relevant recommendations emerge from these data. They are presented below:

- Although over half the firms considered have reduced their labour force, firms experienced an average employment increase of around 27 percent from 2002 to 2006. Moreover, the data for employment growth appears to confirm the firm life-cycle theories stating that smaller firms tend to grow more rapidly. That is, the dynamics of smaller firms are now a far more important factor for policy makers when thinking about employment generation than in the 1990s. However, policy makers need to focus on why small and medium enterprises tend to stay within their size category over time despite making profits (median profit rates above 10 percent) and remarkable increases in labour productivity and investigate the possibility of the existence of firm-size thresholds.
- The average annual survival rate between 2002 and 2006 was around 92 percent, corresponding fairly well with results obtained for other developing countries. Atypically, micro firms are found to have the highest probability of survival, possibly explained by the fact that micro enterprises often engage in home production and formally does not close down even if production fails although also potentially a result of differing business environment for micro-firms. This is potentially also reflected in the fact that micro firms change sector more frequently. For larger firm categories, the typical positive relationship between firm size and survival exists in the data, with large firms displaying higher survival rates than small and medium firms. Establishing

whether observed exit patterns can be explained by differences in firm efficiency is a task for future research.

- A potential policy concern arises with the finding that 63 percent of firm managers in 2006 perceive macroeconomic instability as a major or severe obstacle to firm growth and development. Securing a stable business environment at the macro level is a first premise for developing sound and sustainable business plans from a firm perspective. In particular, this aspect raises concern regarding the impact on firms of exchange rate movements in an import-reliant economy such as Mozambique. Policy options deserve careful scrutiny.
- Managers perceive the environment for doing business as improving from 2002 to 2006 on almost all counts. Only in the case of labour regulations the situation has worsened since 2002 with admittedly few new entrants viewing labour regulations as a serious obstacle. Moreover, there is a high ratio of temporary to permanent workers in Mozambican manufacturing (especially among medium and large firms), which may imply that hiring and firing costs are prohibitive, thus encouraging substantial use of short-term contracts. It would appear that a more flexible set of labour regulations should be put in place.
- The average time spent on bureaucratic burdens has been slightly reduced from 2002 to 2006 and in the latest survey only 42 percent considered “Business Licensing and Regulations” to be a constraint to the operations and growth of the firm. However, although our data indicate slow improvements within registration requirements, the relative burden of bureaucracy lies more with small and especially medium-sized firms. Further efforts in ameliorating this burden would clearly be desirable.
- The number of bribe paying firms has increased from 2002 to 2006, although from a low base as compared to other Sub-Saharan African countries. The average amount paid in bribes is around 9 percent of total sales, a figure similar to that reported for other Sub-Saharan Africa countries. Medium-sized firms pay bribes more frequently than other groups in the size distribution. These figures suggest that bribe payments are not an insignificant part of firm total costs and are related to firm-size. It also suggests that attention should be paid to this area in policy research.

- Regarding tax evasion, evidence suggests an average increase in the declaration of sales values to the tax authorities from 2002 to 2006. In 2006, three out of five reported 100 percent of total sales to the authorities as compared to only two out of five in 2002. However, the data suggests huge firm size differences with regards to tax evasion with medium sized firm having the largest average undeclared sales. Moreover, micro and small firms have a higher probability of evading duties and VAT on their imports. This raises issues related to both tax reform and the need for generating government revenue.
- As in 2002, access to credit is perceived as the largest constraint to growth by firm managers. A total of 73 percent of firms do not have a loan and as expected the probability of having a formal loan increases with firm size. This confirms the widely held view that larger firms receive the few loans and credits which exist due to their greater capacity for satisfying the collateral and bureaucratic requirements. As a consequence over 80 percent of investments are financed using retained earnings. Large numbers of firms do not even apply for loans due to the perceived high costs of application and subsequent debt-servicing. Credit reform merits attention in policy relevant research.
- Mozambican firms are highly vulnerable with respect to customer concentration. For the majority of firms in the sample, the client base is relatively concentrated resulting in high dependence on each customer to fulfil contract (formal or informal) requirements. However, a large part of the sample diversify production to more than one good (60 percent in 2006) making them less vulnerable to shocks within a specific production line. This is confirmed by the observation that firms producing at least two products had higher survival probability than specialized firms. Policy options about how to improve the present situation deserve close scrutiny.
- The observed low incidence of exporting firms combined with a high dependence upon imports of intermediate inputs and raw materials leaves Mozambican manufacturers vulnerable to macro-economic shocks in particular relating to exchange rate movements. Moreover, difficulties in securing timely delivery of needed inputs due to administrative burdens with customs might disrupt production processes. Note that a substantial number of firms which did not export, list i) high quality standards required, ii) high levels of risk involved, and iii) a lack of knowledge of prospective markets and

distribution channels, as main reasons for not engaging in trade. This suggests that potential benefits from greater technical assistance to promote exports are present.

- Mozambican manufacturing firms have continued the increase in capacity utilization from the 1990s. However, the increase has not been equally divided across sectors, with furniture and textiles experiencing falling capacity utilization. This latter result is expected in the context of difficulties in the textiles sector in Mozambique, and it highlights the need for continuing a focus on how to develop the business climate in an orderly fashion.
- Some 49 percent of firms set wage rates using some function of the minimum wage as the principal criteria. This implies that the annual tripartite discussions between government, the unions and the private sector regarding the minimum wage have more far-reaching consequences than just those at the bottom of the income distribution.
- The average educational level of workers is relatively low in Mozambican manufacturing. Given that the average educational level among surviving firms was generally higher than in non-surviving firms an effort to promote on-the-job training and formal education could help affect firm dynamics. This suggests that attention paid to education by policy makers is required.

These conclusions are only a small part of what can be learned from combining the enterprise surveys carried out in Mozambique. We have chosen to highlight a few that appear interesting and relevant for policy-makers. Clearly many would benefit from further, deeper analysis. It is also hoped that these results can assist in forming the basis for developing a national representative enterprise survey for Mozambique, covering all sectors and capturing a similar level of detailed and quality information in order to further improve understanding of the enterprise sector in Mozambique.

References

- Audretsch, D.B. and Klepper, S. (2000). *Innovation, Evolution of Industry and Economic Growth*, Elgar Reference Collection. International Library of Critical Writings in Economics, Cheltenham, U.K. and Northampton, Mass.
- Bigsten, A., Collier, P., Dercon, S., Fafchamps, M., Gauthier, B., Gunning, J.W., Isaksson, A., Oduro, A., Oostendorp, R., Partillo, C., Soderbom, M., Sylvian, M., Teal, F. and Zeufack, A. (2004). "Investments in Africa's Manufacturing Sector: A Four Country Panel Data Analysis", *Oxford Bulletin of Economics and Statistics*, 61, 489-512.
- Bigsten, A., Collier, P., Dercon, S., Fafchamps, M., Gauthier, B., Gunning, J.W., Oduro, A., Oostendorp, R., Partillo, C., Soderbom, M., Teal, F. and Zeufack, A. (2004). "Do African Manufacturing Firms Learn From Exporting", *Journal of Development Studies*, 40, 115-141.
- Brown, D., Earle, J.S. and Telegdy, A. (forthcoming). "The Productivity Effects of Privatization: Longitudinal Estimates from Hungary, Romania, Russia, and Ukraine", forthcoming, *Journal of Political Economy*.
- Castel-Branco, C., Cramer, C. and Hailu, D. (2001). "Privatization and Economic Strategy in Mozambique", WIDER discussion paper No. 2001/64, UNU/WIDER.
- Caves, R.E. (1998). "Industrial Organization and New Findings on the Turnover and Mobility of Firms". *Journal of Economic Literature* 36(4), 1947-1982.
- Collier, P. and Gunning, J.W. (1999). "The Microeconomics of African Growth, 1950-2000", Paper prepared for the AERC Collaborative Research Project on "Explaining African Economic Growth, 1950-2000".
- Gauthier, B. and Gersowitz M. (1997). "Revenue Erosion Through Exemptions and Evasion in Cameroon, 1993", *Journal of Public Economics* 64, 407-424.
- IFC (2003). "Mozambique Industrial Performance and Investment Climate 2003", Investment Climate Assessment World Bank/IFC, Washington D.C.
- IMF (2005). "Republic of Mozambique: Selected Issues and Statistical Appendix", IMF, Washington D.C.
- INE (2004). "Census of Enterprises - CEMPRE", summary tables from 2002 Firm Census updated in 2004. Available on www.ine.gov.mz.
- INE (2006). "Produto Interno Bruto, Óptica da Produção (1996-2005)", available at www.ine.gov.mz.
- KPMG (various years). "Survey of the 100 Biggest Companies in Mozambique", KPMG consultancy reports.
- Liedholm, C. and Mead, D.C. (1999). *Small Enterprise and Economic Development. The Role of Micro and Small Enterprises*, Routledge Studies in Development Economics. Routledge, London and New York.
- Liedholm, C. (2002). "Small Firm Dynamics: Evidence from Africa and Latin America", *Small Business Economics*, 18: 227-242.
- McPherson, M.A. (1996). "Growth of Micro and Small Enterprises in Southern Africa", *Journal of Development Economics*, 48, 253-277

- Mead, D.C. and Liedholm, C. (1998). "The Dynamics of Micro and Small Enterprises in Developing Countries", *World Development*, 26, 61-74.
- Meggison and Netter (2001). "From State to Market: A Survey of Empirical Studies on Privatization", *Journal of Economic Literature*, 39, 321-389.
- Jovanovic, B. (1982). "Selection and the Evolution of Industry". *Econometrica* 50(3), 649-670.
- Jovanovic, B. (1993). "The Diversification of Production", *Brookings Papers on Economic Activity, Microeconomics*, 1, 197-247.
- Jovanovic, B. and MacDonald, G.W. (1994). "The Life Cycle of a Competitive Industry", *Journal of Political Economy*, 102, 322-347.
- Klepper, S. (1996). "Entry, Exit, Growth, and Innovation over the Product Life Cycle", *American Economic Review*, 86, 562-583.
- Pitcher, M.A. (2002). *Transforming Mozambique: The Politics of Privatization 1975-2000*, Cambridge University Press.
- RPED (1999). "Structure and Performance of Manufacturing in Mozambique", RPED Paper No. 107, World Bank, Washington D.C.
- Svensson, J. (2003). "Who Must Pay Bribes and How Much? Evidence from a Cross-Section of Firms", *Quarterly Journal of Economics*, 118, 207-230.
- Sutton, J. (1997). "Gibrat's Legacy". *Journal of Economic Literature*, 35(1), 40-59.
- UNDP (2005). "United Nations Human Development Report 2005, Human Development Index".
- World Bank (1995). "Mozambique: Impediments to Industrial Sector Recovery", Report No. 13752-MOZ, Macro, Industry, and Finance Division, Southern Africa Department.
- World Bank (2005). "Doing Business Survey", available at www.doingbusiness.org.
- World Bank (2006) Mozambique Country Brief, from www.worldbank.org, last updated April 2006.

Annex A. – Questionnaire

FINAL VERSION

Enterprise No.

Enterprise Name

QUESTIONNAIRE

ENTERPRISE SURVEY 2006

January 2006

Interviewer

Date of the interview

| Day | Month | Year |
|-----|-------|------|
| | | |

Time begun

Time finished

A. GENERAL INFORMATION ABOUT THE FIRM

- Q1 Establishment number _____(q1)
- Q2 a) Name of enterprise _____(q2a)
- b) Address of enterprise _____(....)
- _____ (q2b)
- c) Telephone numbers fixed _____(q2c1)
- mobile _____(q2c2)
- d) Fax _____(q2d)
- e) E-mail address _____(q2e)
- Q3 a) Where are your **headquarters** located? _____(q3a)
- Code: Maputo (1), Beira (2), Nampula City (3), Nacala (4), Chimoio (5)*
- b) Where are your main operating facilities located (leave blank if not different from headquarters)
- _____ (q3b)
- Q4 a) How many plants/factories belong to this firm? _____(q4a)
- (A plant or factory is defined as a manufacturing facility that is geographically distinct from other facilities. A production line does not by itself constitute a plant or factory).*
- b) How many are located:
- ba) In this city or town? _____(q4ba)
- bb) In other parts of the province? _____(q4bb)
- bc) In other provinces in Mozambique? _____(q4bc)
- bd) In other countries? _____(q4bd)
- c) How many plants/factories are normally operational (at least 9 months of the year)?
- _____ (q4c)
- d) How many of those plants which are normally operational are in the manufacturing sector?
- _____ (q4d)

The following responses should refer to the main operating facilities of the firm or if not to the national activities of the corporation, depending on how accounts are held.

- Q5 a) Was this firm previously a government owned enterprise (partially or entirely)? _____(q5a)
 Code: Yes (1), No (0)
- If not, go to Q6.**
- b) **If yes**, what percentage belonged to the state? _____%(q5b)
- c) When was the firm privatized? (Year) _____(q5c)
- d) What was the name of the former government enterprise? _____(q5d)
- e) Did this firm inherit debts from the government enterprise? _____(q5e)
 Code: Yes (1), No (0)
- f) Has the purchase cost of the firm at privatisation been paid in full? _____(q5f)
- Q6 a) In what year did the enterprise begin production (formally or informally)? (year) _____(q6a)
- b) What is the legal status of this firm _____(q6b)
 Code: Sole proprietorship (1), Partnership (2), Limited liability company (3), Parastatal Corporation (4),
 Subsidiary of Mozambican firm (5), Subsidiary of Multinational Corporation (6), Other (7)
- c) When did the enterprise begin operating under the current legal form? (Year) _____(q6c)
- Q7 a) Does the firm have a single owner? _____(q7a)
 Code: Yes (1), No (0)
- b) **If not**, what percentage is owned by the most important shareholder? _____(q7b)
- c) Did the current owner/majority shareholder create this firm? _____(q7c)
 Code: Yes (1), No (0)
- Q8 What percentage of this firm is owned by:
- a) Private sector: domestic _____%(q8a)
- b) Private sector: foreign _____%(q8b)
- c) Government/State _____%(q8c)
- d) Other (specify) _____(q8d1) _____%(q8d2)
- Total 100 %
- e) For any **foreign** ownership please specify the two most important countries:
- e1) Most important country _____(q8e1)
- e2) Second most important country _____(q8e2)
- Q9 Is your firm member of a financial group or partially/totally owned by a bank _____(q9)
 Code: Yes (1), No (0)

Q10 When did the enterprise come under the current ownership?(*Year*) _____ (q10)

Q11 a) Do you own the premises from which you are operating? _____(q11a)

Code: Yes (1), No (0)

b) Do you have a certificate of land-use rights? _____(q11b)

Code: Yes (1), No (0)

Q12 a) How many types of products does the enterprise produce (from 4-digit ISIC classification in annex)?

_____ (q12a)

b) Name the three most important products in value terms:

Code: 4-digit ISIC code from annex or blank.

| | Description | Code |
|---------------------------------|----------------|----------------|
| 1) <i>Most important</i> | _____ (q12b1a) | _____ (q12b1b) |
| 2) <i>Second most important</i> | _____ (q12b2a) | _____ (q12b2b) |
| 3) <i>Third most important</i> | _____ (q12b3a) | _____ (q12b3b) |

B. EMPLOYMENT

Q13 How many employees did the firm have in the first year of operation under the current ownership?

Permanent _____(q13a)

Temporary (including seasonal/casual/short-term contracted) _____(q13b)

Total _____(q13c)Q14 How many workers were there at the end of the following years (excluding retirees)? (*Permanent includes full-time and part-time workers, Temporary includes casual, seasonal and temporary workers*)

| | Type | 2003 | 2004 | 2005 |
|-----------|--------------------------|----------|----------|----------|
| | aa) Per man ent | (q14aa1) | (q14aa2) | (q14aa3) |
| | ab) Te mpo rary | (q14ab1) | (q14ab2) | (q14ab3) |
| | ac) Tot al | (q14ac1) | (q14ac2) | (q14ac3) |
| b) Female | ba) Per man ent | (q14ba1) | (q14ba2) | (q14ba3) |
| | bb) Te mpo rary | (q14bb1) | (q14bb2) | (q14bb3) |
| | bc) Tot al | (q14bc1) | (q14bc2) | (q14bc3) |
| c) Total | ca) Per man ent | (q14ca1) | (q14ca2) | (q14ca3) |
| | cb) Te | (q14cb1) | (q14cb2) | (q14cb3) |

| | | | | |
|--|---------------------------|----------|----------|----------|
| | mpo rary | | | |
| | cc) Tot al | (q14cc1) | (q14cc2) | (q14cc3) |

Q15 Of the total workforce in 2005, how many have each of the following types of education as their highest level of education?

| | Male | Female |
|---|---------------|---------------|
| a) University degree | _____ (q15ma) | _____ (q15wa) |
| b) High school, non-vocational (12 th grade) | _____ (q15mb) | _____ (q15wb) |
| c) High school, vocational | _____ (q15mc) | _____ (q15wc) |
| d) Secondary, non-vocational (10 th grade) | _____ (q15md) | _____ (q15wd) |
| e) Secondary, vocational | _____ (q15me) | _____ (q15we) |
| f) Primary education (7 th grade) | _____ (q15mf) | _____ (q15wf) |
| g) Incomplete primary education | _____ (q15mg) | _____ (q15wg) |
| h) No education | _____ (q15mh) | _____ (q15wh) |
| i) Total | _____ (q15mi) | _____ (q15wi) |

The totals in Q15i should be equal to the totals in Q14ac and Q14bc for 2005.

Q16 Of the total number of workers in 2005, how many are in the following categories?

| | Male | Female |
|--|----------------|----------------|
| a) Managers | _____ (Q16am) | _____ (Q16aw) |
| b) Professionals (with university level) | _____ (Q16bm) | _____ (Q16bw) |
| ba) Engineer | _____ (Q16bam) | _____ (Q16baw) |
| bb) Accountant/economist | _____ (Q16bbm) | _____ (Q16bbw) |
| bc) Other professionals | _____ (Q16bcm) | _____ (Q16bcw) |
| c) Sales-persons | _____ (Q16cm) | _____ (Q16cw) |
| d) Other office workers | _____ (Q16dm) | _____ (Q16dw) |
| e) Production workers | _____ (Q16em) | _____ (Q16ew) |
| ea) Team-leader/supervisor | _____ (Q16eam) | _____ (Q16eaw) |
| eb) Electrician, plumber etc. | _____ (Q16ebm) | _____ (Q16ebw) |
| ec) Machine maintenance | _____ (Q16ecm) | _____ (Q16ecw) |
| ed) Machine operator | _____ (Q16edm) | _____ (Q16edw) |
| ee) Mestre | _____ (Q16eem) | _____ (Q16eew) |

| | | |
|---|----------------|----------------|
| ef) Apprentice | _____ (Q16efm) | _____ (Q16efw) |
| eg) Assistant | _____ (Q16egm) | _____ (Q16egw) |
| f) Service workers, guards, cleaners etc. | _____ (Q16fm) | _____ (Q16fw) |
| g) <u>Total</u> | _____ (Q16gm) | _____ (Q16gw) |

The total in Q16g should be equal to those for 1005 in Q14ac, Q14bc and Q15h.

Q17 a) How many expatriates do you employ? _____(q17a)

If none, go to Q18.

If at least 1, of these expatriates how many are employed in:

| | |
|---------------------|--------------|
| b) Management | _____ (q17b) |
| c) Technical fields | _____ (q17c) |
| d) Administration | _____ (q17d) |
| e) Production | _____ (q17e) |
| f) Other | _____ (q17f) |

Q18 a) Is your workforce Unionized? _____(q18a)

Code: Yes (1), No (0)

If not, go to Q19.

b) **If yes**, are all workers in the firm Unionized? _____(q18b)

Code: Yes (1), No (0)

Q19 a) During 2005, did you lose at least one day of production due to labour disputes?
Code: Yes (1), No (0) _____(q19a)

If not, go to Q19c).

b) **If yes**, how many days of production did you lose? _____(q19b)

c) Did you in 2005 experience problems with workers' absenteeism?
Code: Yes (1), No (0) _____(q19c)

If not, go to Q20.

d) **If yes**, how many full-time working days were lost due to workers' absenteeism in 2005?
_____ (q19d)

Q20 Give the percentage of employees who enjoy the following benefits:

| | | |
|------------------------------------|----------------|------------------|
| a) Sick leave with pay | _____ (q20ea1) | _____ % (q20a) |
| b) Right to paid maternity leave | _____ (q20eb1) | _____ % (q20b) |
| c) Right to unpaid maternity leave | _____ (q20ea1) | _____ % (q20c) |
| d) Annual paid leave | _____ (q20eb1) | _____ % (q20d) |
| e) Other (specify) | _____ (q20ea1) | _____ % (q20ea2) |
| | _____ (q20eb1) | _____ % (q20eb2) |

- Q21 Does the firm provide additional insurance for the workforce against:
- a) workplace accidents? _____(q21a)
- b) illness? _____(q21b)
- Code: Yes (1), No (0)
- Q22 Regarding the stability of the labour force in 2005 (excluding temporary and seasonal employees):
- a) How many new permanent workers did the firm hire in 2005? _____(q22a)
- b) How many regular workers retired in 2005? _____(q22b)
- c) How many permanent workers left in 2005? _____(q22c)
- If no workers left, go to Q24.**
- If at least one worker left in 2005:**
- c1) How many left voluntarily in 2005? _____(q22c1)
- c2) How many were made redundant in 2005? _____(q22c2)
- c3) How many were fired in 2005? (*for infractions*) _____(q22c3)
- c4) How many left because of illness in 2005? _____(q22c4)
- c5) How many died in 2005? _____(q22c5)
- Of those who died, how many died due to the following:
- Accident (traffic or other) _____(q22c5a)
- HIV/AIDS _____(q22c5b)
- Other _____(q22c5c)
- Not known _____(q22c5d)
- c6) How many left for other reasons in 2005? _____(q22c6)
- The number given for Q22c should be the same as the sum of Q22c1+c2+c3+c4+c5+c6. If not check with interviewee.*
- Q23 Did the firm have to give severance pay to fired workers? _____(q23)
- Code: Yes (1), No (0)
- Q24 In general terms, does the HIV/AIDS epidemic currently have a notable effect on the operations of your company?
- Code: Yes (1), No (0) _____(q24)
- Q25 At what percentage of your total wage bill would you approximate the total expenses incurred by the firm for HIV health care needs of workers in the past 12 months? _____%(q25)
- Q26 a) In 2005, did your firm **organise** activities related to HIV/AIDS prevention among its workers?
- Code: Yes (1), No (0) _____(q26a)
- b) In 2005, did your firm **participate** in activities related to HIV/AIDS prevention among its workers?
- Code: Yes (1), No (0) _____(q26b)
- If the firm participated in **no activities**, go to Q27.

c) **If yes** (for a or b), which activity/activities?

- ca) HIV prevention messages _____(q26ca)
- cb) Free condom distribution _____(q26cb)
- cc) Counselling for HIV/AIDS _____(q26cc)
- cd) Anonymous HIV testing _____(q26cd)
- ce) Financial support for dependents on HIV-infected workers _____(q26ce)
- cf) Other _____(q26cf)

Code: Yes (1), No (0)

Q27

How does the enterprise hire workers?

- a) Through newspaper, advertisement etc. _____(q27a)
- b) Through labour exchange _____(q27b)
- c) Recommended by friends, relatives, other workers _____(q27c)
- d) Recommended/allocated by local authorities _____(q27d)
- e) Through personal contacts _____(q27e)
- f) Unsolicited CVs _____(q27f)
- g) Others _____(q27g)

Code: Yes (1), No (0)

Q28

a) Do you have a sufficiently skilled workforce given the type of production you are engaged in and the technology you employ? _____(q28a)

Code: Yes (1), No (0)

b) Did your enterprise experience any difficulties in recruiting workers with the required/appropriate skill level in 2005? _____(q28b)

Code: Yes (1), No (0), Not applicable (na) i.e. have not needed to recruit

c) Is it considered normal in a firm of this sector and size that an individual offers money in order to be contracted? _____(q28c)

Code: Yes (1), No (0)

Q29

a) Did your firm carry out any form of worker training in 2005? _____(q29a)

Code: Yes (1), No (0)

If no, go to Q30.

b) **If yes**, how was this training carried out?

- ba) Internal firm trainers _____(q29ba)
- bb) Trainers from the mother company _____(q29bb)
- bc) Trainers from a customer firm _____(q29bc)
- bd) Contracted external trainers _____(q29bd)
- be) External courses for workers _____(q29be)
- bf) Others _____(q29bf)

- Q30 a) What is the main basis for determining wage rates for line workers? List a maximum of three in order of importance.
(1 = most important, 2 = second most important, and 3 = third most important).
- aa) Wage rates in other local non-state enterprises _____(q30aa)
 - ab) Wage rates in local state enterprises _____(q30ab)
 - ac) Based on the minimum wage _____(q30ac)
 - ad) Net average incomes in farming _____(q30ad)
 - ae) Wage rate for employment in agriculture in busy season _____(q30ae)
 - af) Individual negotiation with each worker _____(q30af)
 - ag) Collective negotiation _____(q30ag)
 - ah) Paying capacity of the enterprise _____(q30ah)
 - ai) Qualifications and./or experience of the worker _____(q30ai)
 - aj) Other _____(q30aj)
- b) How many of the firm's employees receive the minimum wage? _____(q30b)
- Q31 a) In 2005, did your firm have to resort to wage reductions?
Code: Yes (1), No (0) _____(q31a)
- b) In 2005, did your firm have to resort to wage postponements?
Code: Yes (1), No (0) _____(q31b)

C. GENERAL MANAGER AND OWNER CHARACTERISTICS

- Q32 Gender of general manager? _____(q32)
 Code: Male (1), Female (0)
- Q33 a) What is your nationality? _____(q33a)
 Code: Mozambican, (1),South African (2),Other African (3), Portuguese (4), Other European (5), Indian (6), Other Asian (7), Other (8).
- b) What is your ethnic origin? _____(q33b)
 Code: African (1), European (2),Indian (3),Other Asian (4), Other(5).
- c) Which of the following languages do you speak?
- | | | | |
|--|---------------|-------|---------|
| | Portuguese | _____ | (q33c1) |
| | English | _____ | (q33c2) |
| | Local dialect | _____ | (q33c3) |
| | Other | _____ | (q33c4) |
- Code: Yes (1), No (0)
- Q34 a) How long have you been working for this firm? (years) _____(q34a)
 b) How long have you been general manager of this firm? (years) _____(q34b)
- Q35 a) How many years of experience in this industry did you have before joining this firm? (years) _____(q35a)
 b) How many years of managerial experience do you have in total? (years) _____(q35b)
 c) Was any management experience acquired outside Mozambique? _____(q35c)
 Code: Yes (1), No (0)
- If not go to Q36.**
- d) **If yes**, please specify the country and duration:
- | | | | |
|--|----------|-------|---------|
| | Country | _____ | (q35d1) |
| | Duration | _____ | (q35d2) |
- Q36 a) What is the highest level of education you have attained? _____(q36a)
 Code: University degree (1), High-school, non-vocational education (2), High-school, vocational education (3) Secondary, non-vocational education (4), Secondary, vocational (5), Primary education (6),Incomplete primary education (7), No education (8).
- b) Was the highest qualification achieved outside Mozambique?
 Code: Yes (1), No (0) _____(q36b)
- If not, go to Q37.**
- c) **If yes**, please give the country and duration.
- | | | | |
|--|----------|-------|---------|
| | Country | _____ | (q36c1) |
| | Duration | _____ | (q36c2) |

- Q37 a) What is the highest level of education completed by your father? _____(q37a)
Code: University degree (1), High-school, non-vocational education (2), High-school, vocational education (3) Secondary, non-vocational education (4), Secondary, vocational (5), Primary education (6), Incomplete primary education (7), No education (8).
- b) What is the highest level of education completed by your mother? _____(q37b)
Code: University degree (1), High-school, non-vocational education (2), High-school, vocational education (3) Secondary, non-vocational education (4), Secondary, vocational (5), Primary education (6), Incomplete primary education (7), No education (8).
- Q38 a) Are you a shareholder of this firm? _____(q38a)
Code: Yes (1), No (0)
If not, go to Q40.
- b) **If yes**, how big is your share? _____%(q38b)
(If general manager fully owns the enterprise write 100 percent)
- Q39 Is the owner/majority shareholder/somebody within the ownership institution a family member of yours? _____(q39)
- Q40 a) What is the gender of owner/majority shareholder (MS)? _____(q40a)
Code: Male (1), Female (0)
- b) What is the highest level of education completed by owner/MS? _____(q40b)
Code: University degree (1), High-school, non-vocational education (2), High-school, vocational education (3) Secondary, non-vocational education (4), Secondary, vocational (5), Primary education (6), Incomplete primary education (7), No education (8).
- Q41 a) What nationality is the owner/MS? _____(q41a)
Code: Mozambican, (1), South African (2), Other African (3), Portuguese (4), Other European (5), Indian (6), Other Asian (7), Other (8).
- b) What is the ethnic origin of the owner/MS? _____(q41b)
Code: African (1), European (2), Indian (3), Other Asian (4), Other(5).

D. INVESTMENT AND R&D

Q42

a) What was the value of the initial investment of the present owner (in the main currency)?

Value _____(q42a1)

Specify Currency _____(q42a2)

b) What was the source of funding of the initial investment (*percentage of total*):

ba) Own resources _____%(q42ba)

bb) Capital from friends and relatives _____%(q42bb)

bc) Loan from bank _____%(q42bc)

bd) Loan from credit cooperative _____%(q42bd)

be) Loan from other local authority _____%(q42be)

bf) Contributions by employees _____%(q42bf)

bg) Loan against interest from private person _____%(q42bg)

bh) Advance payment for sales _____%(q42bh)

bi) Leasing _____%(q42bi)

bj) Venture capital _____%(q42bj)

bk) Other _____%(q42bk)

c) What percentage of funding was in the following currencies?

Meticais _____%(q42ca)

USD _____%(q42cb)

RSA Rands _____%(q42cc)

Other (specify) _____%(q42cd)

100%

Q43

a) Has the firm made any investments in the period from 2002 to 2005?

Code: Yes (1), No (0)

_____ (q43a)

If not, go to Q50.

b) **If yes**, what was the value of the investment?

_____ (q43b1)

Specify Currency

_____ (q43b2)

c) How were investments financed? (List as percentage of total investment)

ca) Own resources

_____ % (q43ca)

cb) Capital from friends and relatives

_____ % (q43cb)

cc) Loan from bank

_____ % (q43cc)

cd) Loan from credit cooperative

_____ % (q43cd)

ce) Loan from other local authority

_____ % (q43ce)

cf) Contributions by employees

_____ % (q43cf)

cg) Loan against interest from private person

_____ % (q43cg)

ch) Advance payment for sales

_____ % (q43ch)

ci) Leasing

_____ % (q43ci)

cj) Venture capital

_____ % (q43cj)

ck) Other

_____ % (q43ck)

d) What percentage of funding was in the following currencies?

Meticais

_____ % (q43da)

USD

_____ % (q43db)

RSA Rands

_____ % (q43dc)

Other (specify)

_____ % (q43dd)

Total

100%

- Q44 a) How much was invested in the following items (*percentage of the total investment*)
- | | |
|------------------------------------|----------------|
| aa) Land | _____%(q44aa) |
| ab) Buildings | _____%(q44ab) |
| ac) Equipment | _____%(q44ac) |
| ad) Other (specify) _____ (q44ad1) | _____%(q44ad2) |
| <u>Total</u> | <u>100%</u> |
- b) From the following possibilities, what were the main objectives of the investment? (*select those which apply*)
- | | |
|-------------------------------|---------------|
| ba) Add to capacity | _____ (q44ba) |
| bb) Replace old equipment | _____ (q44bb) |
| bc) Improve productivity | _____ (q44bc) |
| bd) Improve quality of output | _____ (q44bd) |
| be) Produce a new output | _____ (q44be) |
| bf) Safety | _____ (q44bf) |
| bg) Introduce new technology | _____ (q44bg) |
| bh) Other purposes | _____ (q44bh) |

Code: Yes (1), No (0)

If Q44ac is 0, go to Q46.

- Q45 a) Was any purchased equipment/machinery new or used? _____(q45a)
 Code: New (1), Used (2), Mixed (3), Self-constructed (4)
- b) What is the origin of purchased machinery/equipment? _____(q45b)
 Code: Directly imported (1), Made abroad but purchased locally (2), Made locally (3).

- Q46 a) Did your firm introduce new technology in the period 2002-2005?
 Code: Yes (1), No (0) _____(q46a)

If not, go to Q47.

- b) **If yes**, specify the source of this technology:
- | | |
|---|---------------|
| ba) Incorporated in purchased equipment | _____ (q46ba) |
| bb) Copied from existing technology | _____ (q46bb) |
| bc) Reverse engineering | _____ (q46bc) |
| bd) Introduced by the mother company | _____ (q46bd) |
| be) Developed in-house | _____ (q46be) |
| bf) Purchased blue-prints | _____ (q46bf) |
| bg) Other | _____ (q46bg) |

Code: Yes (1), No (0)

- Q47 a) Has your enterprise introduced any new products in the last three years (i.e. a product with a different 4-digit ISIC classification)? _____(q47a)
 Code: Yes (1), No (0)
If not, go to Q48.
 b) **If yes**, how many? _____(q47b)
 c) If yes, specify the main reason for introducing this new product:
 ca) new market opportunity _____(q47ca)
 cb) less demand for old products _____(q47cb)
 cc) reduced profits due to competition _____(q47cc)
 cd) addition of complementary product _____(q47cd)
 ce) adoption of new technology _____(q47ce)
 cf) other _____(q47cf)
 Code: Yes (1), No (0)
- Q48 a) Has your enterprise significantly improved any existing products in the last three years?
 Code: Yes (1), No (0) _____(q48a)
If not, go to Q49.
 b) **If yes**, how many? _____(q48b)
- Q49 a) Did the firm employ any of its own staff exclusively for design and/or doing innovations (R&D) in 2005?
 Code: Yes (1), No (0) _____(q49a)
If not, go to Q49c.
 b) **If yes**, how many employees? _____(q49b)
 c) Did the firm outsource any design and/or R&D _____(q49c)
 Code: Yes (1), No (0)
 d) Did the firm use R&D from the mother company? _____(q49d)
 Code: Yes (1), No (0)
- Q50 a) At what capacity did the firm produce in the following years? (*Capacity utilization is the ratio of the level of production in relation to the maximum which could be produced given a fixed level of inputs*)
 a) 2003 _____%(q50a)
 b) 2004 _____%(q50b)
 c) 2005 _____%(q50c)
 b) How old is your machinery/equipment (percentage of total equipment):
 ba) <5 anos _____% (q50ba)
 bb) 5-10 anos _____% (q50bb)
 bc) 10-20 anos _____% (q50bc)
 bd) >20 anos _____% (q50bd)
 100%

E. EXPORTS AND IMPORTS:

Q51 Does your enterprise produce for export (direct or indirect)? _____(q51)

Code: Yes (1), No (0)

If yes, go to Q53.

Q52 If the firm does not produce for export, what is the reason?

- a) Not part of the firm strategy _____(q52a)
- b) lack of knowledge of potential markets _____ (q52b)
- c) cost of getting an export licence _____ (q52c)
- d) cost of setting up distribution channels _____ (q52d)
- e) high product standard requirements _____ (q52e)
- f) need to learn bureaucratic procedures _____ (q52f)
- g) high levels of risk _____ (q52g)
- h) tariff barriers in the destination country _____ (q52h)
- i) restrictive rules of origin _____ (q52i)
- j) other non-tariff barriers in destination country _____ (q52j)
- k) other (specify) _____ (q52k1) _____(q52k2)

Code: Yes (1), No (0)

Now please go to Q61.

EXPORTS

Q53

If your enterprise **does produce for export**:

a) What **percentage** of your sales was **directly** exported in 2005? _____%(q53a)

b) What percentage of your sales was **indirectly** exported (via a distributor) in 2005?
_____%(q53b)

c) What percentage of sales was exported **directly** to the following destinations?

ca) South Africa _____%(q53ca)

cb) Other SADC countries _____%(q53cb)

cc) Other African countries _____%(q53cc)

cd) EU countries _____%(q53cd)

ce) USA _____%(q53ce)

cf) other unlisted countries _____%(q53cf)

d) What percentage of sales was exported **indirectly** to the following destinations?

da) South Africa _____%(q53da)

db) Other SADC countries _____%(q53db)

dc) Other African countries _____%(q53dc)

dd) EU countries _____%(q53dd)

de) USA _____%(q53de)

df) other unlisted countries _____%(q53df)

If the firm only exports indirectly, go to Q55.

Q54

If your firm exports directly,

a) In which year did your firm start producing for direct export? _____(q54a)

b) How many foreign purchasers do you have for your products? _____(q54b)

c) Which country is the destination of most direct exports? (*country*) _____(q54c)

Q55

a) Do you receive orders for export production? _____(q55a)

Code: Yes (1), No (0)

If not, go to Q56.

b) **If yes**, mark any of the following which your enterprise receives for the export production?

ba) product specifications _____(q55ba)

bb) standards requirements _____(q55bb)

bc) designs _____(q55bc)

bd) materials _____(q55bd)

Code: Yes (1), No (0)

Q56

Does your enterprise have long-term relations (i.e. more than one year) with your export product buyers? _____(q56)

Code: Yes (1), No (0)

- Q57 Do you use legal advisors when entering export contracts? _____(q57)
 Code: Yes (1), No (0)
- Q58 Have foreign buyers ever requested certification of your procedures and/or products?
 Code: Yes (1), No (0) _____(q58)
- Q59 a) Are you aware of preferential trade regimes for your export products (e.g. EBA, Cotonou)?
 Code: Yes (1), No (0) _____(q59a)
If not, go to Q60.
- b) If yes, does your firm export under one of these regimes?
 Code: Yes (1), No (0) _____(q59b)
If yes, go to Q60.
- c) If you do not export under the preferential regime for your product, why not? _____(q59c)
 Code: High costs of obtaining export licence (1), Purchaser pays the duties (2), non-tariff barriers (3), other reason (4).
- Q60 a) Does your firm have certificates of origin? _____(q60a)
 Code: Yes (1), No (0)
If not, go to Q61.
- b) **If yes**, which certificates does your firm use?
- | | | |
|-------------------------|-------|---------|
| ba) Chamber of commerce | _____ | (q60ba) |
| bb) SADC | _____ | (q60bb) |
| bc) EUR1 | _____ | (q60bc) |
| bd) FORM A (GSP) | _____ | (q60bd) |
| be) EBA | _____ | (q60be) |
| bf) AGOA | _____ | (q60bf) |
| bg) Other | _____ | (q60bg) |

IMPORTS

Q61 What were the origins of the following inputs used by the firm in 2005? (*percentage of total*)

| | Direct Import | | Indirect Import | | Domestic product | TOTAL |
|-------------------------------|---------------|---------------|-----------------|---------------|------------------|-------------|
| | SADC | Rest of World | SADC | Rest of World | | |
| a) Primary commodities | (q61aa) | (q61ab) | (q61ac) | (q61ad) | (q61ae) | 100% |
| b) Intermediate goods | (q61ba) | (q61bb) | (q61bc) | (q61bd) | (q61be) | 100% |

If the firm does not use imported inputs, go to Q63.

- Q62
- a) If the firm imports some inputs, what was the average number of days from goods arrived at the point entry in Mozambique until it reached the firm? _____(q62a)
- b) What percentage of average cargo was lost in 2005 while in transit in Mozambique? _____%(q62b)

F. FEES, TAXES, LICENCES AND INFORMAL COSTS

Q63 Does your firm benefit from any regimes (e.g. the Investment Law, Manufacturing Industry Diploma, EPZ etc) which imply exemption from any of the following taxes?

- a) IRPS _____(q63a)
- b) IRPC _____(q63b)
- c) VAT on imports _____(q63c)
- d) VAT on domestic purchases _____(q63d)
- e) Customs Duties _____(q63e)

Code: Yes (1), No (0)

Q64 a) Does your firm have a NUIT (Numero Único de Identificação Tributária)?

Code: Yes (1), No (0) _____(q64a)

b) How many individual tax forms do you fill annually? _____(q64b)

c) How many working-days are spent filling tax forms annually? _____(q64c)

Q65 From the following list, please indicate all of those which your firm pays:

- a) IRPS _____(q65a)
- b) IRPC _____(q65b)
- c) VAT on imports _____(q65c)
- d) VAT on domestic purchases _____(q65d)
- e) Customs Duties _____(q65e)
- f) Social Security _____(q65f)

Code: Yes (1), No (0)

Q66 a) Have your tax returns been challenged in the past three years? _____(q66)

Code: Yes (1), No (0)

b) Are requested tax payments generally higher or lower than expected or as expected for the following taxes?

- a) IRPS _____(q66a)
- b) IRPC _____(q66b)
- c) VAT _____(q66c)

Code: Higher (1), Lower (2), As expected (3)

Q67 What **proportion of total sales** would you estimate the typical establishment in your area of activity reports for tax purposes? (Percentage) _____%(q67)

- Q68
- a) How many licences did you have to formalise your operations? _____(q68a)
- b) When did you obtain the licences required to start production? (*year*) _____(q68b)
- c) How many registrations, licenses and permits does your firm have now? (*Please count all the licenses, permits issued by different agencies, even if they deal with the same type of activity*).
_____ (q68c)
- d) How long did it approximately take to obtain the most important license, registration or permit for your business? (*Working days*) _____(q68d)
- e) At which of the following levels is your firm registered?
- ea) Municipal/district administration _____(q68ea)
- eb) Ministry/Provincial directorate/district directorate _____(q68eb)
- ec) Local Finance Section (Reparticao de Financas) _____(q68ec)
- Code: Yes (1), No (0)*

- Q69
- a) Approximately, how many man-days are spent each month dealing with government regulations and officials (including taxes, permits, licenses, inspections, business and trade regulations)?
_____ (q69a)
- b) How many times was your firm visited to inspect your business with respect to health, labour and taxes etc. last year?
_____ (q69b)

- Q70
- a) Are you afraid of being fined or shut down by the authorities?
Code: Yes (1), No (0) _____(q70a)
- If not, go to section c).**
- b) **If yes**, what would be the reason? _____(q70b)
- Code: Under-declaration for tax-purposes (1), Difficulties in conforming with tax laws (2), Non-compliance with other regulations (3), Arbitrary decisions of the tax authority (4), Arbitrary decisions of other authorities (5), Other reasons (6)*
- Now go to Q71.**
- c) **If not**, why not? _____(q70c)
- Code: It is possible to pay individuals to avoid problems (1), The activity is sufficiently difficult for the authorities to verify (2), The firm complies with all the tax and other laws (3), Other (4).*

- Q71 a) In the period 2002-2005, did you have to make informal payments to a public official to “get things moving”? _____(q71a)
 Code: Yes (1), No (0)
If yes, go to Q71c.
- ba) **If not**, have you been asked to pay a bribe or informal payment in the period 2002-2005? _____(q71ba)
 Code: Yes (1), No (0)
If no, go to Q73.
- bb) **If yes**, how often are you asked to make bribes? _____(q71bb)
 Code: Yes (1), No (0)
Now, go to Q73.
- c) What is the bribe payment used for? (*respond to all options*)
- ca) to get connected to public services _____(q71ca)
 - cb) to get licenses and permits _____(q71cb)
 - cc) to deal with taxes and tax collection _____(q71cc)
 - cd) to deal with labour inspections _____(q71cd)
 - ce) to gain government contracts/public procurement _____(q71ce)
 - cf) to deal with customs/imports/exports _____(q71cf)
 - cg) other _____(q71cg)
- Code: Yes (1), No (0)
- Q72 a) At what level are bribe payments typically made? (*List in percentages*)
- a) Commune or town authorities _____%(q72aa)
 - b) District authorities _____%(q72ab)
 - c) Provincial authorities _____%(q72ac)
 - d) National authorities _____%(q72ad)
 - e) Other _____%(q72ae)
- b) Do you know in advance approximately how large the bribe payments/communication fees will be during a year? _____(q72b)
 Code: Yes (1), No (0)
- Q73 What would you estimate a typical firm in your line of business and of similar size typically pays each year in informal payments to public officials with respect to issues relating to customs, taxes, licensing, regulations etc? (*percentage of sales*) _____%(q73)

Q74 a) When establishments in your industry do business with the **government**, approximately what percentage of the contract value must they typically offer in additional or unofficial payments to secure the contract? *Code: 0% (1), up to 2,5% (2),from 2,5 to 5% (3), 5-10% (4), 10-20% (5),more than 20% (6)*
_____ (q74a)

b) When establishments in your industry do business with the **private sector**, approximately what percentage of the contract value must they typically offer in additional or unofficial payments to secure the contract? *Code: 0% (1), up to 2,5% (2),from 2,5 to 5% (3), 5-10% (4), 10-20% (5),more than 20% (6)*
_____ (q74b)

Q75 What were your costs related to theft or natural disasters in 2005 as a proportion of total sales?

a) Theft _____ (q75a)

b) Natural disasters _____ (q75b)

Code: 0% (1), up to 2,5% (2),from 2,5 to 5% (3), 5-10% (4), 10-20% (5),more than 20% (6)

G. COMPETITION

Q76 Within your main product range, what share of the national market is made up by the sales of your establishment? (*percent (%) or don't know (na)*) _____%(q76)

Q77 Within your main product range, how many competitors, suppliers and buyers do you have? (*Number or don't know (na)*)

| | State Domestic Firms | Private Domestic Firms | Foreign Owned Firms |
|----------------|----------------------|------------------------|---------------------|
| a) Competitors | (q77a1) | (q77a2) | (q77a3) |
| b) Suppliers | (q77b1) | (q77b2) | (q77b3) |

Q78 Who is your most important competitor? _____(q78)

Code: Public company (1), Domestic private firms importing from abroad (2), Other domestic private firms (3), Firms from neighbouring countries operating in Mozambique (4), Foreign firms importing from abroad (5), Foreign firms operating inside Mozambique (6), Illegal imports/contraband (7), Others (8), Don't know (9).

Q79 a) How many purchasers/clients do you have for your products? _____(q79a)

b) Who is your main purchaser/client? _____(q79b)

Code: Government (1), State firm (2), Parastatal firm (3), Domestic private firm (4), Foreign private firm operating in Mozambique (5), Foreign private firm operating outside Mozambique (6), NGO/Donor organisation (7), Other (8).

c) How long has this been your principle client? _____(q79c)

Q80 How much of your production is used for: (*in percent of total sales*)

a) Final consumption _____(q80a)

b) Intermediate inputs/capital equipment in agriculture _____(q80b)

c) Intermediate inputs/capital equipment in manufacturing _____(q80c)

d) Intermediate inputs/capital equipment in services _____(q80d)

e) Don't know _____(q80e)

Total 100%

- Q81 How do you set the prices of your products/services? (*List in order of importance: most important = 1, second most important = 2, etc.*)
- a) A fixed mark-up over production costs _____(q81a)
 - b) Charge similar prices as my competitors _____(q81b)
 - c) Charge somewhat lower prices than my competitors _____(q81c)
 - d) Individual negotiation with each customer _____(q81d)
 - e) Prices are given by government regulations _____(q81e)
 - f) As a function of exchange rate fluctuations _____(q81f)
 - g) Other _____(q81g)
- Q82 What percentage of sales of your most important product (in terms of value) was sold in the following destinations.
- a) Same locality/administrative post _____(q82a)
 - b) Other locality within same district _____(q82b)
 - c) Other district within province _____(q82c)
 - d) Neighbouring province _____(q82d)
 - e) Other province (non-neighbouring) _____(q82e)
 - f) Export _____(q82f)
- Total 100%
- Q83 Sales structure in 2005 of most important product (in terms of value). Calculate as percentages.
- a) Individual people (non-tourists) _____(q83a)
 - b) Domestic, non-state enterprises _____(q83b)
 - c) State enterprises _____(q83c)
 - d) Non-commercial government authorities _____(q83d)
 - e) Tourists _____(q83e)
 - f) Export _____(q83f)
 - g) Foreign invested companies _____(q83g)
 - h) Other _____(q83h)

Q84 What are the main criteria in selecting suppliers? List maximum of three in order of importance. (most important = 1, second most important = 2 and third most important = 3).

- a) Competitive price _____(q84a)
- b) Terms of credit _____(q84b)
- c) Currency of payment (MT/RAND/USD) _____(q84c)
- d) Quality standards _____(q84d)
- e) Secure supply _____(q84e)
- f) Know supplier personally _____(q84f)
- g) Geographic proximity _____(q84g)
- h) Allocated supply by govt. agency _____(q84h)
- i) No choice (monopoly supplier) _____(q84i)
- j) Other, specify _____(q84j)

Q85 Are raw materials and inputs generally available:

- a) In the desired quantity? _____(q85a)
- b) In the desired quality? _____(q85b)

Code: Yes (1), No (0)

H. ACCESS TO FINANCE

Q86 a) Do you have an overdraft facility or line of credit? _____(q86a)
 Code: Yes (1), No (0)
 b) **If yes**, what percent is currently used? _____%(q86b)

Q87 a) Do you have a loan from a bank or financial institution? _____(q87a)
 Code: Yes (1), No (0)

If not, go to Q87f.

b) **If yes**, for the most important loan what is the:

| | | | |
|--|----------|-------|----------|
| ba) Source of the loan (bank and country)? | Bank | _____ | (q87ba1) |
| | Country | _____ | (q87ba2) |
| bb) Amount originally borrowed? | | _____ | (q87bb1) |
| | Currency | _____ | (q87bb2) |
| bc) Year in which you borrowed? | | _____ | (q87bc) |
| bd) Current liability? | | _____ | (q87bd) |
| be) Interest rate, percent annual? | | _____ | (q87be) |
| | | _____ | (q87be) |
| bf) Period for amortization (<i>years</i>) | | _____ | (q87bd) |

If the loan was in Meticias, go to Q90.

c) If the loan was in **foreign currency**, what was the principal reason for this? (*Select one possibility*)

| | | |
|--|----------------|----------------|
| ca) Lower costs of finance | _____ | (q87ca) |
| cb) Difficulty in obtaining credit in Meticais | _____ | (q87cb) |
| cc) Other (specify) | _____ (q87cc1) | _____ (q87cc2) |

Code: Yes (1), No (0)

d) Has your firm ever used any kind of contract to protect against exchange rate variation?
 Code: Yes (1), No (0) _____(q87d)

If yes, go to Q90.

e) **If not, why not?**

| | | |
|------------------------------|----------------|----------------|
| ea) Not offered by the banks | _____ | (q87ea) |
| eb) Lack of knowledge | _____ | (q87eb) |
| ec) Firm not interested | _____ | (q87ec) |
| ed) Other (specify) | _____ (q87ed1) | _____ (q87ed2) |

Now go to Q90.

f) **If your firm does not have a loan**, what is the reason?

| | | |
|-----------------------------------|-------|---------|
| fa) Did not apply for a bank loan | _____ | (q87fa) |
| fb) Application was turned down | _____ | (q87fb) |

Code: Yes (1), No (0)

If application was turned down, go to Q89.

- Q88 If you have **not applied** for a bank loan what is the reason?
- a) Do not need loan _____(q88a)
 - b) Against my religion _____(q88b)
 - c) Application procedures are too cumbersome _____(q88c)
 - d) Collateral requirements are too stringent _____(q88d)
 - e) Corruption in the allocation of bank credit _____(q88e)
 - f) Other _____(q88f)

Code: Yes (1), No (0)

Now go to Q90.

- Q89 If **application** for a loan was **rejected**, what was the reason?
- a) Lack of collateral _____(q89a)
 - b) Incompleteness of application _____(q89b)
 - c) Perceived lack of feasibility of project _____(q89c)
 - d) Poor credit history _____(q89d)
 - e) Other Specify _____(q89ea) _____(q89eb)

Code: Yes (1), No (0)

- Q90 Are audited statements necessary to obtain bank credit? _____(q90)

Code: Yes (1), No (0)

- Q91 a) Do you have a non-bank loan or credit? _____(q91a)

Code: Yes (1), No (0)

If not, go to Q92.

b) **If yes**, what is the:

- ba) Source of this loan or credit? _____(q91ba)

Code: Loan from a private creditor (1), Loan from friends/family (2), Loan from shareholders/partners (3), credit from another firm (4), other (5).

- bb) Amount originally borrowed? _____(q91bb1)

Currency _____(q91bb2)

- bc) Year in which you borrowed? _____(q91bc)

- bd) Current liability? _____(q91bd)

- be) Interest rate, percent year? _____%(q91be)

- bf) Amortization period _____(q91bf)

- c) **If yes**, why did you choose to borrow informally? _____(q91c)

Code: Couldn't get formal credit (1), Most favourable interest (2), Easier formalities (3), No collateral required (4), Flexible payback (5), Other (6)

I. NETWORKS, BUSINESS ENVIRONMENT AND CONSTRAINTS

Q92 a) In approximately how many different firms and institutions from the following categories do you have personal contacts (close friends, family etc.), which you found useful for your business operations? (Note that we are referring to personal contacts that you are in regular contact with, meaning at least once every three months).

- aa) Firms in the same sector in Mozambique? _____(q92aa)
- ab) Firms in a different sector of business (located in Mz)? _____(q92ab)
- ac) Firms located abroad? _____(q92ac)
- ad) Banks and financial institutions? _____(q92ad)
- ae) Government agencies and similar? _____(q92ae)

b) Of these contacts, whom do you consider the most important? _____(q92b)

Code: Firms in the same sector of business (1) Firms in a different lines of business (2), Firms located abroad (3), Banks and financial institutions (4), Government agencies and similar (5).

Q93 Of the contacts in Q92, how many are from the following categories?

- a) Supplier of your firm? _____(q93a)
- b) Customer of your firm? _____(q93b)
- c) Debtor of your firm? _____(q93c)
- d) Creditor of your firm? _____(q93d)

Q94 a) Approximately how many times a year did your contacts assist in issues directly related to the operation of your firm. _____(q94a)

b) When was the last time one of your personal contacts assisted you/your firm with issues related to the operation of your firm? _____(q94b)

Code: Under a month ago (1), 1-3 months ago (2), 3-6 month ago (3), 6 months-1 year ago (4), over a year ago (5)

Q95 a) Are you/your enterprise a member of one or more business associations?

- aa) No _____(q95aa)
- ab) Yes, one _____(q95ab)
- ac) Yes, more than one _____(q95ac)

If not, go to Q96.

b) **If yes**, name the most important one _____(q95b)

c) **If yes**, do you pay a membership fee _____(q95c)

d) In your view, does the association represent the interests of your firm? _____(q95d)

e) In your view, does the association bring benefits to your firm? _____(q95e)

Code: Yes (1), No (0)

Now go to Q97

Q96

If your firm **does not** belong to any business association, what is the reason for that?

- a) there is no association of relevance to our line of business _____(q96a)
- b) existing associations provide no tangible benefits _____(q96b)
- c) the association did not renew my membership _____(q96c)
- d) membership fee is too high _____(q96d)

J. ECONOMIC SITUATION AND GENERAL BUSINESS ENVIRONMENT

Q97 a) Does your enterprise maintain formal accounts? _____(q97a)

Code: Yes (1), No (0)

b) **If yes**, when did you begin keeping formal accounts? _____(q97b)

c) **If yes**, are these annual financial statements audited by an external auditor?

Code: Yes (1), No (0) _____(q97c)

Q98 Please give the following information regarding the economic situation of the firm (*in contos*):

| Year | 2003 | 2004 | 2005 |
|---|------------|------------|------------|
| a) Total revenue from sales | (q98a03) | (q98a04) | (q98a05) |
| b) Total revenue from exported goods | (q98b03) | (q98b04) | (q98b05) |
| c) Value of production/manufactured output | (q98c03) | (q98c04) | (q98c05) |
| d) Cost of total input goods (=da+db) | (q98d03) | (q98d04) | (q98d05) |
| da) raw material inputs | (q98da03) | (q98da04) | (q98da05) |
| db) intermediate good inputs | (q98db03) | (q98db04) | (q98db05) |
| e) Cost of indirect inputs (electricity, maintenance, sub-contracted services, transport, marketing, <i>excl. salaries</i>). | (q98e03) | (q98e04) | (q98e05) |
| f) Value of total inputs to production (d+e) | (q98f03) | (q98f04) | (q98f05) |
| g) Total Value Added (c-f) | (q98g03) | (q98g04) | (q98g05) |
| h) Total wage bill, including allowances | (q98h03) | (q98h04) | (q98h05) |
| i) Total gross profit (g-h) | (q98i03) | (q98i04) | (q98i05) |
| j) Value of your allowable depreciation | (q98j03) | (q98j04) | (q98j05) |
| k) Total interest payments | (q98k03) | (q98k04) | (q98k05) |
| l) Total fees and taxes | (q98l03) | (q98l04) | (q98l05) |
| la) VAT | (q98la03) | (q98la04) | (q98la05) |
| la1) VAT on domestic inputs | (q98la103) | (q98la104) | (q98la105) |
| la2) VAT on imported inputs | (q98la203) | (q98la204) | (q98la205) |
| lb) IRPS | (q98lb03) | (q98lb04) | (q98lb05) |
| lc) IRPC | (q98lc03) | (q98lc04) | (q98lc05) |
| ld) Customs duties | (q98ld03) | (q98ld04) | (q98ld05) |
| le) Other | (q98le03) | (q98le04) | (q98le05) |
| m) Total assets end-year (accounting value) | (q98m03) | (q98m04) | (q98m05) |
| n) Buildings end-year (present value) | (q98n03) | (q98n04) | (q98n05) |
| o) Machinery end-year (present value) | (q98o03) | (q98o04) | (q98o05) |
| p) Total outstanding debt end-year | (q98p03) | (q98p04) | (q98p05) |

r) Please indicate the market/replacement value of the following for the year-end of 2005 (*in contos*)

r1) Total assets end-year _____(q98r1)

r2) Buildings end-year _____(q98r2)

r3) Machinery end-year _____(q98r3)

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Q99 Please judge whether or not the following factors are problematic for the operation and growth of your business, marking 0 for those which are not, and indicating the severity of those factors which *are* problematic on a scale of 1 to 4. (circle the appropriate response).

Code: (0=no obstacle, 1=slight, 2=moderate, 3=major, 4=serious obstacle, -77 not applicable)

| | No Problem | If an obstacle, what is the degree of severity? | | | | Not Applicable |
|---|------------|---|----------|----------|----------|----------------|
| | 0 | 1 | 2 | 3 | 4 | -77 |
| a) Telecommunications | (q99a0) | (q99a1) | (q99a2) | (q99a3) | (q99a4) | (q99a77) |
| b) Electricity | (q99b0) | (q99b1) | (q99b2) | (q99b3) | (q99b4) | (q99b77) |
| c) Transportation | (q99c0) | (q99c1) | (q99c2) | (q99c3) | (q99c4) | (q99c77) |
| d) Access to land | (q99d0) | (q99d1) | (q99d2) | (q99d3) | (q99d4) | (q99d77) |
| e) Tax rates | (q99e0) | (q99e1) | (q99e2) | (q99e3) | (q99e4) | (q99e77) |
| f) Tax administration | (q99f0) | (q99f1) | (q99f2) | (q99f3) | (q99f4) | (q99f77) |
| g) Customs and trade regulation administration | (q99g0) | (q99g1) | (q99g2) | (q99g3) | (q99g4) | (q99g77) |
| h) Labour regulations | (q99h0) | (q99h1) | (q99h2) | (q99h3) | (q99h4) | (q99h77) |
| i) Skills and education of workers | (q99i0) | (q99i1) | (q99i2) | (q99i3) | (q99i4) | (q99i77) |
| j) Business licensing and registration | (q99j0) | (q99j1) | (q99j2) | (q99j3) | (q99j4) | (q99j77) |
| k) Access to domestic credit | (q99k0) | (q99k1) | (q99k2) | (q99k3) | (q99k4) | (q99k77) |
| l) Access to foreign credit | (q99l0) | (q99l1) | (q99l2) | (q99l3) | (q99l4) | (q99l77) |
| m) Cost of financing (e.g. interest rates) | (q99m0) | (q99m1) | (q99m2) | (q99m3) | (q99m4) | (q99m77) |
| n) Economic policy uncertainty (unpredictability of policies) | (q99n0) | (q99n1) | (q99n2) | (q99n3) | (q99n4) | (q99n77) |
| o) Macroeconomic instability (inflation, exch. rate) | (q99o0) | (q99o1) | (q99o2) | (q99o3) | (q99o4) | (q99o77) |
| p) General corruption | (q99p0) | (q99p1) | (q99p2) | (q99p3) | (q99p4) | (q99p77) |
| pa) Corruption related to inspections | (q99pa0) | (q99pa1) | (q99pa2) | (q99pa3) | (q99pa4) | (q99pa77) |
| pb) Corruption related to customs | (q99pb0) | (q99pb1) | (q99pb2) | (q99pb3) | (q99pb4) | (q99pb77) |
| pc) Corruption related to taxes | (q99pc0) | (q99pc1) | (q99pc2) | (q99pc3) | (q99pc4) | (q99pc77) |
| q) Crime, theft and disorder | (q99q0) | (q99q1) | (q99q2) | (q99q3) | (q99q4) | (q99q77) |
| r) Anti-competitive practices (e.g. monopoly) | (q99r0) | (q99r1) | (q99r2) | (q99r3) | (q99r4) | (q99r77) |
| s) Access to business support services | (q105s0) | (q105s1) | (q105s2) | (q105s3) | (q105s4) | (q105s77) |
| t) Access to market information | (q105t0) | (q105t1) | (q105t2) | (q105t3) | (q105t4) | (q105t77) |
| u) Opening up to international markets (SADC etc) | (q105u0) | (q105u1) | (q105u2) | (q105u3) | (q105u4) | (q105u77) |
| v) Competition from illegal imports/contraband | (q105v0) | (q105v1) | (q105v2) | (q105v3) | (q105v4) | (q105v77) |

- Q100
- a) Is the owner/MS member of a political party? _____(q100a)
Code: Yes (1), No (0), Decline to answer (na)
- b) If yes, which party? _____(q100b)
Code: Frelimo (1), Renamo (2), other (3), declined to answer (na)
- c) Are there any former politicians in the firm's management board?
Code: Yes (1), No (0), Decline to answer (na) _____(q100c)
- d) If yes to c) do they have executive power? _____(q100d)
Code: Yes (1), No (0), Decline to answer (na)

Annex B. – Additional Tables**Appendix Table B.1: Number of Firm by Sector and Size**

| | Year | Micro | Small | Medium | Large | Missing | Total | Percent | Survivors | Survival rate |
|-----------------------------|------|-------|-------|--------|-------|---------|-------|---------|-----------|---------------|
| Food processing | 2002 | 4 | 20 | 16 | 5 | 2 | 47 | 24.5 | 32 | 90.8 |
| | 2006 | 7 | 17 | 10 | 4 | 2 | 40 | 25.3 | | |
| Wood Products and Furniture | 2002 | 5 | 19 | 14 | 1 | 0 | 39 | 20.3 | 25 | 89.5 |
| | 2006 | 7 | 18 | 8 | 1 | 1 | 35 | 22.2 | | |
| Textiles and Garments | 2002 | 12 | 4 | 8 | 3 | 1 | 28 | 14.6 | 19 | 90.8 |
| | 2006 | 12 | 6 | 3 | 1 | 1 | 23 | 14.6 | | |
| Metal/Machinery | 2002 | 3 | 13 | 17 | 0 | 0 | 33 | 17.2 | 30 | 97.6 |
| | 2006 | 2 | 16 | 17 | 0 | 0 | 35 | 22.2 | | |
| Other | 2002 | 0 | 14 | 18 | 2 | 0 | 34 | 17.7 | 23 | 90.7 |
| | 2006 | 0 | 9 | 14 | 1 | 1 | 25 | 15.8 | | |
| Missing | 2002 | 0 | 5 | 5 | 0 | 1 | 11 | 5.7 | 8 | 92.3 |
| | 2006 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 | | |
| Total | 2002 | 24 | 75 | 78 | 11 | 4 | 192 | 100.0 | 137 | |
| | 2006 | 28 | 66 | 52 | 7 | 5 | 158 | 100.0 | | |
| Percent | 2002 | 12.5 | 39.1 | 40.6 | 5.7 | 2.1 | 100.0 | | | |
| | 2006 | 17.7 | 41.8 | 32.9 | 4.4 | 3.2 | 100.0 | | | |
| Survivors | | 21 | 51 | 57 | 8 | 0 | 137 | | | |
| Annual avg survival rate | | 96.7 | 90.8 | 92.5 | 92.3 | 0.0 | | | | |

Note: Some 5 observations are missing in the size category in the raw data. An additional 4 observations (two in each end of the distribution) are outliers and are excluded in the present analysis. Micro: 1-9 employees; Small: 10-49 employees; Medium; 50-299 employees; Large: 300 employees and above (World Bank definition).

Appendix Table B.2: Number of Firm by Sector and Legal Ownership Form

| | Year | Private | Partnership | Ltd liability | Other | Missing | Total | Percent | Survivors | Survival rate |
|-----------------------------|------|---------|-------------|---------------|-------|---------|-------|---------|-----------|---------------|
| Food processing | 2002 | 14 | 5 | 21 | 3 | 4 | 47 | 24.5 | 32 | 90.8 |
| | 2006 | 17 | 17 | 6 | 0 | 0 | 40 | 25.3 | | |
| Wood Products and Furniture | 2002 | 19 | 3 | 16 | 1 | 0 | 39 | 20.3 | 25 | 89.5 |
| | 2006 | 17 | 16 | 2 | 0 | 0 | 35 | 22.2 | | |
| Textiles and Garments | 2002 | 15 | 4 | 7 | 1 | 1 | 28 | 14.6 | 19 | 90.8 |
| | 2006 | 15 | 5 | 3 | 0 | 0 | 23 | 14.6 | | |
| Metal/Machinery | 2002 | 11 | 6 | 13 | 2 | 1 | 33 | 17.2 | 30 | 97.6 |
| | 2006 | 9 | 16 | 9 | 1 | 0 | 35 | 22.2 | | |
| Other | 2002 | 8 | 8 | 16 | 1 | 1 | 34 | 17.7 | 23 | 90.7 |
| | 2006 | 4 | 15 | 5 | 1 | 0 | 25 | 15.8 | | |
| Missing | 2002 | 3 | 3 | 3 | 1 | 1 | 11 | 5.7 | 8 | 92.3 |
| | 2006 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 | | |
| Total | 2002 | 70 | 29 | 76 | 9 | 8 | 192 | 100.0 | 137 | |
| | 2006 | 62 | 69 | 25 | 2 | 0 | 158 | 100.0 | | |
| Percent | 2002 | 36.5 | 15.1 | 39.6 | 4.7 | 4.2 | 100.0 | | | |
| | 2006 | 39.2 | 43.7 | 15.8 | 1.3 | 0.0 | 100.0 | | | |
| Survivors | | 54 | 23 | 52 | 5 | 3 | 137 | | | |
| Annual avg survival rate | | 93.7 | 94.4 | 90.9 | 86.3 | 78.3 | | | | |

Note: The "Other" category regarding ownership form includes: Parastatal Corporations, subsidiary of Mozambican firms and subsidiary of Multinational firms. However, some firms in 2002 were registered legally as a private firm, partnership or limited liability company and had 100 percent government ownership.

Appendix Table B.3: Number of Firm by Size and Legal Ownership Form

| Ownership Form | Year | Micro | Small | Medium | Large | Missing | Total | Percent | Survivors | Survival rate |
|----------------------------------|------|-------|-------|--------|-------|---------|-------|---------|-----------|---------------|
| Sole proprietorship/private firm | 2002 | 23 | 30 | 15 | 1 | 1 | 70 | 36.5 | 54 | 93.7 |
| | 2006 | 25 | 27 | 6 | 2 | 2 | 62 | 39.2 | | |
| Partnership | 2002 | 0 | 10 | 17 | 2 | 0 | 29 | 15.1 | 23 | 94.4 |
| | 2006 | 2 | 31 | 32 | 2 | 2 | 69 | 43.7 | | |
| Limited liability | 2002 | 1 | 30 | 39 | 6 | 0 | 76 | 39.6 | 52 | 90.9 |
| | 2006 | 1 | 6 | 14 | 3 | 1 | 25 | 15.8 | | |
| Other | 2002 | 0 | 2 | 5 | 2 | 0 | 9 | 4.7 | 5 | 86.3 |
| | 2006 | 0 | 2 | 0 | 0 | 0 | 2 | 1.3 | | |
| Missing | 2002 | 0 | 3 | 2 | 0 | 3 | 8 | 4.2 | 3 | 78.3 |
| | 2006 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 | | |
| Total | 2002 | 24 | 75 | 78 | 11 | 4 | 192 | 100.0 | 137 | |
| | 2006 | 28 | 66 | 52 | 7 | 5 | 158 | 100.0 | | |
| Percent | 2002 | 12.5 | 39.1 | 40.6 | 5.7 | 2.1 | 100.0 | | | |
| | 2006 | 17.7 | 41.8 | 32.9 | 4.4 | 3.2 | 100.0 | | | |
| Survivors | | 21 | 51 | 57 | 8 | 0 | 137 | | | |
| Annual avg survival rate | | 96.7 | 90.8 | 92.5 | 92.3 | 0.0 | | | | |

Note: Some 5 observations are missing in the size category in the raw data. An additional 4 observations (two in each end of the distribution) are outliers and are excluded in the present analysis. Micro: 1-9 employees; Small: 10-49 employees; Medium: 50-299 employees; Large: 300 employees and above (World Bank definition). The "Other" category regarding ownership form includes: Parastatal Corporations, subsidiary of Mozambican firms and subsidiary of Multinational firms. However, some firms in 2002 were registered legally as a private firm, partnership or limited liability company and had 100 percent government ownership.

Appendix Table B.4: Workforce Unionization

| | | OBEs. | Percent Unionized | All workers unionized |
|--------|------|-------|-------------------|-----------------------|
| Micro | 2002 | 14 | 0.000 | 0.000 |
| | 2006 | 28 | 0.107 | 0.107 |
| Small | 2002 | 40 | 0.575 | 0.325 |
| | 2006 | 65 | 0.446 | 0.231 |
| Medium | 2002 | 45 | 0.889 | 0.533 |
| | 2006 | 52 | 0.923 | 0.308 |
| Large | 2002 | 2 | 1.000 | 0.000 |
| | 2006 | 7 | 1.000 | 0.571 |
| Total | 2002 | 101 | 0.647 | 0.363 |
| | 2006 | 152 | 0.565 | 0.247 |

Note: Figures in share of total firms in category.

Appendix Table B.5: Business Association

| | | 2002 | 2006 |
|-------------------|------------|--------------|--------------|
| Member | Yes | 47.4 (91) | 53.8 (85) |
| | No | 47.9 (92) | 44.3 (70) |
| | Missing | 4.7 (9) | 1.9 (3) |
| Survival rate | Member | 73.6 | |
| | Non-member | 70.7 | |
| Employment Growth | Member | 49.1 | |
| | Non-member | 0.7 | |

Note: Figures in percentages (Number of observations in parenthesis)

Appendix Table B.6: Firm Participation in HIV Related Activities

| | Year | OBEs. | Percent |
|--------------------------|------|-------|---------|
| HIV affect workforce | 2002 | 9 | 9.2 |
| | 2006 | 26 | 16.6 |
| HIV participation | | OBEs. | Percent |
| No participation | 2002 | 149 | 77.6 |
| | 2006 | 71 | 44.9 |
| HIV prevention messages | 2002 | 20 | 10.4 |
| | 2006 | 15 | 9.5 |
| Free condom distribution | 2002 | 8 | 4.2 |
| | 2006 | 8 | 5.1 |
| Counselling for HIV | 2002 | 11 | 5.7 |
| | 2006 | 38 | 24.1 |
| Anonymous HIV testing | 2002 | 0 | 0.0 |
| | 2006 | 8 | 5.1 |
| Financial support | 2002 | 3 | 1.6 |
| | 2006 | 9 | 5.7 |
| Other | 2002 | 1 | 0.5 |
| | 2006 | 9 | 5.7 |
| Total | 2002 | 192 | 100.0 |
| | 2006 | 158 | 100.0 |

Note: In the question regarding whether HIV has affected the workforce 94 and 1 declined to answer in 2002 and 2006, respectively.

Appendix Table B.7: Changes in Perceived Market Share

| | | 2002 | 2006 |
|---------------|---------------------------|-------|------|
| Market share | Mean | 23.1 | 32.7 |
| | OBEs | (150) | (92) |
| By size | Micro | 21.6 | 17.3 |
| | Small | 21.3 | 30.1 |
| | Medium | 24.9 | 36.7 |
| | Large | 27.5 | 64.3 |
| Survival rate | Market share above median | | 67.6 |
| | Market share below median | | 76.3 |

Note: Figures in percentages (Number of observations in parenthesis)