



Descriptive Report

Survey of Mozambican Manufacturing Firms 2017

Inquérito as Indústrias Manufatureiras 2017

Copenhagen, Helsinki, and Maputo

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Preface

This report documents the principal findings of the 2017 Survey of Mozambican Manufacturing Firms (IIM 2017). The survey was planned and implemented by researchers from the Development Economics Research Group (DERG) at the University of Copenhagen, the United Nations University World Institute for Development Economics Research (UNU-WIDER), and the Centre for Studies on Economics and Management (CEEG) at the University of Eduardo Mondlane in Maputo. The survey and subsequent analysis are implemented under the Directorate for Economic and Financial Studies (DEEF), CEEG, UNU-WIDER, and University of Copenhagen *Inclusive Growth in Mozambique—Scaling-up Research and Capacity* programme supported financially by the Ministry of Foreign Affairs of Denmark (Danida), the Ministry of Foreign Affairs of Finland (MFA), and the Ministry of Foreign Affairs of Norway.

The data collection took place during the months of July, August, and September 2017 by a team of 24 local enumerators—mainly graduates of management, accountancy, and economics—under supervision by Ricardo Santos (UNU-WIDER) and Hanna Berkel (DERG).

The main objective of the IIM 2017 is to trace the companies interviewed in the previous survey round (IIM 2012), thereby documenting how the economic situation has developed for firms in the manufacturing sector in Mozambique. Out of 831 firms interviewed in 2012, 523 firms were found to be still in operation, 216 were found to have closed in the period between the two survey rounds, and 92 were either not traceable or refused to partake in the survey. The survey covers the main urban areas of seven provinces in Mozambique: Maputo City, Maputo Province, Gaza, Sofala, Manica, Tete, and Nampula.

While this report provides a descriptive overview, more in-depth studies are being elaborated in 2018. An important improvement over previous rounds of the IIM survey is the completeness and level of detail in economic accounts data—even for companies with no formal accounts. This was possible due to an emphasis on understanding of such accounts during the hiring and training of enumerators.

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Abbreviations and acronyms

CEEG	Centre for Studies on Economics and Management
CEMPRE	Censo de Empresas (Firm Census)
CREL	Registry of Legal Entities
CTA	Confederation of Mozambican Business Associations
DEEF	Directorate for Economic and Financial Studies
DERG	Development Economics Research Group (at UoC)
GoM	Government of Mozambique
IIM (2012 & 2017)	Inquérito às Indústrias Manufacturerias (Manufacturing Surveys in 2012 and 2017)
INE	Instituto Nacional de Estatística (National Institute of Statistics)
IOF	Inquérito ao Orçamento Familiar (Household Budget Survey)
INSS	Instituto Nacional de Segurança Social (National Institute of Social Security)
MEF	Ministry of Economics and Finance of Mozambique
MFA	Ministry of Foreign Affairs of Finland
MIC	Ministry of Industry and Commerce of Mozambique
MSME	Micro, small, and medium enterprise
MTs	Meticals
NGO	Non-governmental organisation
NUIT	Número Único de Identificação Tributária (Tax identification number)
OLS	Ordinary least squares
R&D	Research and Development
SADC	Southern African Development Community
SME	Small and medium enterprise
TFP	Total factor productivity
UEM	Eduardo Mondlane University
UNU-WIDER	United Nations University World Institute for Development Economics Research
UoC	University of Copenhagen

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Resumo dos Resultados do Inquérito às Empresas Manufactureiras em Moçambique 2017

A **Direcção Nacional de Estudos Económicos e Financeiros** do Ministério de Economia e Finanças Moçambicano, o **Centro de Estudos de Economia e Gestão (CEEG)** da Universidade Eduardo Mondlane, o United Nations University World Institute for Development Economics Research (**UNU-WIDER**) e o Development Economics Research Group (**DERG**) da Universidade de Copenhaga são as instituições parceiras do projecto *Crescimento inclusivo em Moçambique – reforçando a investigação e as capacidades*. O objectivo do mesmo é apoiar a continuação do rápido crescimento económico das últimas duas décadas do país e, simultaneamente, atingir todos os cidadãos moçambicanos.

No contexto deste esforço, um inquérito a 831 empresas manufactureiras, em sete províncias moçambicanas, foi implementado pelo CEEG, UNU-WIDER e DERG em 2017. Este projecto foi a continuação de inquéritos prévios e, desta forma, criou uma base de dados de painel para, principalmente, poder comparar a situação das mesmas empresas manufactureiras entre 2011 e 2017. O principal resultado a destacar é que as empresas inquiridas foram fortemente afectadas pela crise económica que se iniciou em 2016 e ainda decorre à data deste relatório. No entanto, foram também identificados desenvolvimentos positivos.

O trabalho de campo consistiu na realização de entrevistas face-a-face. As entrevistas foram realizadas por 24 estudantes e recém graduados de contabilidade e gestão de empresas, com o fim de facilitar as respostas às perguntas sobre a contabilidade organizada dos empresários entrevistados. Cada empresa foi entrevistada por um par de entrevistadores, maioritariamente constituído por pessoas dos dois géneros, tendo algumas equipas sido constituídas por duas entrevistadoras. Para preencher os questionários, foram usados tablets para inserir os dados obtidos, recorrendo a uma plataforma digital chamada KoboToolbox. Os dados, assim recolhidos, de modo offline, eram a cada final do dia carregados na base de dados online, acelerando o processo de recolha de dados através da automatização das tarefas de entrada de dados. A recolha de dados, que aconteceu durante os meses de Julho a Setembro de 2017, foi supervisionada por dois pesquisadores, um da UNU-WIDER e uma do DERG. Para além das entrevistas de inquérito, foram realizadas entrevistas semiestruturadas, recorrendo a métodos de pesquisa qualitativa, bem como pesquisa baseada em observação participante, durante e depois do período do inquérito, que enriqueceram os dados com informação adicional.

As entrevistas iniciaram-se na cidade e na província de Maputo. Depois de duas semanas, metade dos inquiridores realizou o inquérito nas províncias de Gaza, Nampula e Tete enquanto a outra metade trabalhou nas províncias de Sofala e Manica. Uma vez que este inquérito correspondeu ao seguimento das mesmas empresas que haviam sido inquiridas no Inquérito às Indústrias Manufactureiras 2012, só foram incluídas sete das onze províncias moçambicanas, as mesmas que haviam sido cobertas no inquérito referido. Assim, as seis províncias com a maior concentração de empresas manufactureiras foram seleccionadas. Além disso, em 2011, foi decidido incluir a província de Tete por causa de desenvolvimentos específicos durante aquele tempo

Houve dois questionários. O questionário principal foi dirigido aos donos ou, no caso da sua indisponibilidade, aos gerentes, de empresas manufactureiras operativas pelo menos desde 2009, sem ter fechado por mais de um ano desde a sua fundação, e que foram entrevistadas em 2011. Este questionário incluía perguntas, entre outras, sobre a localização da empresa, características dos proprietários, número e salários dos funcionários contratados, contabilidade, acesso a crédito bancário, investimentos, exportações, participação em associações empresariais e actividades informais. O segundo questionário foi dirigido às empresas que eram operativas e foram entrevistadas em 2011, mas que foram fechadas entre 2011 e 2017. Este questionário, procurando captar, fundamentalmente, as razões dos encerramentos, era mais curto.

Amostra

Das 831 empresas manufactureiras que foram entrevistadas em 2011, os inquiridores encontraram 523 empresas a operar e 216 que tinham sido encerradas desde o último inquérito. As restantes, num total de 92 empresas, não foram encontradas por causa de coordenadas de GPS incorrectas ou recusaram a participação. Três observações das 523 empresas principais foram excluídas por causas de dados em falta ou porque se transformaram em empresas de grande escala, enquanto o estudo tem como enfoque as micro, pequenas e médias empresas (MPMEs), conforme as categorias de tamanho do Banco Mundial.

A tabela 1 apresenta que, das 523 empresas a operar que fazem parte do estudo, 382 são micro, 103 pequenas e 35 médias empresas. A maioria dos entrevistados ficou na mesma dimensão de tamanho desde 2011. Das empresas que mudaram de tamanho, há um número maior de empresas que diminuíram de dimensão (65) do que empresas que cresceram (28). Das empresas

que diminuíram, a maioria eram de dimensão pequena no ano de 2011 e das empresas que cresceram, a maioria eram de tamanho micro em 2011.

Tabela 1: Transição de dimensões de empresas

Dimensão 2011	Dimensão 2017		
	Micro	Pequeno	Médio
Micro	336	16	0
Pequeno	45	69	9
Médio	1	18	25
Observações	382	103	34

Fonte: Cálculos dos autores, utilizando dados do relatório IIM 2017

Das 216 empresas que foram fechadas desde o inquérito de 2011, mais de dois terços eram de dimensão micro à data do seu encerramento. A cidade de Maputo e a província de Sofala indicam uma percentagem especialmente alta de encerramentos de empresas, quando comparado com as outras províncias. Porém, como foram as províncias com mais empresas inquiridas, este desenvolvimento não é surpreendente. A província com menos encerramentos de empresas é Manica.

Resultados da pesquisa

Os resultados descritos a seguir são uma pequena selecção da informação do inquérito, considerada mais relevante. Mais detalhes sobre cada subcategoria podem ser obtidos no relatório IIM 2017.

Uma proporção de 78 por cento das indústrias amostradas são unipessoais, 20 por cento sociedades e o pequeno resto tem outro status legal. O sector mais representado na amostra das empresas entrevistadas em 2011 foi o de mobiliário. No entanto, ele diminuiu e, em 2017, representa o terceiro maior. Em 2017, os dois maiores sectores são o da madeira (segundo maior em 2011), seguido do de bebidas e alimentos (quarto maior em 2011). Notavelmente, dois destes sectores, madeiras e mobiliário, possuem grandes sinergias, integrando, potencialmente, uma mesma cadeia de valor, com o primeiro a montante do segundo. Mais de 50 por cento das empresas amostradas encontram-se nestes três sectores, sugerindo, portanto, um elevado grau de concentração das indústrias manufactureiras em Moçambique (IIM, 2012, 2017).

Uma novidade do relatório de 2017 é que inclui dados sobre a contabilidade organizada das empresas. A actividade de manter contabilidade oficial depende do tamanho da empresa. Quase todas as empresas médias mantêm contabilidade organizada, enquanto para as empresas de

micro dimensão isto é somente o caso para 20 por cento. O número de empresas que reporta grandes ou pequenas perdas (33 por cento) cresceu comparado com 2011 (18 por cento), enquanto mais empresas indicaram ter obtido lucros (75 por cento) em 2011 que em 2017 (80 por cento). Entre as sete províncias inquiridas, Tete e Nampula parecem ser as regiões mais afectadas pela crise. No entanto, numa sugestão de que existe uma expectativa positiva por parte dos empresários, mais que a metade das empresas inquiridas mostraram vontade de expandir o seu negócio.

Neste inquérito, uma empresa moçambicana é considerada formal quando possui um número de identificação tributária (NUIT) e um documento sobre a reserva do nome da sua empresa. Desta forma, a proporção de empresas formais ficou em 53 por cento, a mesma de 2011. Porém, entrevistas qualitativas mostraram que as empresas consideradas informais, na maioria dos casos, mantêm uma licença simplificada obtida pelo Conselho Municipal. Muito poucas empresas não tinham nenhum documento oficial. O registo de uma empresa é um processo complexo e demorado porque diferentes autoridades são responsáveis pelo processo de diversos documentos exigidos para o registo. Apesar de existir um sistema de registo simplificado pelo qual o Balcão de Atendimento Único (BAÚ) deveria ser responsável (Decreto no 39/2017, de 28 de Julho), não é totalmente evidente que este esteja a ser implementado. Uma das pesquisadoras da equipe de investigação, realizando uma pesquisa qualitativa de observação participante, apoiou uma micro empresa de um sapateiro moçambicano no seu registo. Pode observar que, ao invés de ter sido o BAÚ a centralizar os procedimentos, o negócio foi, no fim de um demorado processo, registado junto do Município de Matola, que não emitiu uma licença simplificada mas um alvará mediante o qual o sapateiro, de jure, continua a não cumprir todos os requisitos necessários para formalizar a sua empresa. Apesar disso, muitas empresas registadas realizam actividades informais, como, por exemplo, a emissão de facturas falsificadas e evasão fiscal. Isto sugere que a fronteira entre o sector formal e informal é pouco clara em Moçambique e que, neste país, é quase impossível encontrar uma empresa que é 100 por cento formal.

Outra parte do questionário perguntou sobre a força laboral da empresa. O inquérito regista um número preocupante de mais de 5.000 empregos perdidos nas empresas amostradas desde 2009. Em geral, todos os tipos de trabalhadores, tal como permanentes, temporários, casuais e femininos diminuíram entre 2015 e 2017 por causa da crise económica. Com excepção da província de Maputo e da cidade de Maputo, as indústrias amostradas pagam um salário médio

que é mais baixo que o salário mínimo nacional para o sector manufactureiro (5.965 MTs). Contudo, o valor do salário varia muito entre regiões, com os trabalhadores na província de Maputo a ganhar um salário médio de 8.100 MZN e em Gaza de 3.500 MZN. Um desenvolvimento positivo é que, segundo sugerem os resultados dos inquéritos, a contribuição ao Instituto Nacional de Segurança Social (INSS) tem crescido.

As características dos proprietários também são exploradas no inquérito. Assinala-se como evolução positiva, a indicação de que a propriedade feminina cresceu fortemente entre 2011 e 2015, de 8 a 14 por cento. Além disso, quase todos os donos de empresas frequentaram a escola, sendo que 40 por cento completaram a educação secundária.

Os empresários moçambicanos parecem ser avessos ao risco, com 30 por cento deles não querendo tomar nenhum risco. Empresas médias tomam mais risco que pequenas e microempresas. Em geral, os entrevistados indicaram um baixo nível de confiança nas outras pessoas. Este baixo nível de confiança é reflectido na proporção de empresas cujos representantes afirmaram que não emprestariam nenhum dinheiro aos seus contactos de negócio (quase 50 por cento) e no facto de somente 6 por cento das empresas inquiridas terem indicado haver recebido apoio (financeiro e não-financeiro) de um contacto. As respostas das empresas inquiridas sugerem que as associações empresariais podem não ter uma forte representatividade, uma vez que somente 15 por cento das empresas inquiridas, na sua maioria de dimensão média, indicou participar nelas. Uma das razões mais importantes para não ser membro de uma associação é a percepção que as mesmas não trazem nenhum benefício (49.66 por cento dos gestores entrevistados afirmaram não conhecer nenhuma associação relevante para a sua actividade e 14.42 por cento das empresas, segundo os seus gestores, não obteriam nenhum benefício tangível). A adesão a redes sociais, como o Facebook, parece ainda estar numa fase embrionária; apenas 7 por cento das empresas inquiridas indicaram ter uma conta nessa aplicação

Conclusão

O IIM 2017 criou dados de painel que fornecem aos políticos, ONGs e pesquisadores informação detalhada sobre o sector manufactureiro em Moçambique. Desde o último inquérito de 2012, a situação do sector não parece ter mudado muito. Entretanto, Mozambique entrou e atravessa uma fase de desaceleração económica. Destacam-se as seguintes evidências:

- O número de médio de trabalhadores das empresas entrevistadas reduziu-se entre 2012 e 2017, entre as empresas sobreviventes; por outro lado, a taxa de encerramento de empresas, de 6.5 por cento ao ano, foi relativamente baixa. Esta evidência sugere que o sector manufactureiro conseguiu mitigar os efeitos da crise, ajustando a força de trabalho enquanto evitaram níveis mais elevados de encerramento.
- A sensação de crise económica é também transmitida pelas percepções dos empresários e gestores relativamente à performance das suas empresas, notavelmente pior relativamente a 2016, quando comparada com 2011. Uma das consequências aparentes é, não só a redução do número de trabalhadores, mas uma transição para contractos de trabalho mais precários, ou seja, menos trabalhadores efectivos e mais temporários ou casuais.
- Por seu lado, os indicadores económicos e financeiros das empresas sugerem uma melhoria entre 2015 e 2016, para as pequenas e médias empresas, enquanto as microempresas continuam a manifestar dificuldades. O mesmo aconteceu com a produtividade das empresas manufactureiras.

Relativamente às condições de funcionamento e estratégias das empresas manufactureiras, destaca-se a seguinte evidência:

- Empresas manufactureiras enfrentam fragilidades nos seus fornecimentos de matéria prima, não só na quantidade, mas também na qualidade.
- A opção de exportação é ainda muito pouco utilizada, com a maioria das empresas a reportar os elevados custos do licenciamento como o principal motivo para não explorarem essa possibilidade.
- Muitas empresas operam em condições de formalidade limitada ou mesmo informalidade total. As empresas que desejem formalizar-se enfrentam situações de falta de transparência e mesmo de corrupção nos processos de registo. Simultaneamente, empresários e gestores entrevistados reportaram serem confrontados com normas que desconheciam ou mesmo potencialmente arbitrárias, quando visitados por representantes do Estado Moçambicano, sendo obrigados a pagar multas (ou recebendo sugestões de pagar subornos para evitar essas multas). Coincidentemente, perto de metade dos gestores e empresários entrevistados temem que as suas empresas possam ser encerradas pelas autoridades. Em

conjunto, estas respostas sugerem que as empresas manufactureiras enfrentam um ambiente com elevado risco legal.

- O acesso ao crédito em Moçambique é ainda considerado muito constrangido, em particular devido a falta de informação, exigências ao nível do colateral a apresentar na candidatura a crédito e elevadas taxas de juro.

Ao nível das características da gestão, destacam-se, finalmente:

- Aumento da proporção de empresas lideradas por mulheres, para um valor de 12 por cento, ainda bastante abaixo da paridade.
- Os gestores e empresários das empresas manufactureiras apresentam, em geral, uma elevada aversão ao risco e falta de confiança em outras pessoas. Notavelmente, os donos de microempresas entrevistados revelaram manifestamente uma aversão ao risco extrema. Tal manifesta-se numa menor vontade de contrair e conceder crédito.
- Finalmente, a evidência recolhida sugere uma relativamente baixa adesão a estruturas da sociedade civil que medeiam a relação entre empresas e o Estado, nomeadamente as associações empresariais.

À luz das conclusões que as evidências sugerem, encontramos um sector manufactureiro que, havendo enfrentado, e ainda enfrentando um ambiente económico exigente, aparenta ter toda a capacidade de se ajustar, sem fragilizar excessivamente o tecido empresarial. Entretanto, o sector manufactureiro Moçambicano pode beneficiar de uma acção proactiva do Governo de Moçambique no sentido de potenciar as capacidades das empresas. Em particular, as evidências sugerem a necessidade de fortalecer o processo de desburocratização já iniciado, verificando e combatendo algumas práticas que comprometem a eficácia dos procedimentos desenhados e instituídos por lei; uma atenção às limitações no acesso ao crédito; e uma maior atenção à possibilidade de responder à identificação de barreiras formais à exportação, especialmente de produtos moçambicanos com valor acrescentado e mais elevada incorporação de mão-de-obra.

Durante os meses a seguir, diversos pesquisadores continuarão a trabalhar com os dados com o objectivo de publicar *estudos de pesquisa académica* mais detalhados sobre temas específicos, nomeadamente: produtividade, características das empresas fechadas, confiança e preferências de risco, geografia das relações económicas e formalização de empresas informais.

1 Introduction, data collection, and methods

1.1 Background and delimitation

After the establishment of a democratic system in Mozambique in 1994, the country's economy embarked on an annual growth process of 7 per cent. However, recent challenges such as the slow burn conflict between the ruling party FRELIMO and the opposition RENAMO as well as a government debt crisis blur the picture of a country undergoing rapid development. From an industrial standpoint, foreign development aid and large-scale, capital-intensive projects played an important role in this development process. One example of such a large project situated in the manufacturing sector is the aluminium smelter Mozal, the biggest company in Mozambique (KPMG 2016). However, these large-scale investments are regularly being criticized for only benefitting foreign multinationals and local elites, not leaving much for the Mozambican population (Castel-Branco and Goldin 2003; Jubilee Debt Campaign 2012). In our survey, we focus on the core of the country's manufacturing sector, namely that which consists primarily of micro, small, and medium enterprises (MSMEs). This sector has the potential of creating new jobs in urban areas and is often hailed as a principal driver of structural change, by creating new jobs that thus reduce poverty.

It is important to note that the survey described in this report is not a representative sample of the Mozambican manufacturing sector. Rather, it aims to track the development over time of the manufacturing sector by re-visiting as many as possible of the 831 companies interviewed in 2012. As such, it might overlook many firms that have started operating since 2009. However, qualitative evidence from the field interviews does not give the impression that much of the economic activity has shifted to new firms.

To generate a reliable panel dataset, the questions asked in this survey round are like those in 2012. One important change is that the present survey emphasizes the completeness and detail of economic accounts data, something that was missing for many firms in the previous round.

The descriptive tables and figures of this report aim to provide a broad picture of the manufacturing sector, comparing results across size categories of firms, provinces, and sectors. Where applicable the figures will be compared to answers to similar questions from 2012.

1.2 Sample

The 2017 Manufacturing Survey (IIM 2017) in Mozambique aims at following as many firms from the IIM 2012 survey as possible, thus adding a panel dimension to the existing database. It contains both companies still in operation and those which have stopped operating since 2012, to explore the reasons for their closure.

The sampling of firms for the 2012 round of the IIM dataset is outlined in detail in the descriptive report from that survey round (DNEAP 2013). In summary, it departed from the Mozambican firm census from 2002 (CEMPRE), as this represented a base for the overall structure of the country's manufacturing sector, meaning it displayed the number of manufacturing firms and their characteristics by location. Out of the population of manufacturing firms, six provinces, which had the highest concentration of manufacturing enterprises, were selected into the sample. It was subsequently decided to include the province of Tete because of developments during the time of sampling in 2011. Within these provinces, the sample was limited to the districts with the highest concentration of companies. Therefore, mostly companies in large urban areas are included in the sample.

Overall, the seven selected provinces contained 85 per cent of the total number of manufacturing companies. The selected locations represented more than 60 per cent of Mozambican manufacturing firms at the time. Of all the Mozambican manufacturing companies in 2004, 77 per cent were micro, 17 per cent small, and only 5 per cent of medium size, which is reflected in the sampling of the survey.

1.3 Questionnaires

The survey questionnaires were elaborated based on those of the previous survey round. Due to time considerations, the main questionnaire was shortened slightly, and some sections were re-ordered. The main difference from the 2012 version was that the section on economic accounts was moved to the top to ensure completeness of this data. Table 1.1 shows the main components of the questionnaire.

Table 1.1: Principal questionnaire

Economic accounts
A General information about the firm
B Respondent characteristics
C Employment
D Management
E Investment and R&D
F Sales structure and exports
G Indirect costs, raw materials, and services
H Customers and suppliers
I Fees, taxes, licences, and informal costs
J Access to finance
K Networks and business associations
L Informal enterprises
Perception and statements

Source: Authors' elaboration.

Unlike in previous years, the questionnaires were completed in electronic form using the survey software KoBoCollect. This allowed data collection using tablets instead of paper, which in turn allowed the researchers to follow the data collection remotely. Other advantages included the possibility of making last-minute changes to some of the questions following feedback from enumerators during the training sessions; the possibility of filtering to allow for questions to emerge during an interview depending on the answers to previous questions; and the possibility of collecting accurate GPS coordinates during the data collection using the built-in locator in the tablets. Overall, the use of tablets during the data collection was a success.

1.4 Survey preparation

The questionnaire was updated and uploaded to the data collection software KoBoToolbox by three researchers from the Development Economics Research Group (DERG), John Rand, Peter Fisker, and Hanna Berkel, as well as by one researcher from UNU-WIDER, Ricardo Santos. The Mozambican Ministry of Industry and Commerce (MIC), the Ministry of Economics and Finance, the Tax Authority, and the Business Confederation (CTA) suggested changes and additions to the questionnaire. The Director of the Centre for Studies on Economics and Management (CEEG), Faizal Carsane, and, especially, MEF's senior staff Fausto Mafambissa, established institutional contacts to gain their formal support for the survey.

1.5 Implementation

The implementation of the survey was supervised by Ricardo Santos (UNU-WIDER) and Hanna Berkel (DERG) with administrative support by CEEG at Eduardo Mondlane University (UEM). CEEG hired 31 enumerators who conducted interviews from mid-July to the beginning of September 2017. It was decided to contract students in their final year of courses in subjects such as accountancy, management, and economics as well as recent graduates in the same subjects, all with related work experience, as this would facilitate smooth replies to the economic accounts part of the questionnaire and a stronger general understanding of the survey's objectives.

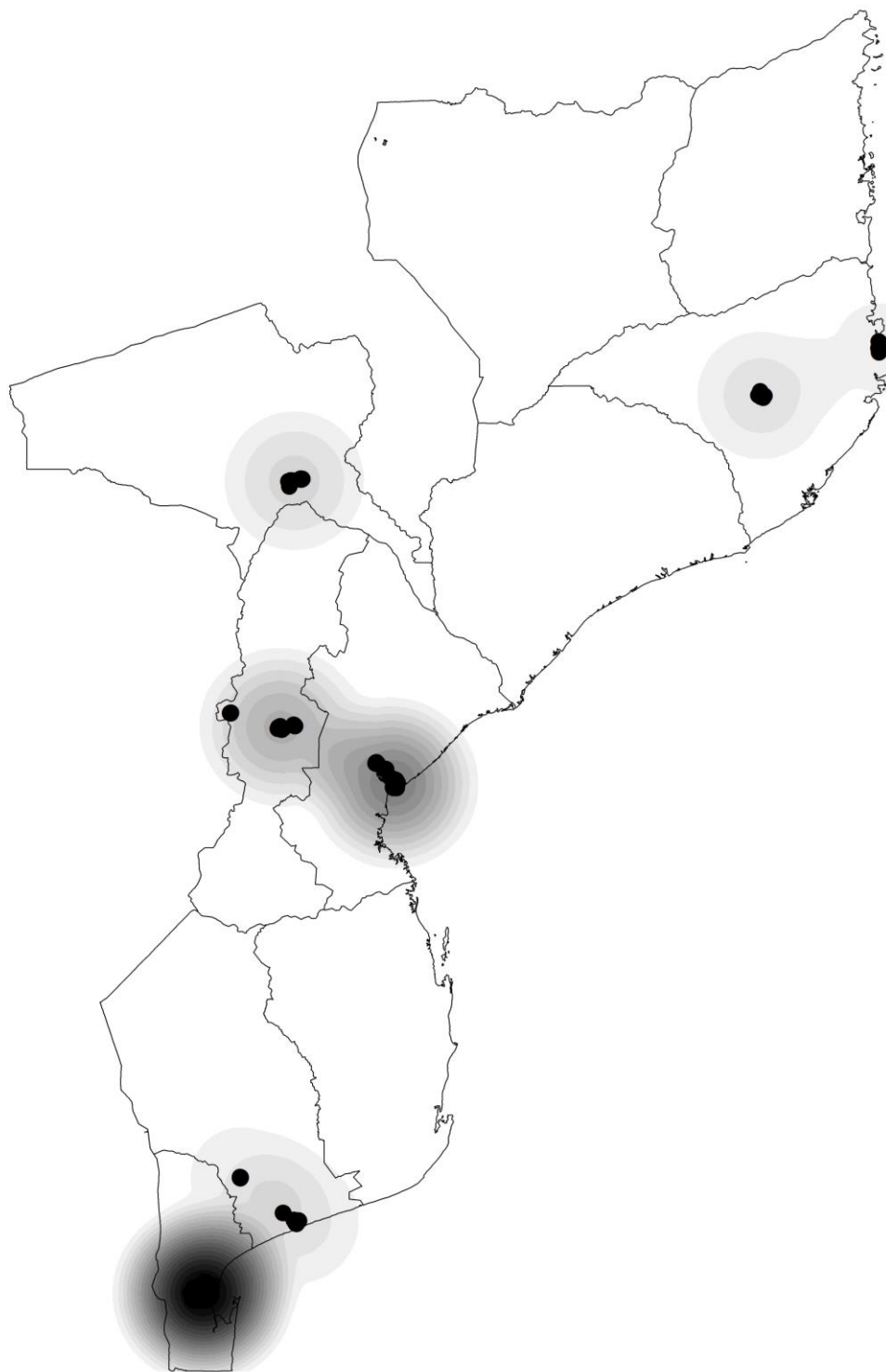
During the first of two days of enumerator training, led by Peter Fisker, Hanna Berkel, and Ricardo Santos, each survey question was explained and discussed. The enumerators then practised filling in the questionnaire in teams of two. On the second day, they were tested on how they filled in the questionnaire. Finally, 24 were selected, based on the quality of their survey results and aiming, if possible, for gender equality. The remaining seven were put on a waiting list and they were all hired at a later point of the data collection process as others dropped out, mostly due to other job opportunities.

Overall, 12 teams of two enumerators, one female and one male, conducted the interviews. They all used a Lenovo A7 tablet, which they had to pick up every morning and hand in the same evening to the supervisors for safe-keeping. This also enabled the supervisors to debrief each team every evening to learn about any difficulties in finding companies or with interview questions, and to get suggestions about how to improve the data collection process. It also facilitated an overview of how many companies were not findable, how many had been closed since 2012, and whether the enumerators had worked well. The interviews that had been conducted also had to be uploaded into the Kobo Toolbox Platform as this was not possible in the field without internet access.

After two and a half weeks of data collection in Maputo City and Maputo Province (Matola and Boane), one of the supervisors travelled with six teams to the provinces of Gaza (Xai-Xai and Chokwe), Nampula (Nampula and Nacala), and Tete (Tete and Moatize), while another supervisor travelled with the remaining six teams to Sofala (Beira, Mafambisse, and Dondo) and Manica (Chimoio, Manica, and Gondola).

In total, 523 companies, which had already been interviewed in 2012, were still operating and surveyed in 2017. Table 1.2 reports that the province in which most companies were traced was Maputo City (141), followed by the provinces of Sofala (102), Maputo (70), and Manica (70). Figure 1.1 represents a map of Mozambique and the locations of the companies interviewed. More than two-thirds of the enterprises were of micro size (381), followed by small (104), medium (35), and large (1) firms. However, this report does not consider the large firms as it concentrates on MSMEs. There were 216 companies which had stopped operating since 2012 but which were found and interviewed (exit questionnaire). Another 92 enterprises that were interviewed in 2012 could not be located due to incorrect GPS coordinates or closure, or they refused to be interviewed in 2017.

Figure 1.1: Map of firm locations



Source: Locations obtained during data collection overlaid onto administrative units from the Global Administrative Areas database. Dots represent locations of firms while graduated colours indicate density of nearby firms.

Table 1.2: Number of firms, by location and firm size

	Micro	Small	Medium	Large	Total
Maputo City	88	38	15	0	141
Maputo Province	45	19	6	0	70
Gaza	41	5	2	0	48
Sofala	86	12	3	0	101
Manica	56	11	3	0	70
Nampula	33	13	4	1	51
Tete	31	5	2	0	38
Total	380	103	35	1	519

Source: Authors' own calculations using IIM 2017 data.

To create an incentive to conduct as many interviews as possible, the enumerators were paid per interview (500 meticaís (MT)). A goal of three interviews per day was set but was not always possible to reach due to invalid phone numbers, wrong GPS coordinates, and refusal of participation by company owners. Where possible, the enumerators called the companies in advance to arrange an interview. Despite having appointments, the company owners or accountants, whom the owners often consulted about the economic accounts questions, were often not available upon arrival, which meant the enumerators had to come back another day. However, many of the companies had 'lost' their old mobile phone numbers due to a legal process which obliged everyone to register his/her phone number (Club of Mozambique 2016a), which made a pre-arranged appointment impossible.

When they were unable to arrange the interview in advance, the enumerators went directly to the location indicated by the GPS coordinates, which had been collected during the interviews in 2012. This mostly worked out very well. However, some of the GPS coordinates registered in 2012 did not correspond to the location of the company. In such cases, the enumerators had to search based on the company's address, which was a complicated and long process because most of the streets were not findable in Google Maps. Nevertheless, the enumerators located almost all the companies with the help of local knowledge.

After returning from the provinces, some interviews were conducted with companies in Maputo and Matola, as these had been postponed to a later date. Data collection finished on 8 September. The data was then controlled and cleaned, and some of the companies in Maputo, Matola, and Xai-Xai were re-visited to control the data obtained.

1.6 Data validation

Errors may have occurred during the interview process. Often, the enumerators had to explain the questions in more detail to help the interviewees to answer them. These explanations may not always have been identical to what the question was intended to ask. For example, when asked if their company had a tax identification number (NUIT), interviewees answered that their company did have one, but the owners might have confused this with the Mozambicans' personal ID numbers that are also called NUITs.

As many micro companies do not maintain formal accounts, the enumerators had to calculate the value of sales themselves by asking how many products the companies sold per month and then grossing up the values per year. As a carpenter probably does not sell the same number of chairs and beds every month, then the accounts of informal companies are often only broad estimates.

As the interviews lasted between one and a half and three hours, mostly depending on the interviewees' own questions and comments, the enumerators sometimes did not read out the questions in full, which may have resulted in wrong answers. For example, when asking about bribes they sometimes directly asked if the companies had already paid bribes, although they were supposed to ask about bribe payments by other companies in the same sector. Moreover, interviewees tended to provide random and potentially inaccurate answers when they recognized the questionnaire would take more time than they had thought.

As many Mozambicans' mother tongue is not Portuguese but another local language, their own understanding of the questions may have been different to that of the researchers.

When the enumerators did not find a firm, they may have invented the data in the exit questionnaire to receive payment for an interview. However, the supervisors believe that most of the exit questionnaire data is correct as they spoke with each of the teams every night to find out why certain companies were not findable and why an exit questionnaire had been conducted instead of the principal one.

Despite these difficulties, the researchers believe that the data obtained is accurate enough to create informative studies about the manufacturing sector in Mozambique.

1.7 Ethical considerations

In terms of ethical dilemmas, the following issues arose during the IIM 2017 data collection. First, the supervisors were often not aware of how privileged they were compared to young Mozambicans. For example, while it was very common for the supervisors to travel by plane, for most of the enumerators this was the first time they had travelled in such a luxurious way. Thus, the IIM was a great opportunity for the enumerators to get to know their own country and for some of the supervisors to learn not to take certain things for granted, such as travelling comfortably or travel in general.

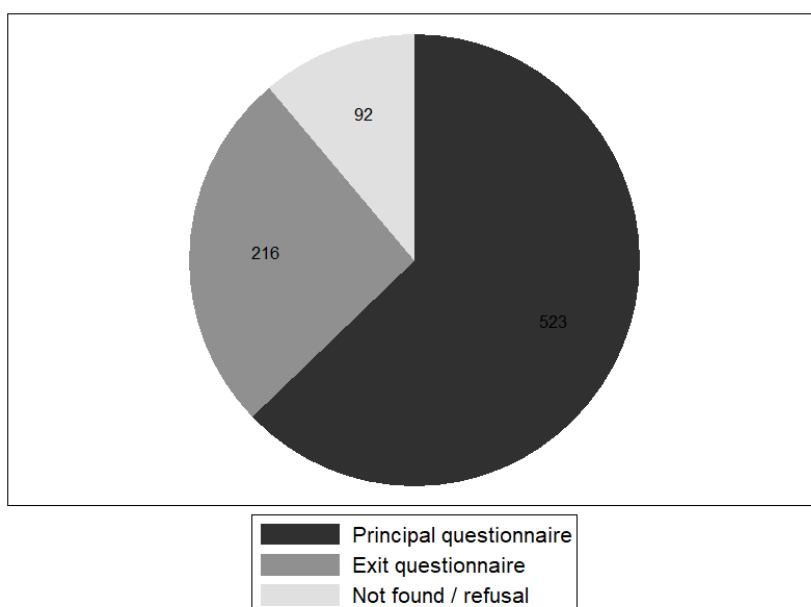
Moreover, the supervisors expected certain skills from the enumerators which might be 'normal' in Europe but were very new in a Mozambican context. For example, while many Europeans use GPS systems and Google Maps every day, this was the first time that the enumerators had worked with Google Maps. However, the supervisors had assumed that they were all familiar with it and they could become impatient when certain things did not work out as quickly as planned. The enumerators were very good at remembering street names and certain houses and places to help find the way, while the supervisors depended on technologies which did not always work. Thus, data collection was a kind of knowledge exchange between the enumerators and supervisors about the different ways of finding certain places (here, companies).

2 Overview: sample characteristics and report structure

2.1 Firms, by location and size

Out of the 831 companies that had been interviewed in 2012, 523 companies were traced in 2017. A further 216 firms that had closed since 2012 were located and surveyed through an exit questionnaire. The survey collected information on a total of 739 of the companies interviewed in 2012. The remaining 92 were not findable or refused to participate (see Figure 2.1). Most of the companies traced (141) were in Maputo City, followed by Sofala province (101), Maputo and Manica provinces (both 70), Nampula (50), Gaza (48), and Tete (38).

Figure 2.1: Companies interviewed

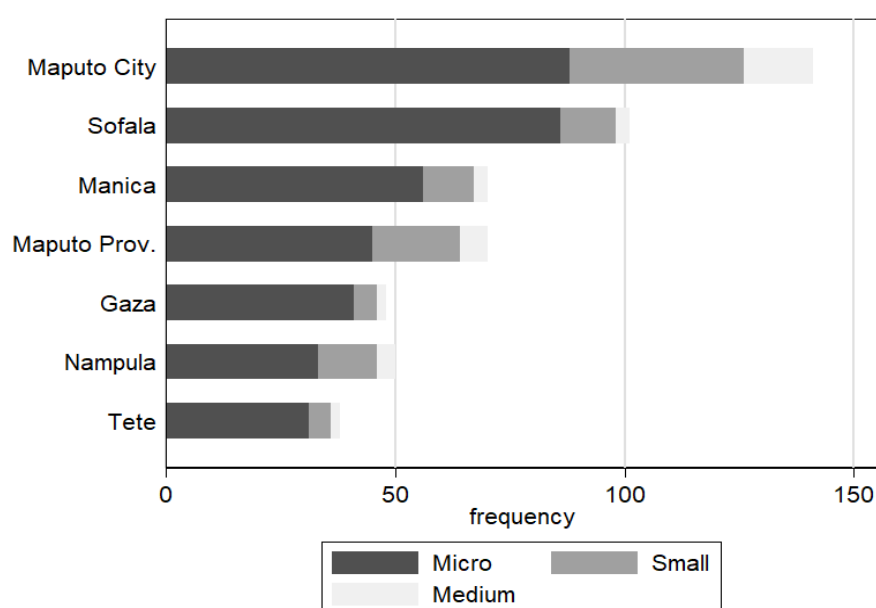


Source: Authors' own calculations using IIM 2017 data.

Standard World Bank definitions were used to categorize the size of the sampled firms. Firms with less than 10 employees were categorized as micro, with 10–49 employees as small, and with 50–299 employees as medium-sized companies (DNEAP 2013). However, it should be noted that Mozambican law uses different size categories that are based not only on the number of workers but also on the initial investment when the company was founded and the potential installed power in KvA (GoM 2003: 1,160). If we had used the Mozambican categories, more than 87 per cent of the companies sampled would be of micro size.

Figure 2.2 illustrates the number and size of firms interviewed, by province. In 2017, 382 were micro (73 per cent), 103 small (20 per cent), and 35 (7 per cent) medium-sized enterprises. We drop the three observations of large companies as we are focusing on MSMEs. More than 80 per cent of the companies interviewed in the provinces of Gaza, Sofala, Manica, and Tete were of micro size, while medium-sized firms were over-represented in Maputo (11 per cent), Matola (9 per cent), and Nampula (8 per cent). In Maputo City, the number of small companies interviewed (38) is noteworthy.

Figure 2.2: Number of firms, by province and size



Source: Authors' own calculations using IIM 2017 data.

Table 2.1 reports the change of firm size over time. Most companies had remained the same size. However, a few companies had shrunk in size: 45 enterprises which were of small size in 2011 were micro firms in 2017 and 18 medium-sized companies were now small. One company had decreased from medium to micro size. Only a small number of companies had grown: 16 which had been micro-sized were now small enterprises, and nine small firms were now medium-sized ones. None of the micro companies in 2011 had managed to become a medium-sized enterprise.

Table 2.1: Size category transition matrix

Size 2017	Firm size 2011		
	Micro	Small	Medium
Micro	336	45	1
Small	16	69	18
Medium	0	9	25

Source: Authors' own calculations using IIM 2017 data.

Table 2.2 illustrates certain firm characteristics by size and province. The companies sampled had an average age of 20 years. Small companies stood out with a mean age of 25. However, they had to be at least eight years old as the IIM 2012 did not include companies that started their operations after 2009.

The mean number of workers of all firms sampled was 14, but the median was only four. There were significant differences between the firm sizes, with an average number of three workers for micro firms, 21 for small, and 104 for medium-sized companies. Companies in Nampula tended to have the most workers, 30 on average, but in this province, medium-sized enterprises were over-represented. In Gaza and Tete, companies tended to be particularly small with a median of two workers.

Table 2.2: Firm characteristics, by size category and province

	Mean no. of workers	Median no. of workers	Mean firm age	Number of observations	Per cent of sample
Micro	3	3	18	383	73.2%
Small	21	20	25	104	19.9%
Medium	104	92	23	35	6.7%
Maputo City	17	4	23	141	27.0%
Maputo Province	17	5	20	70	13.4%
Gaza	9	2	17	48	9.2%
Sofala	8	3	20	101	19.3%
Manica	10	4	17	70	13.4%
Nampula	30	6	19	51	9.8%
Tete	12	2	20	38	7.3%
Total	14	4	20	523	100%

Source: Authors' own calculations using IIM 2017 data.

2.2 Firms, by sector

Table 2.3 shows the 2-digit sectors in which the firms sampled were located. In the survey questionnaire, enumerators noted the 4-digit sector code, which was then aggregated to two digits by the researchers. In the sections that follow, a further simplification has been made to compare results with the 2012 report. For instance, *basic metals* and *fabricated metal products*

are collapsed to the simpler category of *metals*. While the furniture sector represented the largest of the companies sampled in 2012, it shrunk in size over time and was the third largest in 2017. There were 133 companies located in the wood sector in 2017, representing the largest sector (second largest in 2011), followed by food and beverages with 72 companies interviewed (fourth largest in 2011). Overall, more than 50 per cent of the companies sampled were in only these three largest 2-digit-sectors. Thus, manufacturing companies in Mozambique continued to be highly concentrated in a few sectors (DNEAP 2013). This was likely caused by changes in the subjective assessments made by the enumerators in the two survey rounds. For instance, it can be difficult to distinguish between wood and furniture for a carpenter who primarily makes bedframes out of wood.

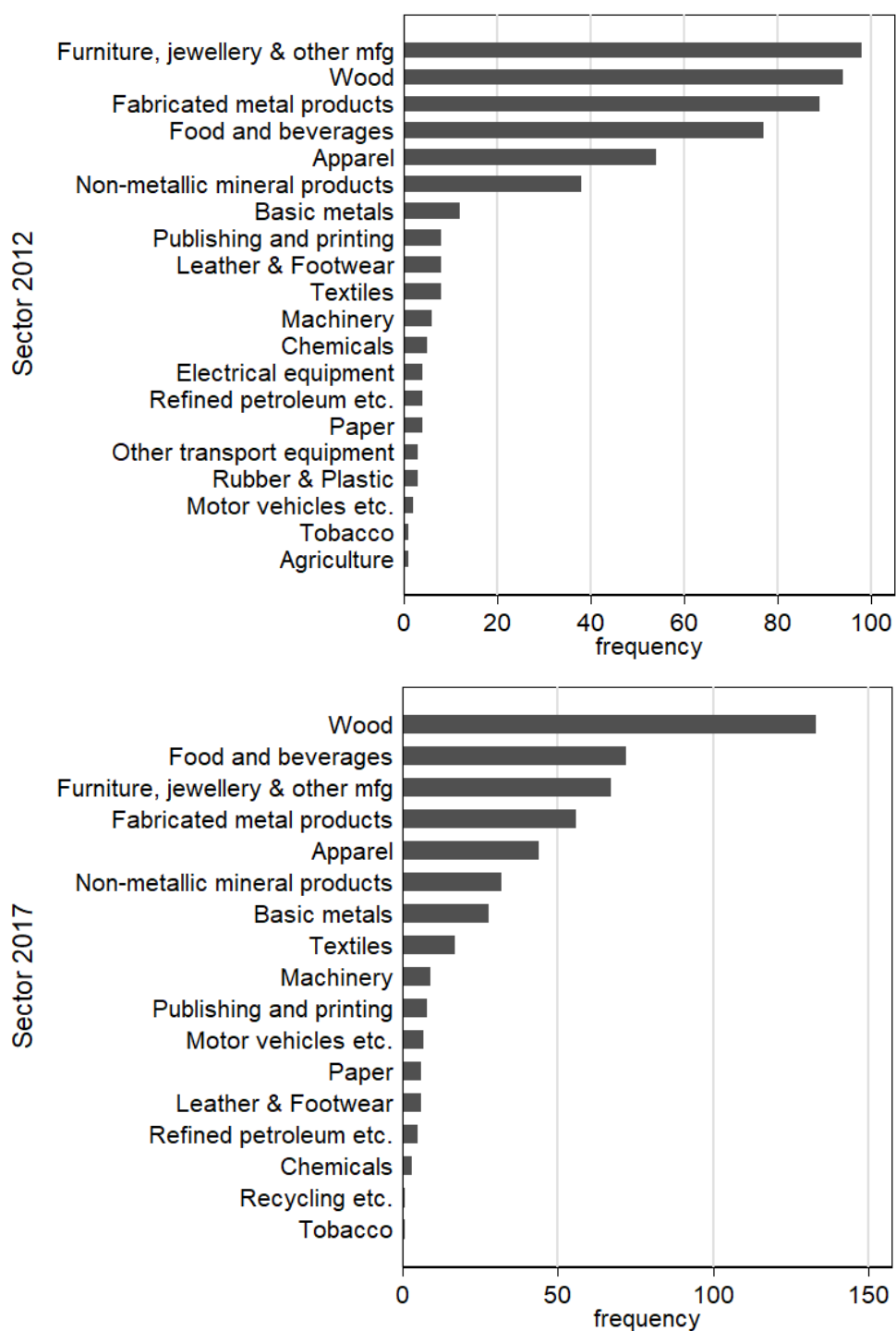
One-third of the micro firms were in the wood sector, followed by furniture (14 per cent), and fabricated metal products (13 per cent). Small firms were mostly located in the food and beverages sectors (29 per cent), wood (18 per cent), and furniture (12 per cent). For medium companies, the food and beverage sector was also the largest, followed by textiles, fabricated metal products, and furniture (see Table 2.3 and Figure 2.3).

Table 2.3: Sector and firm size

	Size category 2017			Total
	Micro	Small	Medium	
Food and beverages	34	28	10	72
Tobacco	0	0	1	1
Textiles	10	2	5	17
Apparel	40	4	0	44
Leather and footwear	6	0	0	6
Wood	114	17	2	133
Paper	1	3	2	6
Publishing and printing	5	3	0	8
Refined petroleum etc.	0	3	2	5
Chemicals	0	2	1	3
Non-metallic mineral	25	5	2	32
Basic metals	20	7	1	28
Fabricated metal products	48	5	3	56
Machinery	7	2	0	9
Motor vehicles etc.	5	2	0	7
Furniture	53	11	3	67
Recycling etc.	0	1	0	1
Not categorized	14	8	3	25
Total	382	103	35	520

Source: Authors' own calculations using IIM 2017 data.

Figure 2.3: Number of firms, by 2-digit sector in 2012 and 2017



Source: Authors' own calculations using IIM 2017 and 2012 data.

Table 2.4 reports the number of interviewed firms by 2-digit sector and size. As in 2012, 91 per cent of the sampled companies were in only six 2-digit sectors: wood, metal, food, furniture, apparel, and non-metallic mineral products.

Table 2.4: Simplified 2-digit sector and size category

	Size category 2017			Total
	Micro	Small	Medium	
Food	34	28	11	73
Textiles	10	2	5	17
Apparel	46	4	0	50
Wood	115	20	4	139
Printing	5	3	0	8
Chemicals	0	2	1	3
Non-metal minerals	25	5	2	32
Metal	68	12	4	84
Machinery	12	4	0	16
Furniture and other	53	11	3	67
Not categorized	14	12	5	31
Total	382	103	35	520

Source: Authors' own calculations using IIM 2017 data.

Table 2.5 represents the 2-digit sectors of sampled firms by province. In Maputo City, most companies were interviewed in the metal, wood, food, and furniture sectors. While the metal sector represented the largest in Maputo City and Tete, the wood sector was the biggest in the provinces of Maputo, Gaza, Sofala, and Manica. The wood sector was notable in the province of Sofala, where it was not only Mozambicans who owned small carpentries, but Chinese companies exported large amounts of timber. In Nampula, the food sector was the largest.

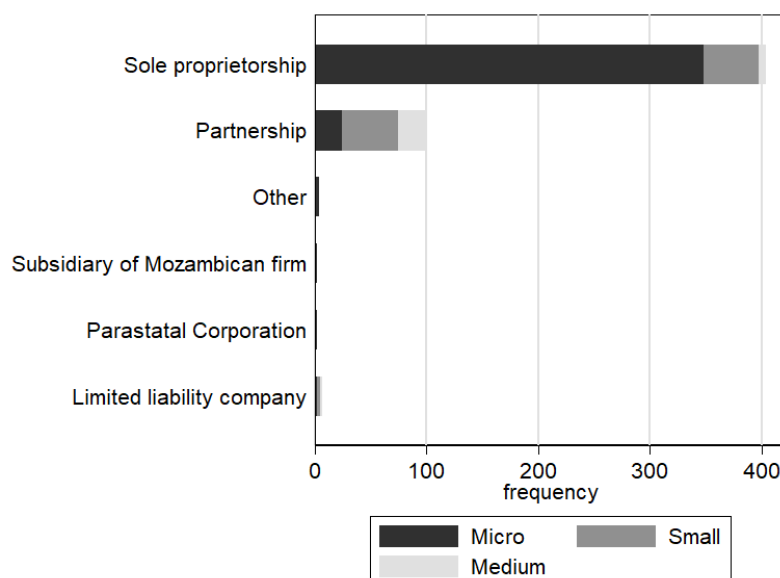
Table 2.5: Simplified 2-digit sector, by province

	Maputo City	Maputo Province	Gaza	Sofala	Manica	Nampula	Tete
Food	19	4	4	11	17	14	4
Textiles	9	2	1	1	0	3	1
Apparel	17	7	8	9	3	2	3
Wood	26	15	12	41	23	11	11
Printing	3	1	0	4	0	0	0
Chemicals	1	1	0	1	0	0	0
Non-metal minerals	7	9	2	8	4	1	1
Metal	28	11	8	11	8	6	12
Machinery	5	2	1	0	7	0	1
Furniture and other	19	11	5	15	7	7	2
Not categorized	7	7	7	0	1	6	3
Total	141	70	48	101	70	50	38

Source: Authors' own calculations using IIM 2017 data.

2.3 Legal status of companies

Figure 2.4: Firms, by ownership and size



Source: Authors' own calculations using IIM 2017 data.

Figure 2.4 and Table 2.6 depict the ownership types of companies by size. Most of the companies sampled, 78 per cent, only had one owner. This was particularly the case for micro companies. Almost 20 per cent of the companies were partnerships and most of the medium-sized enterprises held this type of legal status. Of the small companies in the sample, almost 50 per cent had one owner and the other 50 per cent were partnerships. Only seven of the firms interviewed were limited liability companies (all of which were medium-sized companies), two micro companies were parastatal corporations, two were subsidiaries of Mozambican firms, and four indicated having other legal status.

Table 2.6: Firm ownership

	Micro	Small	Medium	Total
Limited liability company	2	3	2	7
Parastatal corporation	2	0	0	2
Partnership	24	51	26	101
Sole proprietorship	348	49	7	404
Subsidiary of Mozambican firm	2	0	0	2
Other	4	0	0	4
Observations	382	103	35	520

Source: Authors' own calculations using IIM 2017 data.

2.4 Firm exits

In analysing the sample of closed firms, we can observe that in all years between 2013 and 2016 there were around the same number of firm closures, namely around 40 per year (in the region of 5 to 8 per cent). The many closures of firms can probably be related to the Mozambican political crisis; an armed conflict which started at the end of 2013 when the opposition party RENAMO declared an end to the 1992 peace agreement with the ruling party FRELIMO (The Economist 2013). From 2015, the country suffered an economic crisis linked to the political crisis, low commodity prices, and natural disasters (Club of Mozambique 2016b). As shown in Table 2.7, the year 2015 seems to have been one of the most difficult ones with 51 firms closing. The situation did not improve when hidden government debts were discovered in 2016, although it might have improved in 2017. However, the year had not yet finished when the data was being collected, and qualitative interviews undertaken afterwards showed that most companies were having severe difficulties in maintaining their business due to a lack of demand.

Table 2.7: Firm exits, by province and year

	2012	2013	2014	2015	2016	2017	Observations
Maputo City	5	11	16	7	10	6	57
Sofala	2	7	2	10	11	6	38
Nampula	1	5	9	7	6	0	28
Gaza	3	7	3	8	3	1	25
Tete	0	6	4	7	5	2	24
Maputo Province	0	5	6	5	4	3	23
Manica	2	3	4	7	3	2	22
Observations	13	44	44	51	42	20	214

Note: Two of the 216 firms interviewed by the exit questionnaire did not give information relevant for this table.

Source: Authors' own calculations using IIM 2017.

2.5 Report structure and summary

This sub-section gives a short summary of the main findings, which are described in more detail in the following sections. Section 3 on survival and growth shows that the current economic crisis has had strong effects on the Mozambican manufacturing sector. In the 2009–17 period, more than 5,000 jobs were lost in the companies sampled. While overall there was a steep decline in the size of the firms, there were interesting variations across sectors and provinces.

Section 4 shows statistics related to the companies' economic accounts. First, it considers whether firms were keeping accounts. It then gives a detailed overview of the firms in the

sample's key economic indicators in 2015 and 2016, and, finally, calculates productivity both in terms of labour productivity and total factor productivity (TFP).

Section 5 looks at figures relating to the sales and trade of Mozambican manufacturing firms. It answers the questions of who do companies sell to, where do they sell to (including exports), and what do they do to increase sales, and, finally, addresses the relationships between firms and the authorities.

Section 6 analyses access to credit and finance. The data indicates that there are large obstacles for most companies to obtain credit. The micro and small companies are excluded from this market and note that bureaucracy and nepotism mean they do not have access to the lending market, and even if they did they would not be able to pay the high interest rates or present the necessary collateral.

A description of informal companies and payments follows in Section 7. The proportion of formal companies (in possession of a taxpayer number and name registration) has stayed the same, around 53 per cent since 2012. Where companies do not hold a NUIT, they mostly have a simplified operational licence from the municipal council. The registration of a company is a long and difficult bureaucratic process with different authorities being responsible for issuing different documents. Thus, many company owners stated they did not know with which authorities they should formally register their business. Around 50 per cent of the companies sampled also said that informal payments were common in their sector.

Section 8 gives in-depth insights into the manufacturing workforce. In general, all types of workers, such as permanent, temporary, casual, and female, decreased between 2015 and 2017 due to the economic crisis. Except for Maputo Province and City, those companies located in the other provinces sampled, paid an average salary lower than the national minimum wage for the manufacturing sector. A positive development was the increased number of companies paying social security contributions.

The characteristics of the interviewees, owners of Mozambican manufacturing companies, and their representatives are analysed in Section 9. Female ownership of companies seemed to be increasing in the sample. Moreover, almost all company owners went to school and 40 per cent held a secondary degree. Mozambican company owners seemed to be relatively risk averse, with 30 per cent saying they were not ready to take any risk. Medium-sized companies were

more inclined to take risks than micro and small firms. Interviewees exhibited a low level of trust.

Section 10 looks at the firms' participation in social networks such as business associations and social media. Business associations did not seem to play a big role in Mozambique, with only 15 per cent of the companies sampled — mostly medium-sized companies—being members. The use of social media such as Facebook was not a common practice among the firms sampled.

Finally, Section 11 summarizes the most important results in terms of policy relevance.

3 Survival and growth

3.1 Firm growth

Micro, small, and medium enterprises have considerable potential to push a country's economy forward and reduce poverty by growing and creating jobs. However, instead of growing over time, most of the sampled Mozambican companies had shrunk in size. Comparing the average and median size of firms (number of workers) between 2011 and 2017, both micro and small enterprises had decreased (see Table 3.1). Small companies had shrunk the most from a median size of 25 workers to 20 workers, and the median number of workers for micro companies had decreased from four to three over a period of six years. This is most likely a result of the current economic crisis in Mozambique. In qualitative interviews, most companies indicated they were going through difficult times due to very low demand in 2016 and 2017. However, medium-sized firms seem to have gone through better times despite the economic crisis, as they had increased from a median of 88 to 92 workers.

Looking at the individual provinces, Nampula was the only province where the average number of workers had increased from 27 to almost 30.

Table 3.1: Mean and median firm size, by firm size and province

	Mean		Median		Observations
	2017	2011	2017	2011	
Micro	3.1	5.8	3	4	382
Small	21.4	31.4	20	25	103
Medium	104.5	97.3	92	88	34
Maputo City	17.5	21.1	4	7	141
Maputo Province	17.1	22.4	5	8	70
Gaza	8.6	13.6	2	4	48
Sofala	7.5	8.8	3	4	101
Manica	9.8	13.0	4	5	70
Nampula	29.6	27.0	6	6	51
Tete	11.9	16.0	2	7	38
Total	14	20	4	6	519

Source: Authors' own calculations using IIM 2017 data.

A total of 5,084 jobs had been lost in the manufacturing companies that were found and were operating in both 2011 and 2017, a number that is described in more detail in Section 8. While the firms interviewed employed 13,200 workers in 2009, this number had decreased to 11,300 in 2011 and had shrunk further in the following years. In the 2015–17 period, the loss of jobs

was particularly heavy, with almost 2,500 fewer employees in 2017 than two years previously. The companies that were found and had closed between 2011 and 2017 employed 4,376 people.

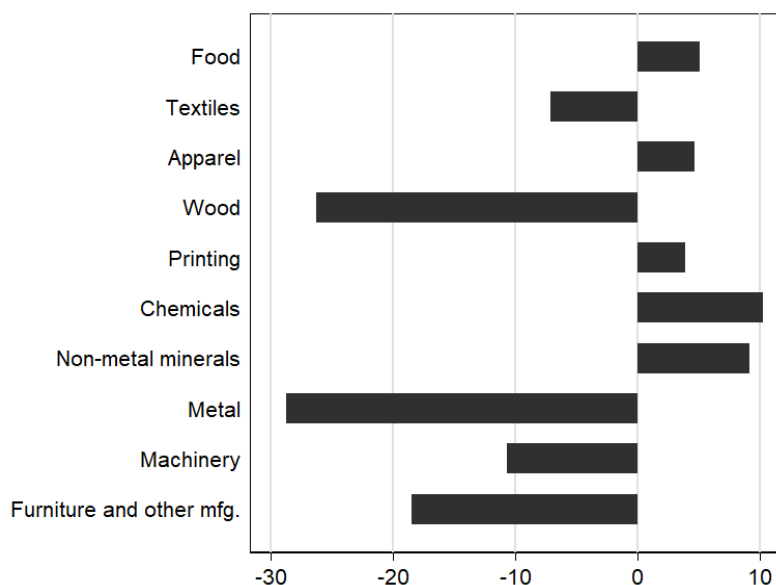
The first column of Table 3.2 shows the overall growth (or decrease) in firm sizes between 2011 and 2017, broken down by size category in 2011 as well as by provinces. In column two the numbers are transformed into average annual growth rates, and column three shows the growth rate of a median company within the category. As can be seen, most categories experienced negative growth over the period, with the notable exception of firms in Sofala province. However, this seems to have been driven by outliers as the median growth in the province is negative. Gaza, Maputo Province, and Tete were hit with average reductions of 23 to 35 per cent. As described earlier, many of those categorized as medium-sized in 2011 had reduced in size and belonged to the small or micro categories in 2017.

Table 3.2: Firm growth in workforce, by size and province

	Average growth 2011–17	Average annual growth	Median growth	Observations
Micro 2011	-7%	-6%	-33%	352
Small 2011	-7%	-7%	-30%	123
Medium 2011	-32%	-8%	-31%	44
Maputo City	-9%	-5%	-33%	141
Maputo Province	-24%	-8%	-33%	70
Gaza	-35%	-12%	-60%	48
Sofala	17%	-4%	-20%	101
Manica	-8%	-5%	-25%	70
Nampula	-11%	-5%	-25%	49
Tete	-23%	-13%	-67%	38
Total	-10%	-6%	-33%	520

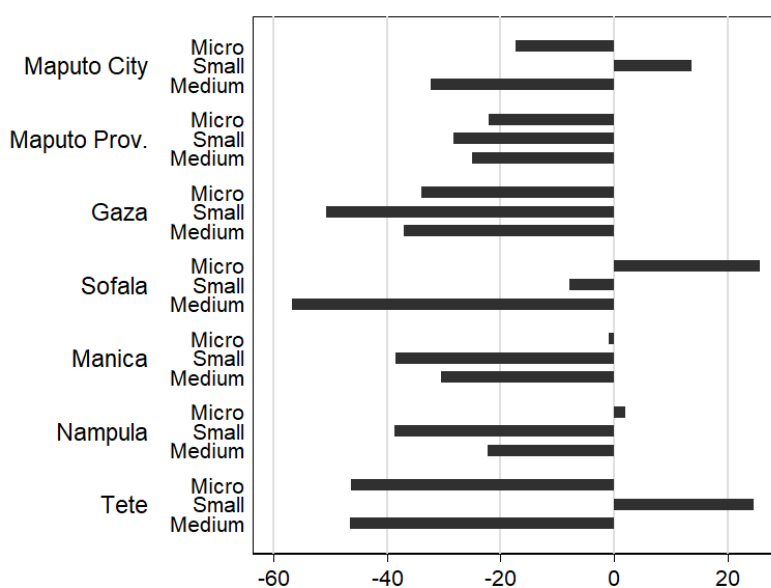
Source: Authors' own calculations using IIM 2017 data.

The picture is more varied when looking at changes in firm size by sector in Figure 3.1. Generally, firms in traditional manufacturing sectors such as wood, metal, and furniture all declined markedly, while firms in other sectors such as food, chemicals, and non-metal minerals experienced an increase.

Figure 3.1: Firm growth, by sector

Source: Authors' own calculations using IIM 2017 data.

Looking at firm sizes across provinces (Figure 3.2), the only categories that increased in size were small companies in Maputo City, micro companies in Sofala and Nampula, and small companies in Tete. Independently of size and province, all other categories decreased. Medium firms in Sofala and small companies in Gaza decreased the most by between 50 and 55 per cent.

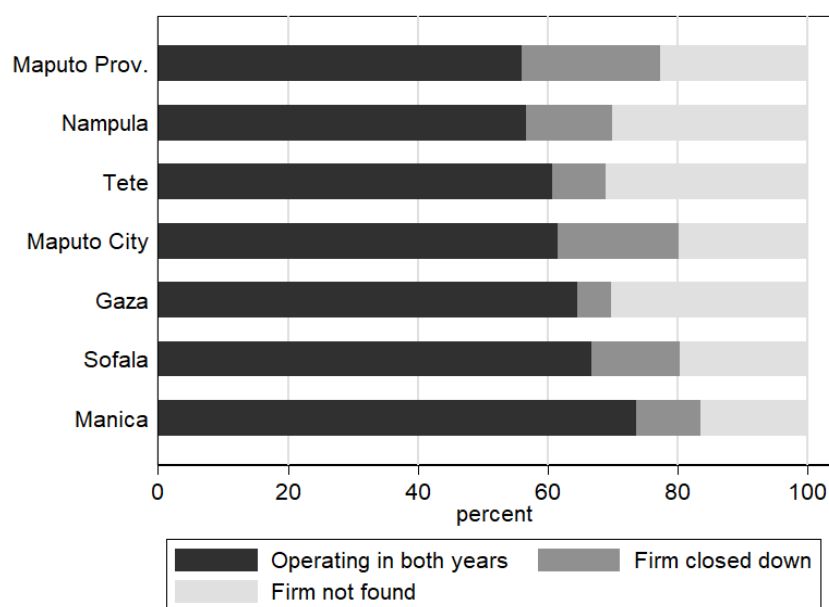
Figure 3.2: Firm growth, by province and size

Source: Authors' own calculations using IIM 2017 data.

3.2 Firm exits

Regarding firm closures, Figure 3.3 reports that in all provinces at least 15 per cent of the companies which had been interviewed in 2011 were not findable. Most of these companies had closed in Maputo Province and Maputo City, while the fewest number of firms to have stopped operating were in Gaza. Around 70 per cent of the enterprises in Sofala and Manica were traced, whereas this was only the case for 55 per cent in Nampula and Maputo Province. It should be noted that the category ‘firm not found’ includes companies that had closed and whose owners had disappeared, as well as firms that may never have existed and those that refused to participate in the survey.

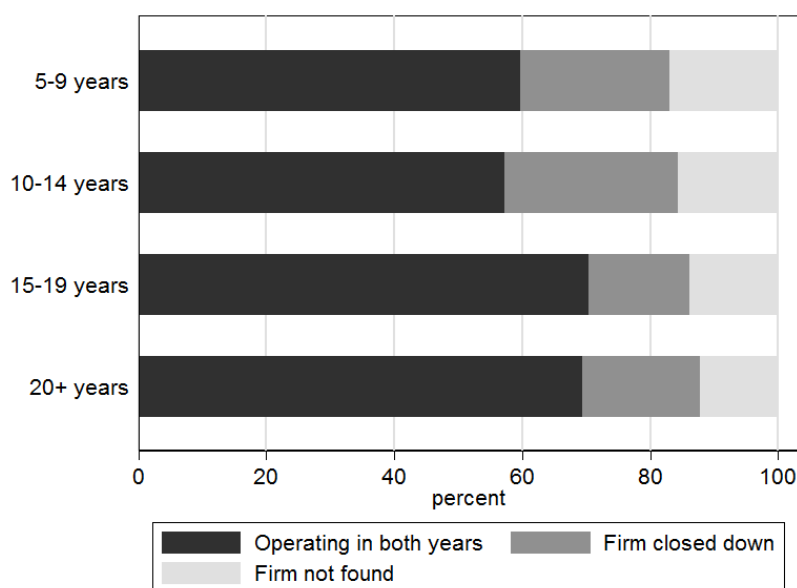
Figure 3.3: Firm continuation, by province



Source: Authors' own calculations using IIM 2017 data.

The firms that had closed did not seem to be of a specific age but included slightly more young companies (5–14 years) than old (15–>20), as can be seen in Figure 3.4.

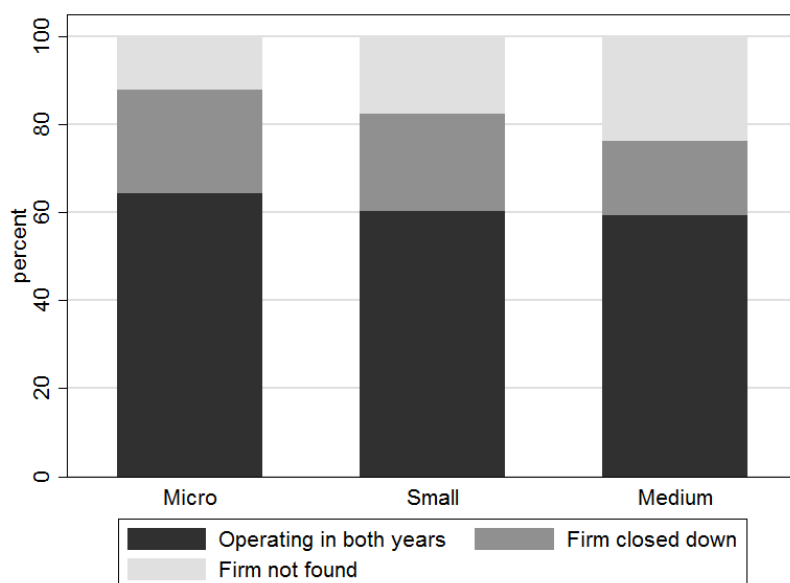
Figure 3.4: Firm continuation, by 2012 age, per cent



Source: Authors' own calculations using IIM 2017 data.

The number of firms that had closed increased slightly by size as demonstrated in Figure 3.5. More than 20 per cent of the medium companies interviewed in 2011 had closed since that year, while around 19 per cent of small and 10 per cent of micro firms had shut down. The reason why there had been fewer closures of micro firms might have been that owners of such companies often do not have any other employment opportunities besides their own company. Thus, they keep operating even if their business is not going well. Many may apply informal strategies, such as paying their employees less than the minimum wage and not paying taxes, while it is more difficult for medium companies to make use of these practices due to their size and visibility.

Figure 3.5: Firm continuation, by size, per cent



Source: Authors' own calculations using IIM 2017 data.

As the descriptive statistics suggest, it is not obvious why some companies persisted while others closed during the interval between the surveys. One way to analyse the matter further is to run a probit model on firm exits using characteristics from the 2012 round as independent variables. A simple model shown in Table 3.3 suggests that the firm's size, age, or formal status were not significant factors when trying to explain closure or survival. The model is based on observations that were found in both years. Including the firms that were not findable does not alter the results.

Table 3.3: Determinants of firm closure

	(1)	(2)	(3)
Firm size 2011	-0.001 (.001)	-0.002 (0.002)	-0.002 (0.002)
Firm age 2011		-0.010* (0.005)	-0.010 (0.005)
Formal in 2012			0.009 (0.151)
Pseudo-R²	0.001	0.007	0.007
Observations	710	560	560

Note: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. Probit. Dependent variable: Firm closure = 1 if the firm closed operations between 2012 and 2017.

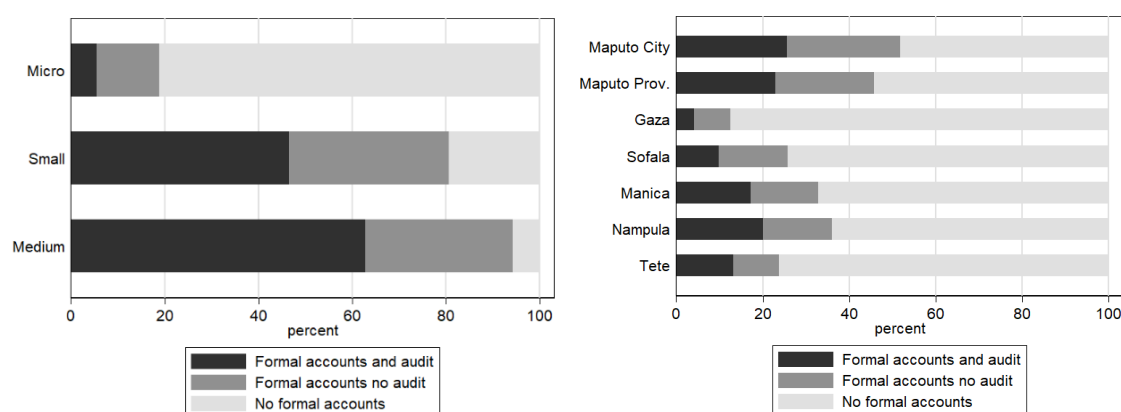
Source: Authors' own calculations using IIM 2017 data.

4 Economic accounts

4.1 Accountancy

The activity of keeping formal accounts largely depends on firm size, as shown in the left-hand panel of Figure 4.1. Whereas around 95 per cent of medium-sized firms kept formal accounts (and 63 per cent used external auditors), less than 20 per cent of micro companies kept formal accounts. Looking at the provincial variation reveals that around half of the companies located in Maputo City maintained formal accounts, closely followed by Maputo Province. Gaza was the province with the lowest share of companies keeping formal accounts, at around 12 per cent. This can be explained partly by the fact that a large share of the firms sampled in Gaza were micro.

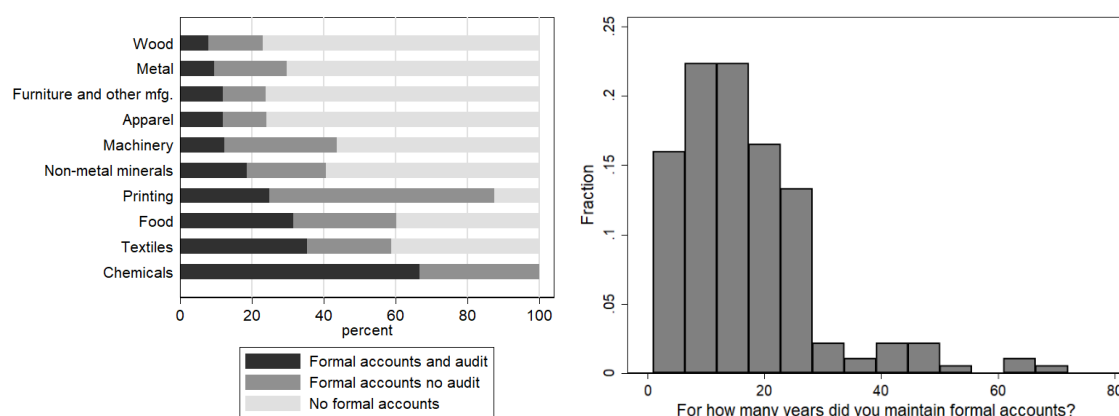
Figure 4.1: Economic accounts, by size and province



Source: Authors' own calculations using IIM 2017 data.

In observing individual sectors (left-hand panel of Figure 4.2), we find that firms operating in the more traditional sectors, such as wood, metal, furniture, and apparel, are generally much less likely to keep formal accounts than firms producing more complicated products within the sectors of chemicals, textiles, food, and prints.

On average, the 188 companies in the sample that kept formal accounts had been doing so for 17 years with 14 years being the median. The longest record of formal accounts went back 75 years. A histogram of the age-distribution is shown in the right-hand panel of Figure 4.2.

Figure 4.2: Formal accounts, by sector and over time

Source: Authors' own calculations using IIM 2017 data.

In 2017, 91 firms kept formal accounts and used external auditors. Around the same number kept formal accounts but did not use external auditors, which represents a very slight increase of four firms since 2012. Of the firms who reported keeping formal accounts in 2016, 49 had not done so in 2012, whereas 45 firms had gone in the other direction and had stopped keeping formal accounts in the intermediate period (Table 4.1).

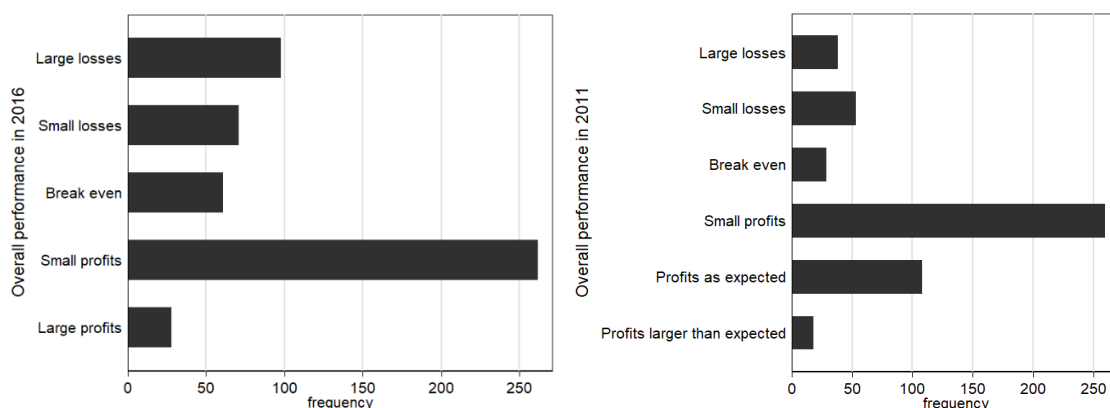
Table 4.1: Do you maintain formal economic accounts?

		2012			Total
		Yes (external audit)	Yes (no external audit)	No	
2017	Yes (external audit)	44	30	16	90
	Yes (no external audit)	28	35	33	96
	No	19	26	283	328
	Total	91	91	332	514

Source: Authors' own calculations using IIM 2017 data.

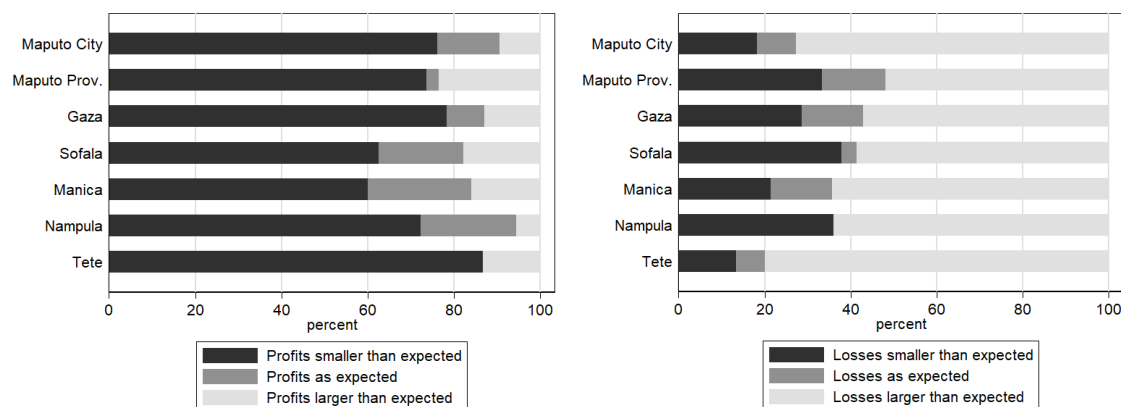
4.2 Profits, losses, and perceptions

As an indirect way of measuring the economic performance of the manufacturing sector, we asked the companies to assess their own performance in 2016 on a scale from large losses to large profits. The same was done in the previous survey round, although profits were then split into small profits, profits as expected, and profits larger than expected as seen in Figure 4.3. Overall, a larger share of companies reported losses in 2016 than in 2011. Almost 100 (20 per cent) companies stated that they had experienced large losses and around 70 companies had small losses. Fewer companies reported losses in 2011, and more companies reported profits (386 against 290 in 2016).

Figure 4.3: Firm performance in 2016 and 2011

Source: Authors' own calculations using IIM 2017 data.

Figure 4.4 shows the distribution of profits and losses in 2017 compared to expectations by province. In both cases the graphs only include companies that reported profits ($n=290$) and losses ($n=169$) respectively. The general picture is that profits were smaller than expected and losses were larger than expected.

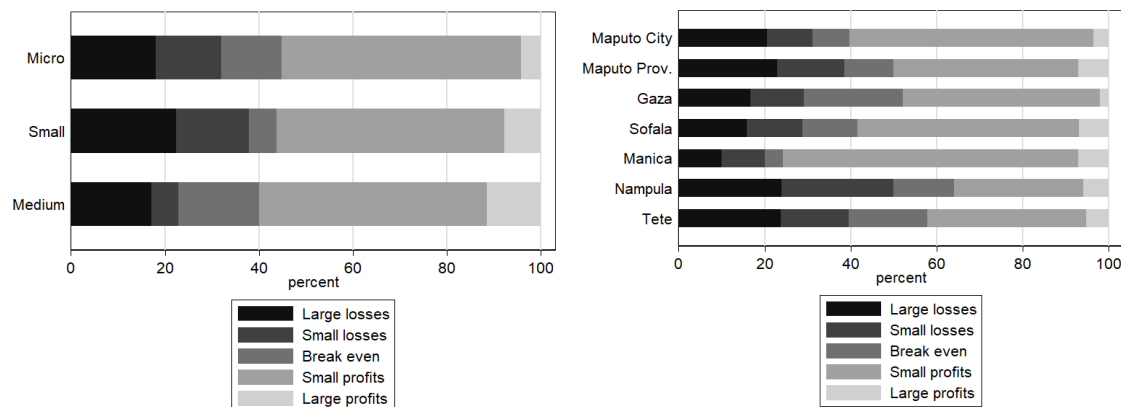
Figure 4.4: Profits (for those reporting profits) or losses (for those reporting losses) compared to expectations by province

Source: Authors' own calculations using IIM 2017 data.

Of the seven provinces represented in the sample, Tete and Nampula seem to have been the worst affected by the negative economic climate, with only around 40 per cent of firms reporting profits of any kind. Tete also had the highest occurrence of profits being smaller than expected and losses larger than expected. Firms in Manica (75 per cent of firms), Maputo City (60 per cent), and Sofala (58 per cent) were the most likely to report profits. Micro companies were the least likely to experience large profits and medium firms the most likely. However, the

differences in perceived performance between the three size groups were not substantial (Figure 4.5).

Figure 4.5: Firm performance, by size and province



Source: Authors' own calculations using IIM 2017 data.

Companies without formal accounts were also asked about their annual profits and losses. Many did not know the value of the products they had sold over a year but managed to estimate this number when breaking it down into months. For those who did not know the monthly value either, the enumerators asked how many products had been sold per week and how much these were worth, and then assisted the company owners to gross up the monthly and annual values.

4.3 Main economic indicators

IIM 2017 contains detailed information on key economic indicators for all 523 companies registered in the database. For the firms that did not maintain formal economic accounts, the figures are estimates based on support questions directed by the enumerators to firm owners or managers. In this regard, it is worth highlighting that all enumerators were recent graduates, or final year students, of accountancy, management, or economics, and were selected based on their ability to correctly specify economic accounts data. In comparison, very few companies in the sample (around 30) had registered reliable data for 2012, so the main Tables 4.2 and 4.3 will focus on numbers for 2015 and 2016. For previous years, we refer to the IIM 2012 report.

To be able to compare values across time and space, the numbers reported are deflated both temporally and spatially using the most recent inflation data from Mozambique's Statistics Bureau (Instituto Nacional de Estatística, INE) as well as the Inquérito ao Orçamento Familiar (IOF) 2007/08. The figures are deflated using an index that uses Maputo City in 2010 as point of

reference. The spatial weights are constructed from the IOF survey, on top of which the temporal inflation has been calculated since 2010 by INE.

Table 4.2 includes all observations in the database except for the top and bottom 1 per cent of each variable, since including these could lead to outlier bias.

Overall, it can be concluded that 2015 was a crisis year for the small and medium-sized companies in the Mozambican manufacturing sector with a recovery happening in 2016, whereas for the micro-sized companies, 2016 seems to have been worse than 2015 in terms of value added, gross profit, and total equity.

Averaging over provinces, some regions saw a large increase in activity from 2015 to 2016: Maputo City, Maputo Province, and Sofala registered overall large growth in value added and profits. The remaining provinces experienced small decreases. Similarly, a few sectors on average had good growth rates while most stagnated. The sectors with the highest growth in value added were the food and metal sectors. The largest decline took place within the non-metal minerals sector.

Table 4.2: Main economic indicators, no outliers, MT millions (Maputo 2010 = 100)

	Value added		Gross profit		Total equity	
	2015	2016	2015	2016	2015	2016
Micro 2017	0.53	0.39	0.38	0.22	1.30	1.46
Small 2017	4.18	8.19	2.41	5.19	12.9	14.6
Medium 2017	12.5	36.0	6.19	29.4	16.2	16.9
Maputo City	2.67	6.30	1.70	4.56	5.74	6.45
Maputo Province	2.68	7.17	1.14	4.90	9.69	8.02
Gaza	1.52	1.38	0.81	1.14	1.38	3.15
Sofala	0.81	2.85	0.59	2.47	0.13	0.39
Manica	1.12	1.22	0.56	0.37	1.68	1.91
Nampula	1.79	1.56	1.36	1.18	5.05	7.60
Tete	1.08	1.10	0.37	0.93	6.72	7.52
Food	3.68	7.22	2.13	5.84	4.45	7.98
Textiles	3.64	4.14	2.42	3.04	2.94	3.32
Apparel	0.28	0.25	0.04	0.02	0.29	3.77
Wood	1.13	1.24	0.74	0.76	1.73	1.89
Printing	0.98	1.09	0.15	0.34	2.40	3.05
Chemicals	9.00	10.9	5.66	6.61	2.61	6.30
Non-metal minerals	3.05	2.91	2.01	1.21	4.17	5.19
Metal	1.23	5.48	0.70	4.62	2.51	2.46
Machinery	1.38	2.10	0.43	0.86	2.46	2.67
Furniture and other	0.95	1.73	0.23	0.59	1.49	1.07
Total	1.66	3.07	0.95	2.18	2.29	2.90

Source: Authors' own calculations using IIM 2017 data.

It is interesting to consider whether the changes from 2015 to 2016 led to changes in the remuneration of labour and capital. A way to do this is to divide wages and gross profits by value added for the different years. As can be seen from Table 4.3, wages seem to have increased compared to value added while the gross profits have declined or stayed unchanged.

Table 4.3: Remuneration of labour and capital

	Wages/value added		Gross profit/value added	
	2015	2016	2015	2016
Micro 2017	0.94	1.64	0.57	0.31
Small 2017	0.88	1.14	0.52	0.39
Medium 2017	0.76	1.01	0.41	0.41
Total	0.92	1.50	0.55	0.33

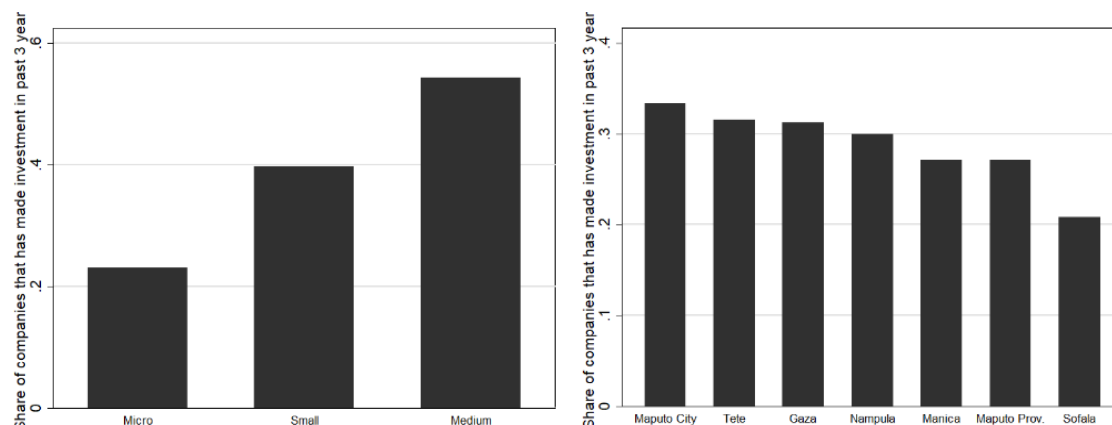
Source: Authors' own calculations using IIM 2017 data.

4.4 Investments

The propensity to invest depends on the size of the company. Larger companies are more likely to invest than smaller ones as shown in Figure 4.6. Interestingly, the share of firms that made any investment during the previous three years is very stable across provinces. However, Sofala

stands out with only around 20 having made investments compared to around 30 per cent in most other provinces.

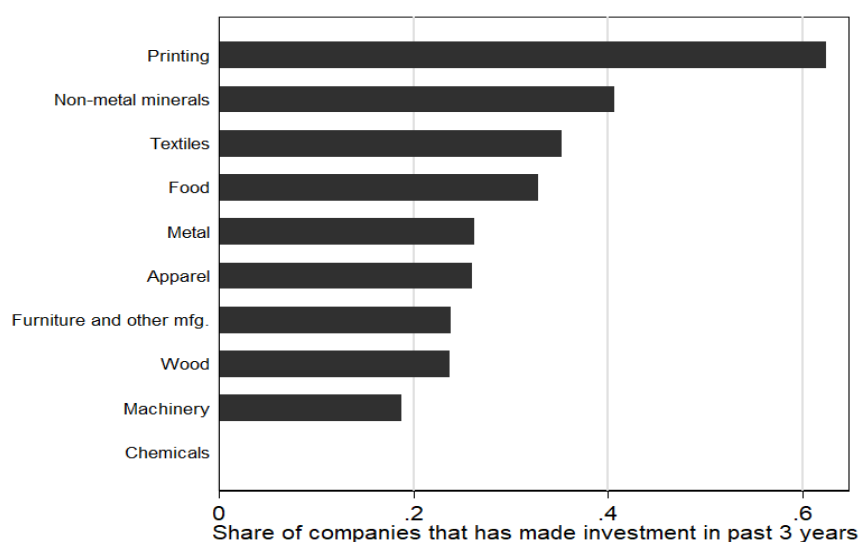
Figure 4.6: Investments, by size and province



Source: Authors' own calculations using IIM 2017 data.

The printing sector is the sector with the largest share of companies having made investments during the previous three years (62 per cent). We find the more traditional sectors such as apparel, furniture, and wood at the lower end of the distribution, whereas machinery and chemicals (0) are the sectors with fewer investments (Figure 4.7).

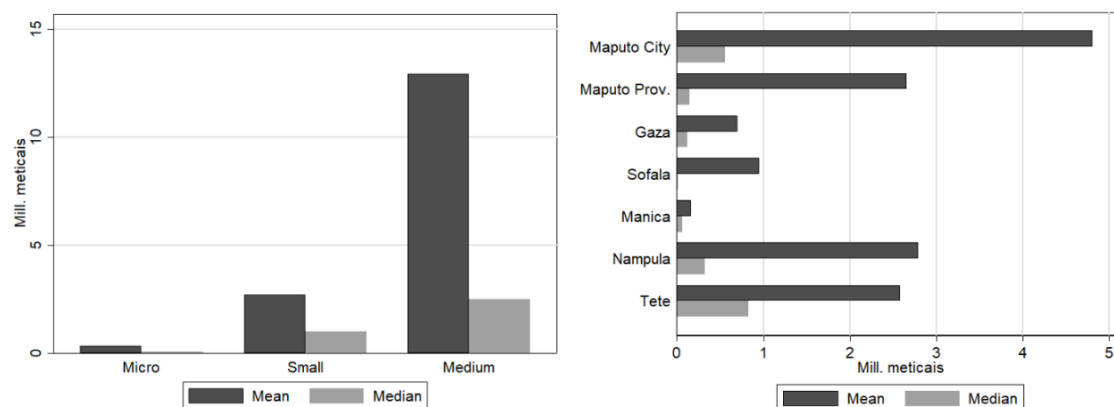
Figure 4.7: Investments, by sector



Source: Authors' own calculations using IIM 2017 data.

When looking at the extensive margin of investments, namely the amount invested during the previous three years, a similar pattern arises. Larger companies were more likely to invest, and they invested disproportionately more than smaller companies. When looking at the provincial distribution, the amounts vary a lot more than the likelihood of making investments. This could of course in part reflect the amount of larger companies within the different provinces.

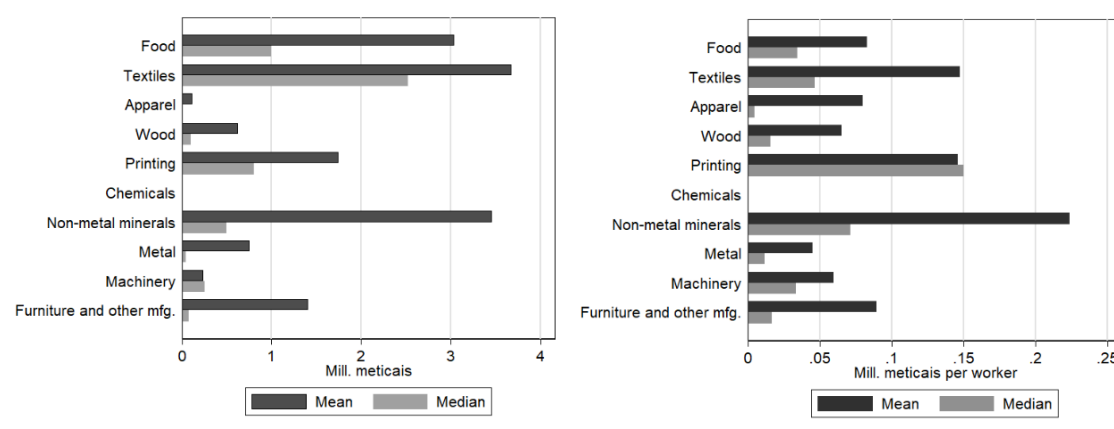
Figure 4.8: Investment value, by size and province, mean and median



Source: Authors' own calculations using IIM 2017 data.

The textile sector seems to invest the most both in terms of means and median investment values, followed by food and non-metal minerals. The lowest amounts invested are found among firms in the apparel, wood, chemicals, metal, and machinery sectors, as shown in the left-hand panel of Figure 4.9. The right-hand panel shows the investment amounts per full-time worker, and a similar, yet moderated, picture emerges.

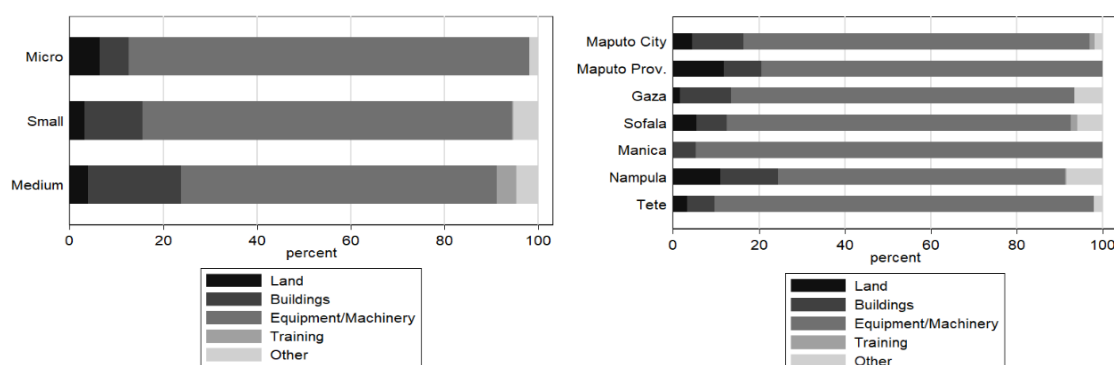
Figure 4.9: Investment value, by sector, mean, and median



Source: Authors' own calculations using IIM 2017 data.

Of the investments reported during the previous three years, more than 80 per cent went to equipment and machinery, with buildings and land in second and third place. Investments in training were very limited and almost exclusive for medium-sized companies. Small and medium-sized companies generally invested more in buildings and other types of investments whereas micro firms spent more than 85 per cent on equipment and machinery. Across provinces, the investment pattern is quite similar. However, it might be of interest that in Gaza and Manica, almost no companies invested in land compared to around 10 per cent in Nampula and Maputo Province (Figure 4.10). This could reflect that the towns are more rural, that the sample in these provinces contained fewer land-demanding companies, or that they chose only to (eventually) improve their facilities rather than expand them.

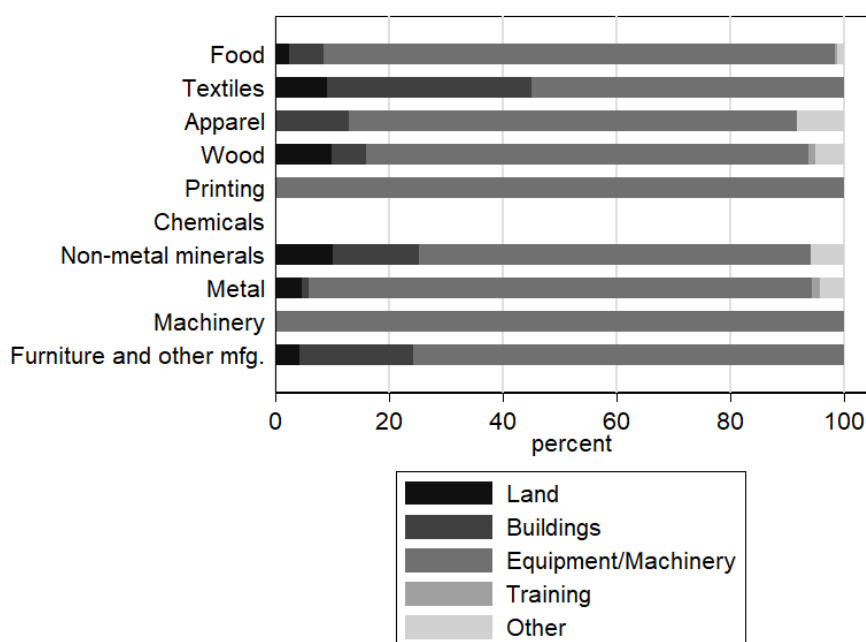
Figure 4.10: Types of investments, by size and province



Source: Authors' own calculations using IIM 2017 data.

Some differences arise in terms of investment type by sector (Figure 4.11). For instance, the firms belonging to the printing, chemicals, and machinery sectors only invested in equipment, whereas almost half the investing companies in the textiles sector reported investments in land and buildings, which could be an indicator for expansion.

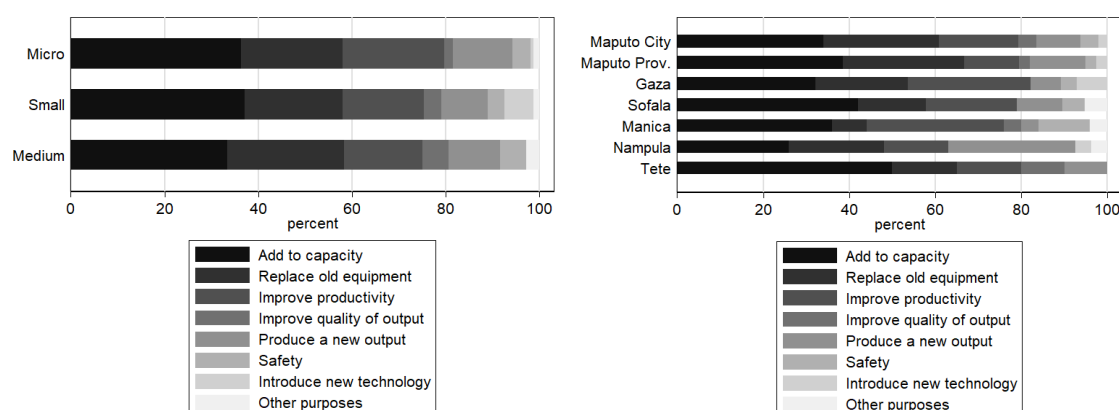
Figure 4.11: Types of investments, by sector



Source: Authors' own calculations using IIM 2017 data.

When companies were asked why they invested, they could choose between the following categories: add to capacity, replace old equipment, improve productivity, improve quality of output, safety, introduce new technology, and 'other'. The respondents could choose more than one answer. When compiled, the distribution of answers turned out to be strikingly similar across size categories. Between 30 and 35 per cent of the selected options were 'add to capacity', 20 per cent 'replace old equipment', 15–20 per cent 'improve productivity', 10–15 per cent 'produce new product', and the remaining 10 per cent were divided between the other categories. Interestingly, no medium-sized company intended to introduce a new technology, and micro-sized firms were, in general, more likely to state that they wanted to improve productivity.

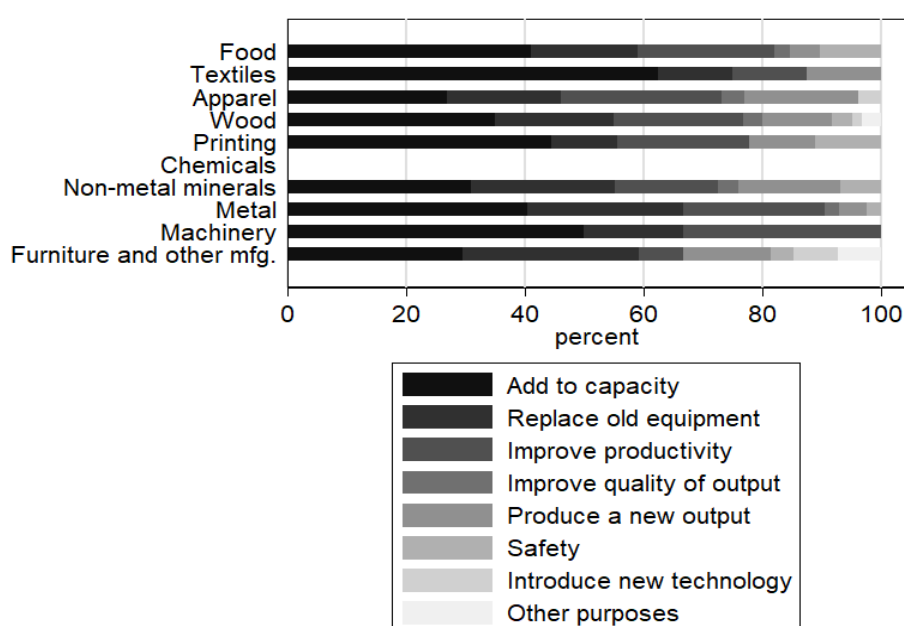
Figure 4.12: Investment purpose, by size and province



Source: Authors' own calculations using IIM 2017 data.

No clear patterns arise when looking at investment purposes across provinces or sectors (Figures 4.12 and 4.13). However, firms in Gaza and Manica seem more minded to increase productivity than in most other provinces; around 30 per cent of the answers given in these two provinces selected that option.

Figure 4.13: Investment purpose, by sector

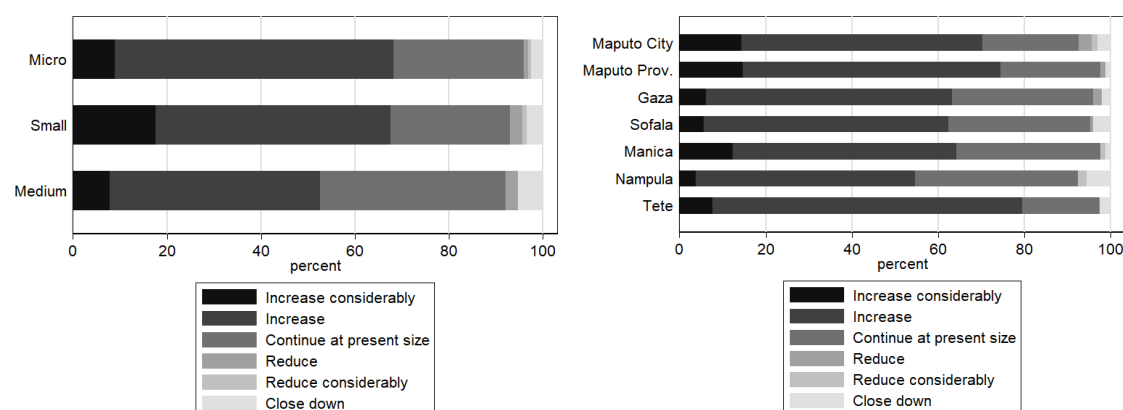


Source: Authors' own calculations using IIM 2017 data.

When asked about their plans, firms could indicate whether they planned to increase considerably, increase, continue at present size, reduce, reduce considerably, or close. More than half of the firms in the sample planned to increase in size in the future, and this held for all

size categories and across all provinces. It seems to be medium-sized company owners that were most pessimistic about the future developments of their enterprises. On the other hand, small companies were more optimistic about the possibilities for considerably increasing their operations, with around 17 per cent of companies choosing this option. Looking at the distribution in the right-hand panel of Figure 4.14, firms located in Tete were more likely to plan an expansion (almost 80 per cent) whereas those in Nampula were least likely (55 per cent). This could be caused by the fact that Tete recently experienced a large boost to the economy due to the mining industry, and reports in 2017 were already suggesting a recouping of the economic dynamic in the sector.

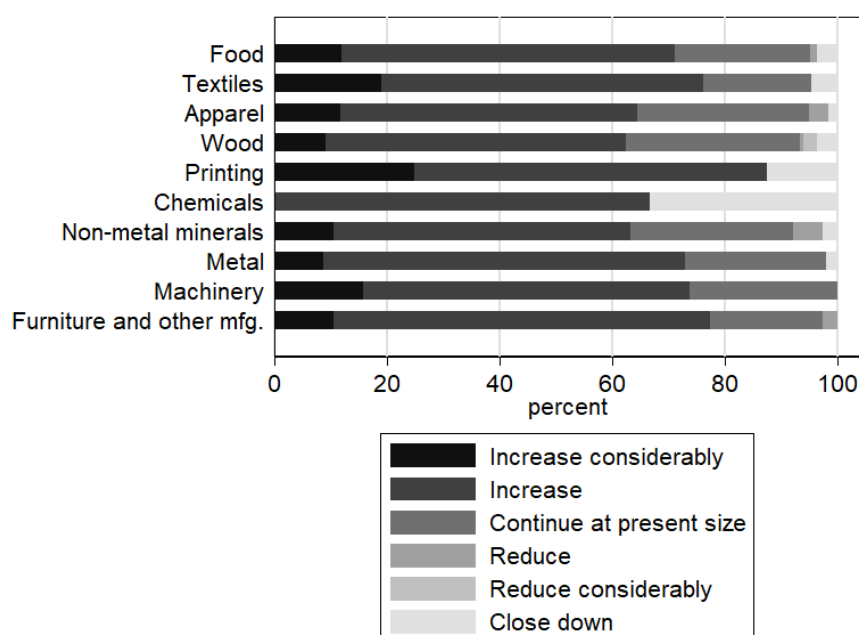
Figure 4.14: Investment plans, by size and province



Source: Authors' own calculations using IIM 2017 data.

As in the graphs showing actual investments, the printing, textile, and machinery sectors are those where most firms planned to increase their size considerably (Figure 4.15). More traditional sectors such as wood and apparel were less likely to plan an increase in size, although still more than half do.

Figure 4.15: Investment plans, by sector



Source: Authors' own calculations using IIM 2017 data.

4.5 Input and suppliers

Several questions in the survey relate to the supply chain. Nine of those are considered in Table 4.4 in terms of the share of companies within each category (rows) answering positively (confirming) to the question.

The first questions ask whether the quantity and quality of inputs are satisfactory. Generally, 79 and 87 per cent of firms said 'yes' to this respectively. However, in Tete province, quantity often seems to be an issue (63 per cent), and quality seems lowest in Sofala (79 per cent). Across sectors, quantity is often lacking in the wood and chemical sectors (67 per cent), and quality is often lacking in the apparel (78 per cent) and wood (81 per cent) sectors. A relatively high number of companies (53 per cent) reported that they sometimes run out of input stock. This is most likely to happen in Sofala (63 per cent) and least likely in Gaza (35 per cent). This coupled with the information about the quality of input suggests that there may be some serious input issues in Sofala. Maputo and Matola lie in the middle of the distribution with 50–56 per cent.

The share of companies buying inputs via e-trading is 5 per cent for micro firms, 13 per cent for small firms, and 35 per cent for medium-sized companies.

Some sectors are more likely to run out of input stock than others. For instance, in the wood, printing, and non-metal minerals sectors, around two-thirds of firms advised that they sometimes run out of stock.

Table 4.4: Input and suppliers

	Input quantity OK	Input quality OK	Negotiates price with supplier	Compares price and quality	Ever runs out of input stock	Easy to find alternative supplier	Takes account of supplier conduct	Buys input via e- trading	Buys input on credit
Micro 2017	78%	85%	84%	87%	53%	80%	80%	5%	19%
Small 2017	81%	91%	77%	83%	50%	70%	89%	13%	47%
Medium 2017	83%	97%	94%	94%	54%	80%	91%	34%	40%
Maputo City	84%	90%	82%	87%	50%	81%	84%	7%	33%
Maputo Province	79%	87%	84%	90%	56%	81%	84%	11%	37%
Gaza	85%	92%	88%	92%	35%	75%	81%	6%	29%
Sofala	73%	79%	92%	92%	63%	84%	81%	7%	19%
Manica	74%	83%	83%	77%	54%	79%	79%	9%	10%
Nampula	88%	94%	70%	74%	46%	68%	86%	14%	26%
Tete	63%	87%	79%	95%	55%	55%	84%	11%	26%
Food	82%	90%	71%	78%	51%	90%	86%	5%	23%
Textiles	94%	94%	71%	59%	24%	76%	94%	12%	47%
Apparel	80%	78%	88%	96%	48%	86%	78%	0%	10%
Wood	67%	81%	90%	91%	63%	71%	76%	8%	21%
Printing	100%	88%	88%	63%	63%	75%	100%	25%	50%
Chemicals	67%	100%	100%	100%	33%	100%	100%	67%	67%
Non-metal minerals	78%	91%	91%	91%	66%	88%	91%	13%	31%
Metal	83%	94%	80%	86%	49%	79%	77%	4%	23%
Machinery	75%	94%	81%	81%	31%	56%	69%	19%	31%
Furniture and other	82%	82%	79%	88%	54%	81%	90%	4%	19%
Total	79%	87%	83%	87%	53%	78%	83%	9%	26%

Source: Authors' own calculations using IIM 2017 data.

4.6 Productivity

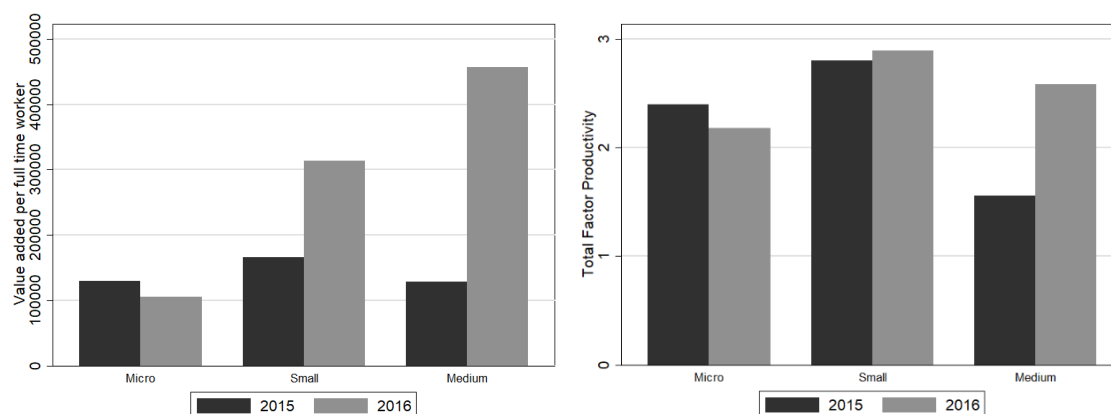
In this section, we consider two different definitions of productivity: value added per full-time worker and total factor productivity (TFP). Both measures are calculated using the temporally and spatially deflated economic accounts where outliers have been removed. TFP is determined as the residuals of a regression with (the log of) value added as left-hand side variable and (log) assets and firm size on the right-hand side in lieu of capital and labour.

With reference to Figure 4.16, the large gains occurring among medium-sized companies between 2015 and 2016 can largely be attributed to growth in productivity. For this group of companies, productivity, as measured by value added per full-time worker, more than doubled

and increased by around 75% when measured as TFP. Also, small companies registered an increase in productivity, whereas the reverse is true for micro-sized companies.

Larger companies generally do not seem to be much more productive than smaller ones, although the tendency appears to be towards labour productivity in 2016.

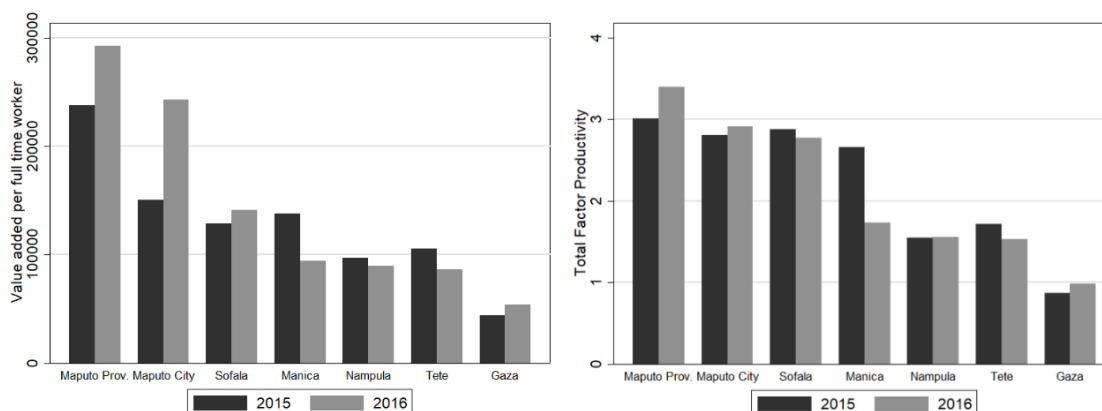
Figure 4.16: Productivity, by size in 2015 and 2016



Note: Labour productivity is defined as value added divided by firm size. TFP is defined as the residual in a production function estimation.

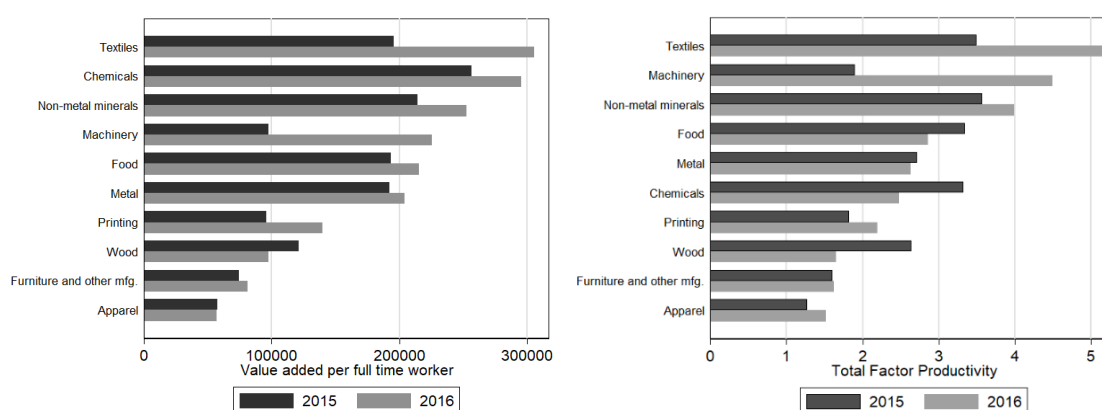
Source: Authors' own calculations using IIM 2017 data.

Looking across provinces in Figure 4.17, large differences appear in productivity. Workers in Maputo Province each add almost MT300,000 of value per year (in constant 2010 Maputo prices) compared to only around MT100,000 in Tete and Nampula, and just under MT50,000 in the province of Gaza. Also, worth noting is that while productivity (both in terms of labour productivity and TFP) has increased in Maputo and Maputo Province, it has stagnated or decreased in all other provinces (Manica experiencing the largest decrease). This can partly be explained by the different sectorial composition of manufacturing in each province.

Figure 4.17: Productivity, by province

Source: Authors' own calculations using IIM 2017 data.

The most productive sectors include textiles, chemicals, and non-metal minerals, which are more prevalent in the provinces of Maputo City, Maputo Province, and Sofala. Firms producing machinery saw a large increase from 2015 to 2016 and are now among the most productive according to both definitions of productivity. At the other end of the scale, we find more traditional sectors such as apparel, furniture, wood, and (as the odd one out) printing. The largest decline in productivity between the two years occurred among woodworkers (Figure 4.18).

Figure 4.18: Productivity, by sector

Source: Authors' own calculations using IIM 2017 data.

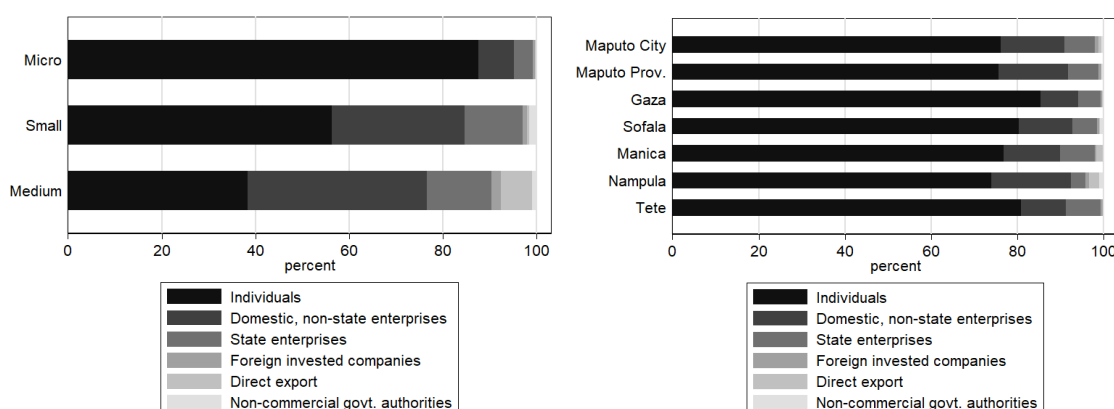
5 Sales and trade

This section investigates where, what, and to whom companies sell, whether they export, and how they make decisions around sales. Some statistics on taxes and relations with authorities are also presented.

5.1 Sales

Figure 5.1 shows to whom companies sell their products. Micro-sized companies overwhelmingly sell to individuals whereas this customer group constitutes only around 50 per cent for small companies and less than 40 per cent for medium-sized enterprises. For the latter, around the same percentage goes to domestic, non-state enterprises while sales to state enterprises is the third largest category. Only medium-sized companies report selling products via direct export. Looking across provinces, there is not much variation, with between 70 and 80 per cent of sales going to individuals. Exports are described in more detail in Section 5.2.

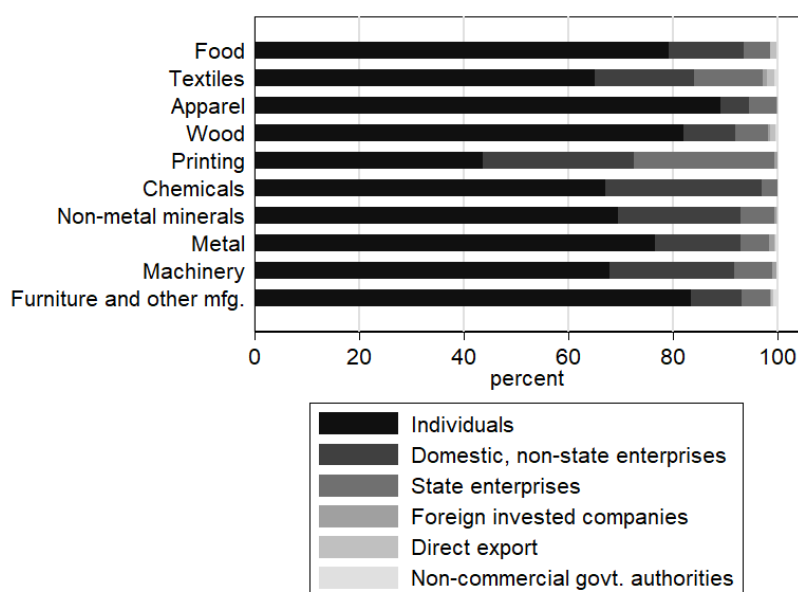
Figure 5.1: Customer groups, by size and province



Source: Authors' own calculations using IIM 2017 data.

When splitting by sector (as shown in Figure 5.2), it is evident that printing, textiles, chemicals, minerals, and machinery are least likely to be sold to individuals, yet more than half of sales go to this group (except for printing). At the other end of the scale, almost 90 per cent of companies in the apparel sector sell primarily to individuals.

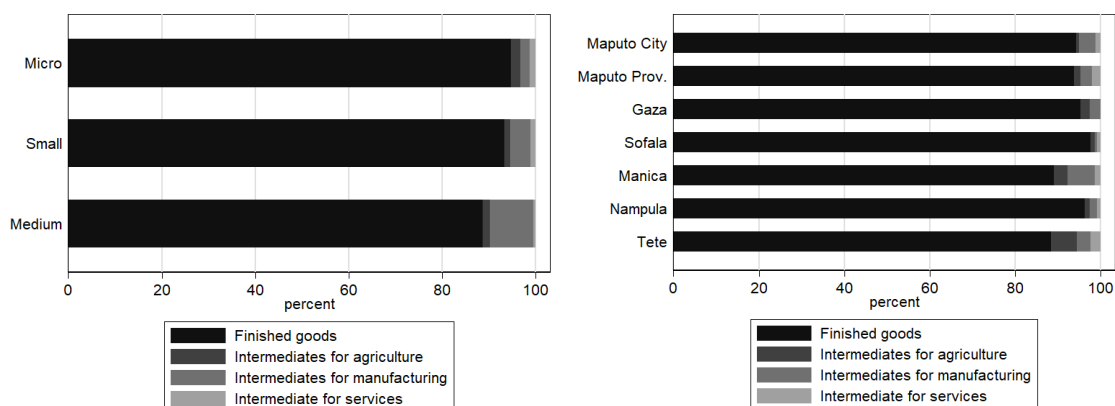
Figure 5.2: Customer groups, by sector



Source: Authors' own calculations using IIM 2017 data.

When asked what type of product companies sell, around 95 per cent said finished goods. The share of companies producing intermediate goods is larger for medium-sized companies (around 10 per cent) as seen in Figure 5.3.

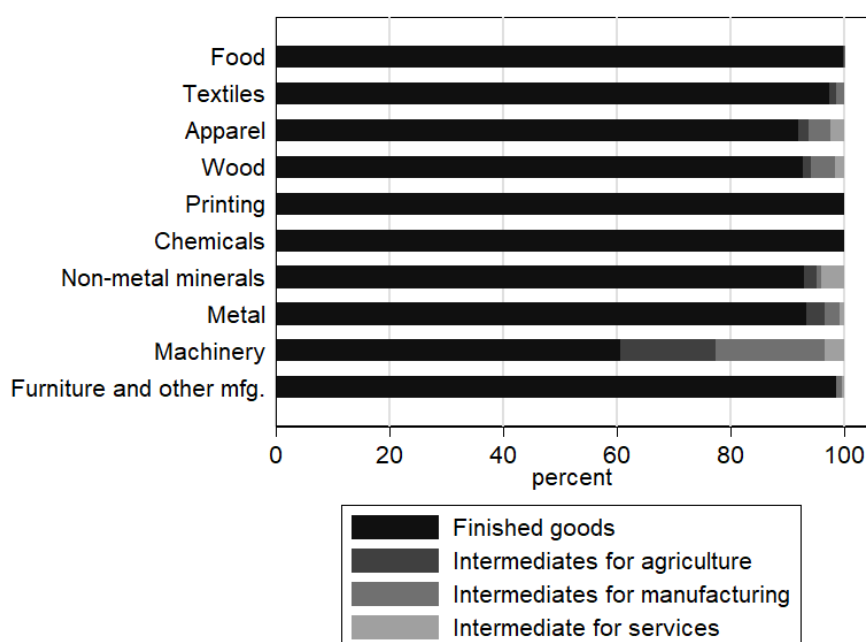
Figure 5.3: Type of product sold, by size and province



Source: Authors' own calculations using IIM 2017 data.

Not surprisingly, the sector where companies are most likely to sell intermediate goods is the machinery sector, where some 40 per cent of companies sell intermediates to production in agriculture, manufacture, and services (Figure 5.4).

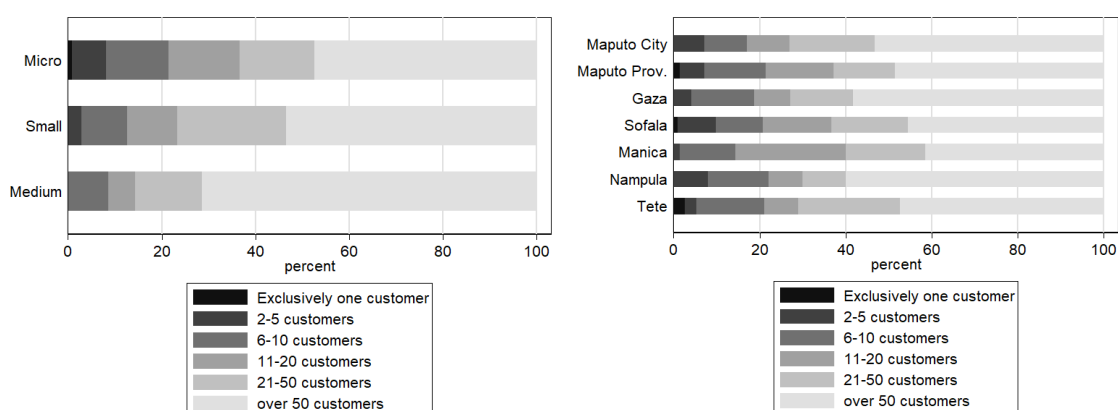
Figure 5.4: Type of product sold, by sector



Source: Authors' own calculations using IIM 2017 data.

Larger companies generally have more customers than smaller ones; however, half the micro-sized companies in the sample have more than 50 customers. Other categories (2–5, 6–10, 11–20, 21–50) are evenly spread with 10–15 per cent corresponding to each. Looking across provinces, firms in Nampula are most likely to have more than 50 customers, closely followed by Gaza. Firms in Manica, Maputo Province, and Tete generally have fewer customers, but the pattern is not very systematic (Figure 5.5).

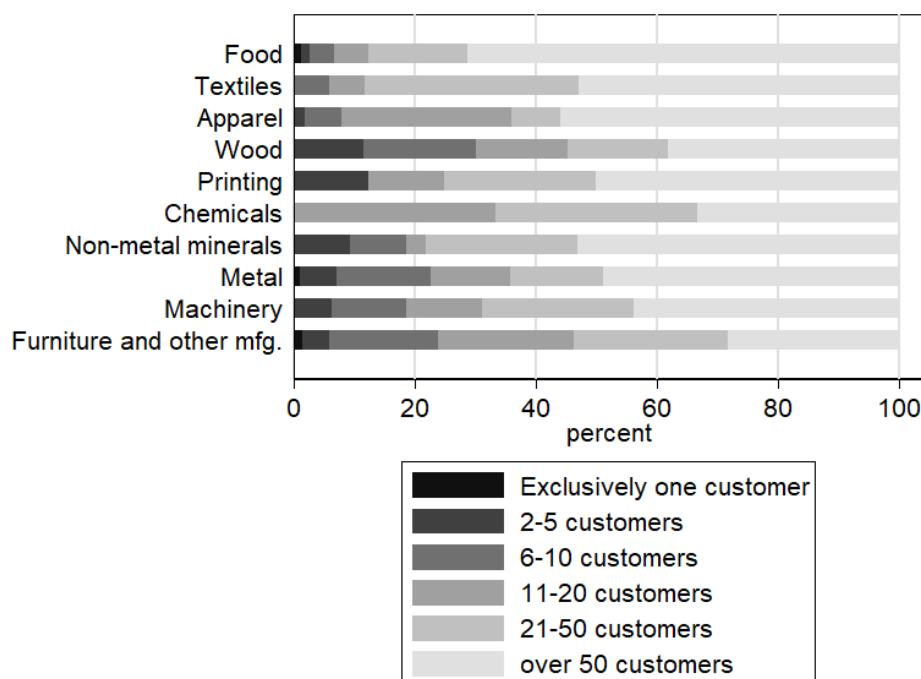
Figure 5.5: Number of customers, by size and province



Source: Authors' own calculations using IIM 2017 data (IIM 2017).

Figure 5.6 shows that the number of customers a company reports varies substantially by sector. Firms in the chemical and textiles sectors generally have many customers, whereas the wood and furniture companies have the fewest. This corresponds to the fact that most companies in these sectors are micro-sized and have a longer production cycle, mostly customized, from design to delivery.

Figure 5.6: Number of customers, by sector

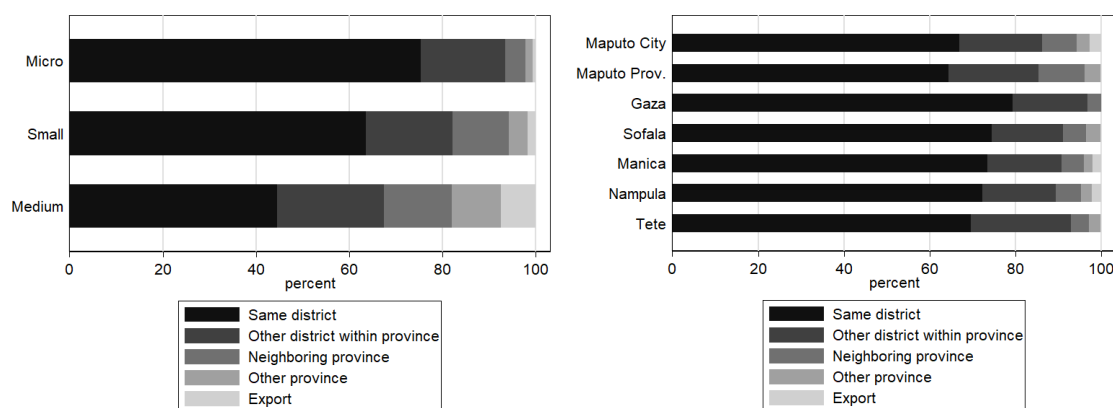


Source: Authors' own calculations using IIM 2017 data.

Where do firms sell their products? As might be expected, this again depends on the firm size. Ninety per cent of micro-sized companies sell only to their own district or another district within the same province. In comparison, this number is around 80 per cent for small companies and around 65 per cent for medium-sized firms. Less than 10 per cent of medium-sized firms export, and the number is negligible for small and micro firms. The likelihood of a company selling to districts and provinces other than their own is largest for firms located in or around Maputo. This is obvious since Maputo City and Maputo Province are two different provinces containing the same greater urban area. Many companies sampled here are thus located close to the border between the two provinces. Although Gaza is a neighbour to Maputo Province and the main towns of Xai-xai and Chokwe are only a few hours' drive away from the capital, firms in this province are least likely to sell to other provinces. This shows that the manufacturing taking

place here cannot (or manufactures do not want to) compete with that of Maputo or Matola in terms of conquering market shares in the big city. Nor does there appear to be an indication of a strategy that would place firms in Gaza upstream in the value chain of companies in Maputo City and Province. This corresponds to the previously established fact that the firms sampled in Gaza are generally micro or small and belong to traditional trades sectors that generally cater to local customers. Distributions by size and province are shown in Figure 5.7.

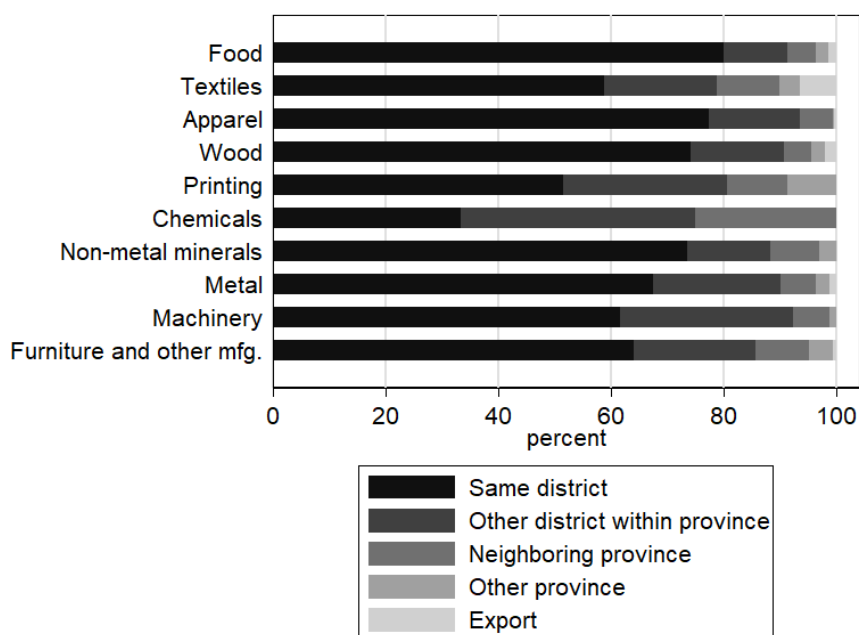
Figure 5.7: Where sales go, by size and province



Source: Authors' own calculations using IIM 2017 data.

Sectors that mostly have local customers are food, apparel, non-metal minerals, and wood. Textiles, printing, and chemicals have more customers in other districts and provinces (Figure 5.8).

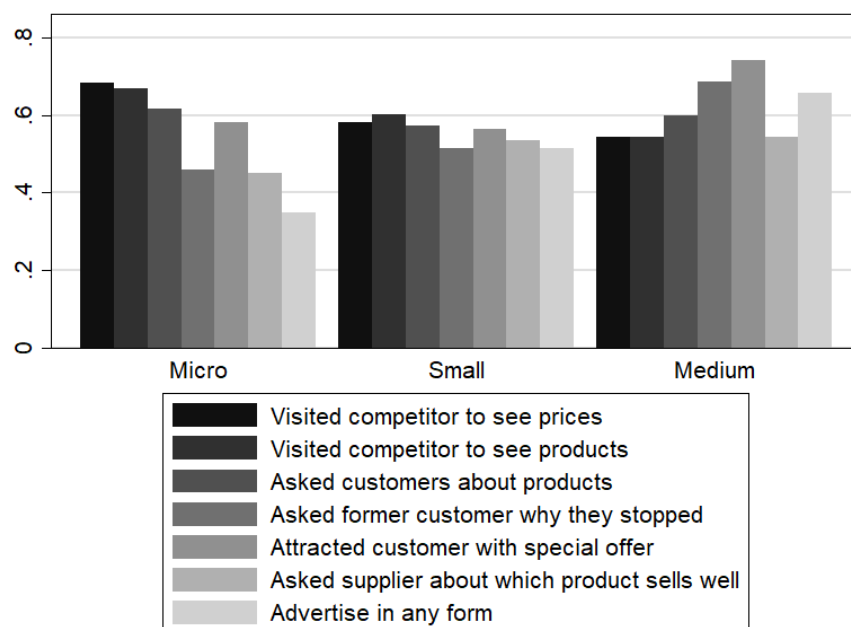
Figure 5.8: Where sales go, by sector



Source: Authors' own calculations using IIM 2017 data.

In the survey, companies were asked how they decide on prices for their products, how they attract new customers, and how they decide on what products to sell. As seen in Figure 5.9, some strategies are common among all size categories whereas others differ. Advertising is done more by larger firms (65 per cent of medium-sized firms against 35 per cent of micro firms). They are also more likely to ask customers why they stop purchasing from them and suppliers about which products sell well. On the other hand, micro-sized companies tend to visit competitors more than their larger counterparts.

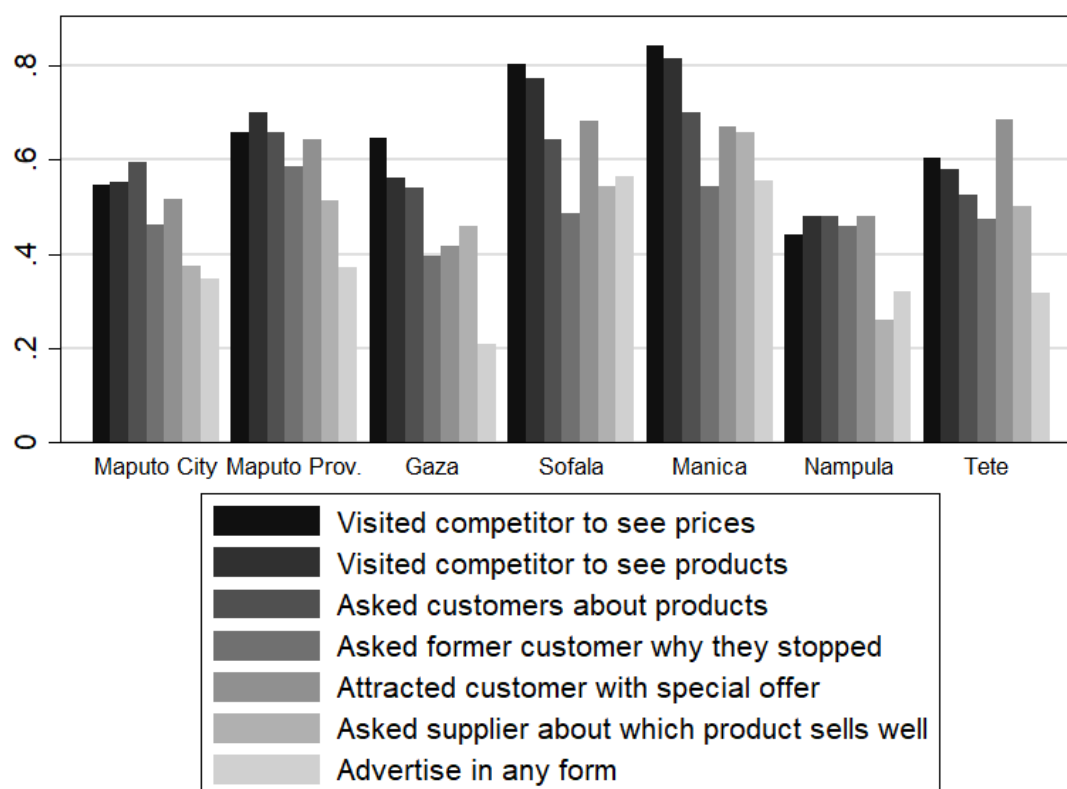
Figure 5.9: Prices and sales strategy



Source: Authors' own calculations using IIM 2017 data.

Looking across provinces, a few interesting patterns arise. For instance, firms in Sofala and Manica are much more likely to visit competitors to see their prices and products (around 80 per cent) than in other provinces. In Nampula, fewer than 50 per cent of the firms reported doing so. In general, firms in Sofala and Manica seem to employ more sales strategies than other provinces. Gaza stands out among the low number of firms using advertising, whereas firms in Maputo City and Province lie close to the overall average in the sample for all categories (Figure 5.10).

Figure 5.10: Prices and sales strategy, by province



Source: Authors' own calculations using IIM 2017 data.

5.2 Exports

A crucial element in the development of a country is the ability to export manufactured goods. In the present sample, exports were very rarely used as a sales channel, with only 19 out of 520 firms stating that they exported goods. Only 10 out of the 520 exported in 2012, and only six did so in both years, meaning that 13 companies started exporting between the two survey rounds, whereas four stopped exporting in the same period (Table 5.1).

Table 5.1: Export transition matrix

2012	2017			
	No	Yes	Observations	
	No	497	13	510
	Yes	4	6	10
	Observations	501	19	520

Source: Authors' own calculations using IIM 2017 data.

Table 5.2 examines more closely the characteristics of the 19 firms that reported exporting. Around the same number of micro, small, and medium-sized firms export, which corresponds to 2 per cent of micro companies, 6 per cent of small, and 21 per cent of medium-sized firms. The exporters are—perhaps surprisingly—spread evenly across provinces except for Tete (0) and Maputo Province (1). In terms of sectors, wood, a low value-added industry (exported by 9 firms) and metal, which in 2016 presented median value, (exported by 5 firms) represent the largest shares of firms exporting.

Table 5.2: Exporter characteristics

Does the firm export?	No	Yes	Per cent yes
Micro 2017	375	7	2%
Small 2017	97	6	6%
Medium 2017	29	6	21%
Maputo City	134	7	5%
Maputo Province	69	1	1%
Gaza	46	2	4%
Sofala	99	2	2%
Manica	66	4	6%
Nampula	47	3	6%
Tete	38	0	0%
Food	72	1	1%
Textiles	16	1	6%
Apparel	50	0	0%
Wood	130	9	7%
Printing	8	0	0%
Chemicals	3	0	0%
Non-metal minerals	31	1	3%
Metal	79	5	6%
Machinery	16	0	0%
Furniture and other	65	2	3%
Observations	499	19	4%

Source: Authors' own calculations using IIM 2017 data.

Of the exporting firms, 17 stated that they did so directly, whereas two exported directly and through a trading company. More than half the exporting firms had long-term relationships with the buyers, and five had experienced a technology transfer from the foreign product buyer (Table 5.3).

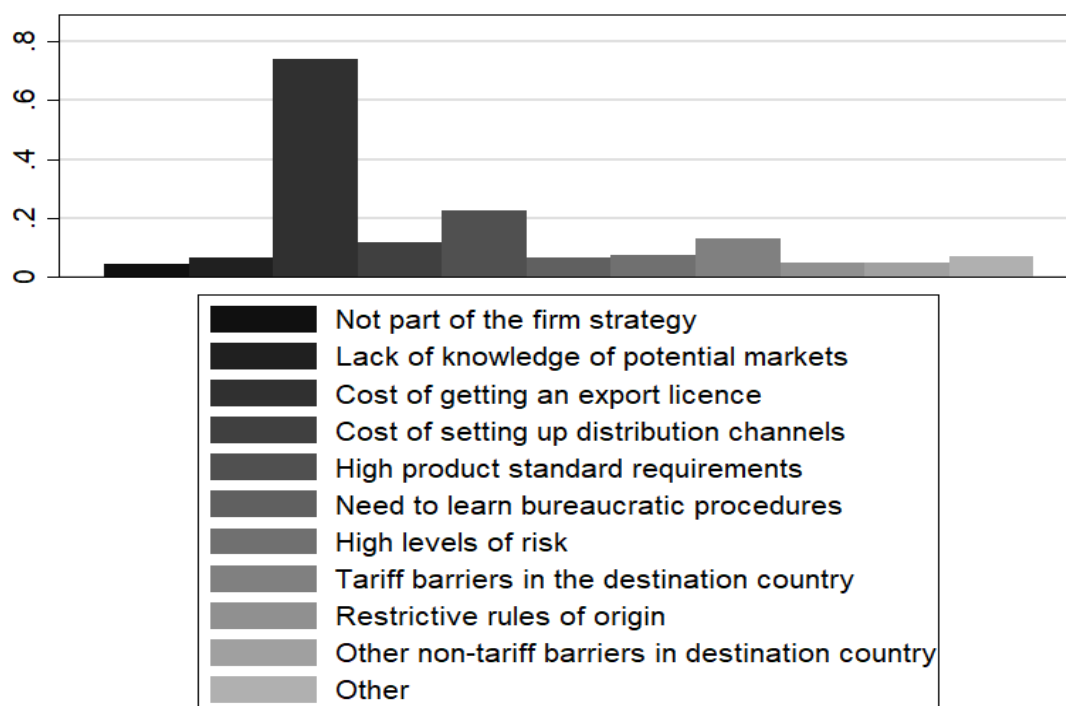
Table 5.3: Characteristics of exports

	Frequency	Per cent
Direct exports	17	89%
Direct and through trading company	2	11%
Long-term relations with buyers	11	58%
Experienced technology transfer from export product buyer	5	26%
Foreign buyers have requested certification	5	26%
Exporter has certificate of origin	9	47%

Source: Authors' own calculations using IIM 2017 data.

With around 96 per cent of the companies in the sample not exporting, it is interesting to know the reasons why they only sell to domestic buyers. Figure 5.11 shows the share of companies that answered affirmatively to many potential reasons for not exporting. The cost of getting an export licence seems to be a main obstacle for increased exportation in the manufacturing sector, with more than 70 per cent of the companies that did not export agreeing to this. Twenty per cent cited the high product standard requirements as a reason. Surprisingly, only around 5 per cent stated that it was not part of the firm's strategy to export.

Figure 5.11: Reasons for not exporting



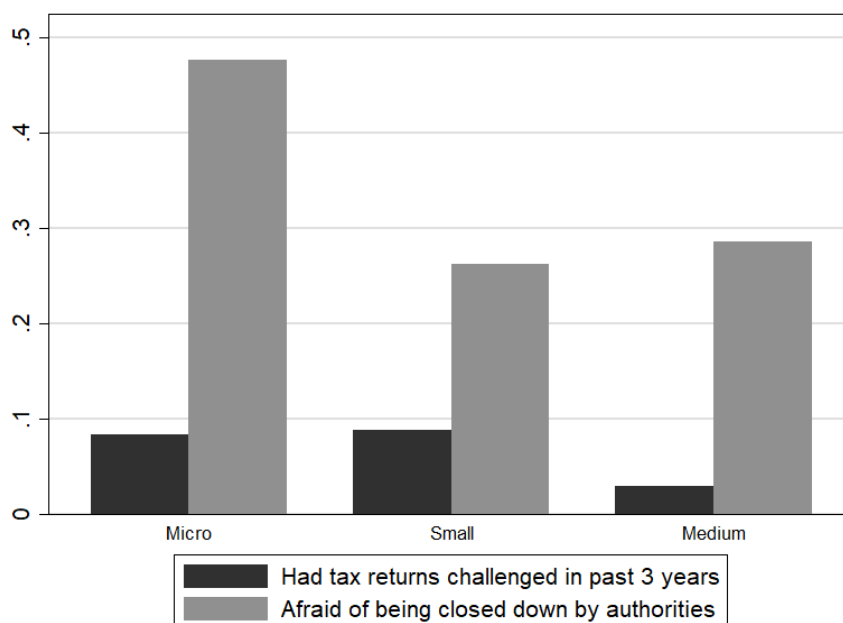
Source: Authors' own calculations using IIM 2017 data.

5.3 Taxes and relations with authorities

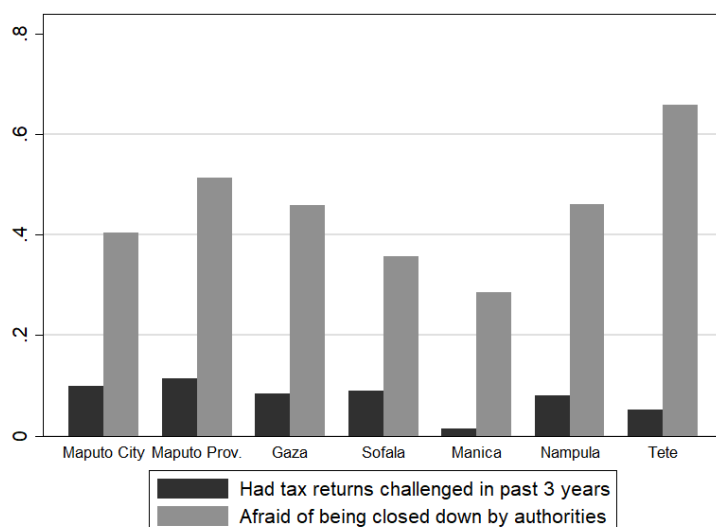
To round off the section, we present some statistics surrounding the relations between firms and authorities. Firstly, Figures 5.12 and 5.13 show the shares of companies who had had their tax returns challenged by the authorities and the shares who feared being closed. Around 7–8 per cent of the micro and small companies had experienced their tax returns being challenged, a number that drops to 3 per cent (1 firm) of the medium-sized firms. Strikingly, almost half the micro-sized companies, 25 per cent of the small, and 28 per cent of the medium-sized firms feared being closed by authorities.

The relationship between firms and the authorities seems to differ considerably across provinces. Manica is the province where fewest firms feared being closed (less than 30 per cent), and where the fewest had had their tax returns challenged. In Tete, more than 65 per cent of companies were afraid of being closed by the authorities.

Figure 5.12: Tax returns challenged/fear of being closed down, by size

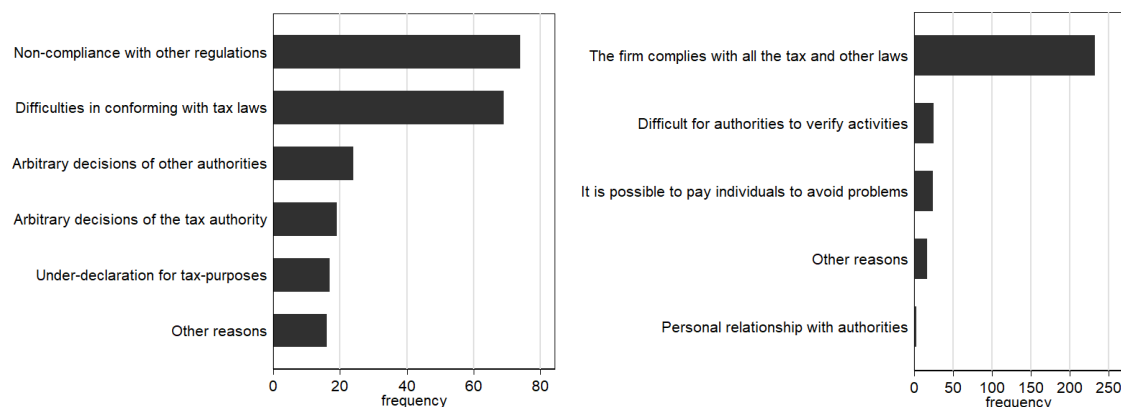


Source: Authors' own calculations using IIM 2017 data.

Figure 5.13: Tax returns challenged/fear of being closed down, by province

Source: Authors' own calculations using IIM 2017 data.

Figure 5.14 gives insight into why some companies were afraid of being closed and why others were not. Among the former, the highest-ranking statements were 'non-compliance with other regulations' and 'difficulties in conforming with tax laws'. These are serious issues for many Mozambican firms and relate to decisions about formalization as discussed in Section 7. Only around 20 firms in this category based their fear on arbitrary decisions by the authorities; however, it requires a certain level of understanding to determine whether a decision is arbitrary or rule-based. Among the firms that did not fear being closed by the authorities, the main reason was that the company complied with all rules. Only a few companies said that it was possible to pay individuals to avoid problems.

Figure 5.14: Reasons for having fear (left) and no fear (right) of being closed down by authorities

Source: Authors' own calculations using IIM 2017 data.

6 Credit and finance

Access to finance is not only of importance for company growth but also for the economy at large, as ‘credit constraints reduce the efficiency of capital allocation and intensify income inequality by impeding the flow of capital to poor individuals with investment opportunities with high expected returns’ (Aterido et al. 2013: 102). Thus, this section looks at firms’ access to credit and continues describing the types of credit constraints they are facing.

6.1 Access to credit

Table 6.1 presents access to credit by financial instrument, firm size, and across provinces. The financial instruments are classified into three groups: having an overdraft, a bank loan, and a non-bank loan.

Of all the micro firms who made an investment between 2014 and 2016, only 5.7 per cent had an overdraft compared to 12.8 per cent who had a bank loan. It was most common for small firms to have an overdraft—19.5 per cent compared to 12.8 per cent of small firms that had a bank loan. Access to credit was more common for medium-sized manufacturing firms, as 26.3 per cent had an overdraft and 16.67 per cent had a bank loan. It is worth stressing that only micro-sized manufacturing firms had non-bank loans, and this might be due to (formal) credit constraints.

There seems to be substantial variation in credit across provinces. Access to credit was exclusively through an overdraft in Nampula, where 40 per cent of the firms used this type of credit. The province with most access to bank loans is Manica, where 22.2 per cent of the firms had a bank loan. Manica is also the province with most access to non-bank loans—15.8 per cent.

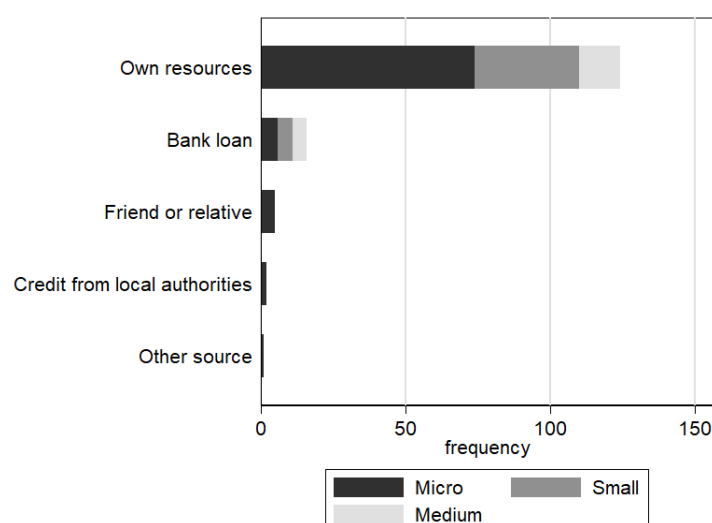
Table 6.1: Use of financial instrument, by firm size and province, per cent (2017)

	Overdraft	Bank loan	Non-bank loan
Micro	5.68	12.79	5.75
Small	19.51	12.82	0.00
Medium	26.32	16.67	0.00
Maputo City	10.64	11.36	0.00
Maputo Province	10.53	15.79	5.26
Gaza	13.33	13.33	7.14
Sofala	4.76	15.00	0.00
Manica	0.00	22.22	15.79
Nampula	40.00	0.00	0.00
Tete	16.67	16.67	0.00
Total	12.16	13.29	3.40

Source: Authors' own calculations using IIM 2017 data.

In 2017, an average of 13.3 per cent of the manufacturing firms in the sample had a bank loan compared to 12.6 who had an overdraft and 3.4 per cent who had a non-bank loan.

Figure 6.1 looks at how firms financed the investments they made between 2014 and 2016. As can be seen, most of them financed investments themselves through their own resources. The micro-sized firms financed investments out of their own pockets, but interestingly small and medium-sized companies also often chose this type of financing.

Figure 6.1: Number of firms, by loan source (2017)

Source: Authors' own calculations using IIM 2017 data.

Of the firms in the survey who had taken a bank loan or a non-bank loan, only 19 and 5, respectively, reported the amounts borrowed and the interest rates paid. Generally, the non-

bank loans were small with a small amount of or no interest paid, whereas the bank loans were more sizeable (MT150,000 being the median, see Table 6.2). Interest rates on bank loans were generally high (25–30 per cent), which was also stated by some company owners as a reason for not applying for a bank loan.

Table 6.2: Loan characteristics of firms that made an investment between 2014 and 2016

	Bank loan	Non-bank loan
Mean loan amount	2,933,368	154,900
Median loan amount	150,000	125,000
Mean interest rate	29.11	2.80
Median interest rate	25.00	0.00
No. of observations	19	5

Source: Authors' own calculations using IIM 2017 data.

6.2 Credit constraints

In this sub-section, we apply two definitions of credit constraints inspired by Byiers et al. (2010). In the first definition, a company is credit constrained if it applied for credit but was denied. The second definition considers self-selection by expanding the credit-constraint measure to include firms that consider themselves in need of a loan, but had their application denied, found the procedure too cumbersome or too stringent, or refrained from applying because of corruption.

Table 6.3 includes the share of companies in the three size categories that applied for credit, were constrained by the two definitions, and demonstrated demand for a loan. In the first column, it is visible that the share of companies that applied for credit, between 20 and 26 per cent, did not differ markedly across size. However, smaller companies were generally much more credit constrained than larger ones. None of the medium-sized firms had had a credit application denied, whereas the numbers for small and micro firms were 11 and 12 per cent respectively. In the broader second definition where self-selection is considered, almost half the micro companies sampled could be considered as credit constrained.

By the first definition, firms in Manica are by far the least credit constrained and those in Nampula by far the most. By the second definition, Maputo City has the lowest share of credit-constrained firms with Manica coming in second. According to the second definition, Gaza is the province where the largest share of companies is constrained, followed by Sofala.

Table 6.3: Credit constraint, by firm size and province, per cent (2017)

	Applied for a credit	Constrained definition 1	Constrained definition 2	Credit demand
Micro	20.42	12.39	47.26	51.97
Small	22.33	11.11	30.00	75.00
Medium	25.71	0.00	19.23	80.77
Maputo City	17.73	9.38	33.59	68.97
Maputo Province	24.29	13.11	45.90	62.26
Gaza	22.92	11.90	59.52	40.54
Sofala	23.53	10.34	48.28	53.85
Manica	17.14	4.92	36.07	67.24
Nampula	26.92	22.45	44.90	44.74
Tete	21.05	14.29	40.00	46.67
Total	21.31	11.45	42.33	58.54

Source: Authors' own calculations using IIM 2017 data.

Firms that had an application for a loan rejected were subsequently asked why. According to Table 6.4, the most common reason for rejection was a lack of collateral (around 70 per cent) for both micro and small companies. Incompleteness of application and lack of feasibility account for around a fifth of the rejections, whereas poor credit history only applies to 10 per cent of the small companies and 2.3 per cent of the micro firms that had an application rejected.

Table 6.4: Reason for rejection of loan application, per cent (2017)

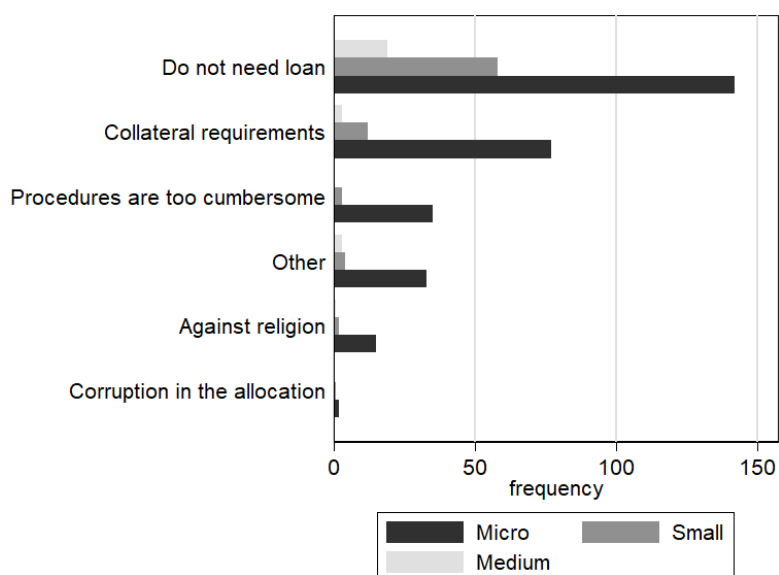
	Lack of collateral	Incompleteness of application	Perceived lack of feasibility of project	Poor credit history	Other
Micro	72.09	20.93	16.28	2.33	18.60
Small	70.00	20.00	20.00	10.00	40.00
Medium	0.00	0.00	0.00	0.00	0.00
Total	71.70	20.75	16.98	3.77	22.64

Source: Authors' own calculations using IIM 2017 data.

Qualitative evidence based on the researchers' field visits suggests that most firm owners and managers think that they only can get a bank loan if they already have a contact in a bank. Furthermore, requirements for collateral are generally large, so applicants typically need to own a house or something of similar value before being able to obtain a loan. Furthermore, many companies complained about having to hand in too many documents during the process, which was perceived as a hindrance. Finally, small and micro-sized companies often did not know where to go or what to do to obtain a loan, and larger companies were often not interested in getting a bank loan due to high interest rates of around 25 per cent. Of the 410 firms that had not applied for a bank loan, 53 per cent stated that they did not need a loan, 22 per cent that

they did not meet the collateral requirements, and 9 per cent found the procedures too cumbersome. Figure 6.2 plots the frequencies by firm size.

Figure 6.2: Reason for not applying for credit, by firm size



Source: Authors' own calculations using IIM 2017 data.

7 Informal companies and informal payments

Although there is considerable debate about the informal economy in developing countries, there is no universal definition of the phenomenon. It is a challenge to define informality in the Mozambican context because ‘almost all levels of informal activity [...] are subject to various forms of official control and fiscal obligation’ (de Vletter 1996: 8). For example, the municipal council tolerates economic agents, including manufacturers, operating informally or semi-formally but charges them a fee for doing their business from a specific establishment on municipal territory such as markets and sidewalks. Moreover, government authorities often accept bribes in exchange for issuing a company licence. In this section we first look at (in)formality in terms of company registration and subsequently at informal and illegal payments.

7.1 (In)formal companies

As the IIM 2017 is a tracer survey, the informality definition from the last round is used. As such, informality is assessed by whether an enterprise is registered (and pays taxes) or not. Each individual step of company registration has been summarized by the World Bank (World Bank 2016). In the dataset, a company is considered formal if it is in possession of a taxpayer number called a NUIT (Número Único de Identificação Tributária), which it receives during its registration process.

However, many of the companies that do not possess a company NUIT are, in some way or another, officially registered, as they hold another type of document issued by the public administration. Most of these also pay taxes. Instead of being entirely informal, most of the companies without a taxpayer number hold a simplified operational licence from the municipal council and must pay certain establishment fees. Some firm owners pay simplified taxes through their personal NUIT because the tax authority has been stricter about collecting taxes from small companies in recent years. Thus, a company registered with the municipality and paying simplified taxes is considered as informal in our report. However, if registration and tax payment are used as informality measures in future studies, instead of only asking if they have a company NUIT, enterprises should also be asked about the kind of authority they are registered with and whether they pay (simplified) taxes, to be able to get an overview of certain (in)formality degrees.

As can be seen in Table 7.1, the percentage of formal companies in possession of a NUIT and a name registration document of the legal entities registry (CREL), remained the same as in 2012, at around 53 per cent. However, the number of more ‘informal’ companies who were neither registered at CREL nor possessed a NUIT has increased from 18 to 29 per cent. This may be because the enumerators found that company owners often misunderstood the question about them possessing a NUIT. In addition to the possibility of a company having a NUIT, each individual Mozambican also holds a NUIT, i.e. a personal identification number. As the enumerators explained, they were asking about the company NUIT and not the personal NUIT, which might not have been the case in 2011, and this could be the reason for a higher percentage of owners stating they did not possess a company NUIT.

Those companies that had a NUIT but stated they were not registered at CREL may not have remembered that they were registered there, as registration at CREL normally happens before a company is able to obtain a company NUIT. However, it is also possible that they skipped certain steps when registering their business because it was not always easy to obtain information about which step to take first. As different authorities, which do not collaborate and often do not seem to know themselves which steps are required, are responsible for company registration, this does not seem to be unlikely. Moreover, these authorities occasionally allow illegal formalization practices themselves, meaning that it is not too difficult, and most likely cheaper than paying all the required procedures, to obtain a licence by offering a bribe. Table 7.1 and 7.2 show the share of firms with CREL and NUIT in 2012 and 2017 and their transitions between categories.

Table 7.1: CREL and NUIT per cent in 2017 and 2012

2017				2012			
	NUIT	No NUIT	Observations		NUIT	No NUIT	Observations
CREL	53.27	5.58	306	CREL	53.95	2.89	295
No CREL	12.50	28.65	214	No CREL	23.89	18.30	219
Obs.	342	178	520	Obs.	404	110	514

Source: Authors' own calculations using IIM 2017 data.

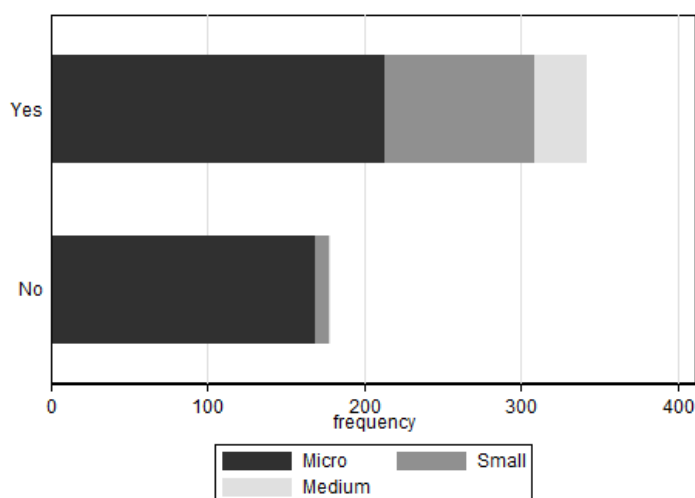
Table 7.2: CREL and NUIT transition matrices

CREL 2017				NUIT 2017			
2012	CREL	No CREL	Observations	2012	NUIT	No NUIT	Observations
CREL	63	156	295	NUIT	307	102	111
No CREL	241	54	219	No NUIT	35	76	409
Obs.	304	213	519	Obs.	342	178	520

Source: Authors' own calculations using IIM 2017 data.

Figure 7.1 and Table 7.3 illustrate that for several reasons micro firms are more likely than small or medium-sized companies to operate without a company NUIT. First, the municipal councils are responsible for issuing simplified licences to micro companies. The Government of Mozambique's legal definition of a micro company is for it to fulfil at least two of the following three criteria: having initial investment of lower than US\$25,000, installed electrical capacity lower than 10 KvA, or the number of workers being lower than 25 (GoM 2003). These micro companies do not need to have a company NUIT to obtain a simplified licence from the municipality, but their owners can use their personal one. Second, qualitative interviews found that many micro firms do not seem to have enough money to pay for registration and often do not know that they should, or how to, register their business. Many of these companies do not even have formal accounts and are not used to dealing with long bureaucratic hassle. A shoemaker, who was accompanied by one of the researchers during his registration process in Matola, stated that he would already have given up on the complicated bureaucratic process of company registration if the researcher had not been present.

Figure 7.1: NUIT possession, by firm size

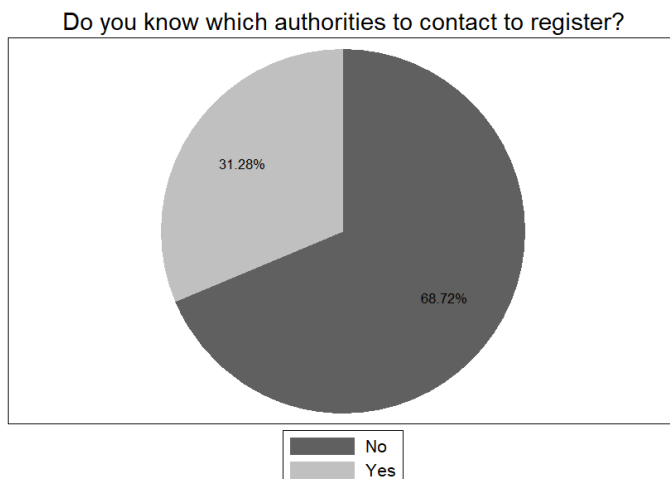


Source: Authors' own calculations using IIM 2017 data.

Qualitative research found that in Maputo City and Province, most micro companies held a municipal operational licence and paid municipal levies. They also had to be registered for the simplified tax system. However, most of the time, this type of firm did not even know they had to register for simplified tax. Often, they would also be tax-exempt if they were registered for the simplified tax system, as enterprises do not need to pay taxes if they have an annual turnover

of less than 36 times the current minimum wage (for the current value of minimum wages for the different sectors see: <https://meusalario.org/mocambique/main/salario/salario-minimo>).

Figure 7.2: Registration authorities



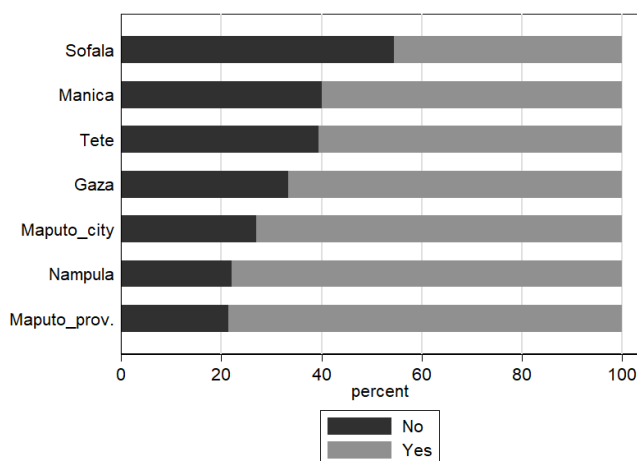
Source: Authors' own calculations using IIM 2017 data.

Although the companies without a company NUIT were subject to certain regulations and licences, more than two-thirds stated they did not know with which authorities to register a firm officially (see Figure 7.2). This perception can be confirmed by a researcher, who tried to find out with which government authority in Maputo City and Province it was possible to register a micro company. Although the one-stop shop is legally responsible for the registration of companies (Decree 39/2017 of 29 of July), it does not seem to fulfil the task of registering micro firms. Instead, it is the municipality. However, to obtain a licence from the municipal council, one first needs to go to the one-stop shop to get a name reservation document. After obtaining the licence, the company owner needs to go to a third office, the tax authority, to register for the tax system. Many companies do not take this step after obtaining the municipal licence because they do not know that it is mandatory to register and because they feel they do not get anything back from paying taxes.

Figure 7.3 shows NUIT possession by province. Interestingly, more firms interviewed had a taxpayer number than did not in all the provinces but Sofala. In Sofala, 55 of the owners indicated they were not in possession of a company NUIT, while 46 had obtained one. One explanation could be that the national authorities are not strict in enforcing the need for firms to operate with a NUIT. The municipal councils seem to enforce stronger measures as most of

the companies told us they had a licence from the municipal council and that its officials even came personally to the companies to collect fees.

Figure 7.3: NUIT possession, by province



Source: Authors' own calculations using IIM 2017 data.

As the Government of Mozambique is aiming to gradually include the informal sector in the formal one, a consequence of informality is the closure of informal businesses if they are not willing or not able to formalize. As in 2012 and noted by Schudel (2008), difficulties in conforming to tax laws and non-compliance with other regulations were the main reasons for owners of informal enterprises being afraid of being shut down by the government.

7.2 Costs and benefits of formalization

There are certain costs and benefits for a company being formal or informal. For example, formal companies can apply for bank loans and for government projects while these opportunities are not available to informal companies. The establishment of business relations with large clients is impossible for informal enterprises, as they need legal documentation of their transactions. On the other hand, informal enterprises may have a lower cost burden through not paying for the registration of their companies and not paying any taxes. However, this advantage may not be so great in Mozambique as many formal companies also evade tax payment and apply informal practices. Overall, some owners must strategically consider whether it is more beneficial for their company to formalize or not, while other companies are involuntarily informal because of missing information and monetary means (Byiers 2009).

The enterprises in the sample without a company NUIT were asked about the most important benefits of company registration. Table 7.3 shows that around 37 per cent said better access to finance would be the most important benefit of registration, followed by better access to raw materials. These have already been identified as the biggest challenges for informal economic agents in Mozambique during the 1990s (de Vletter 1996). Other perceived benefits of formalization are better access to markets and government programmes, as well as better opportunities with large clients.

Table 7.3: Benefits of registration

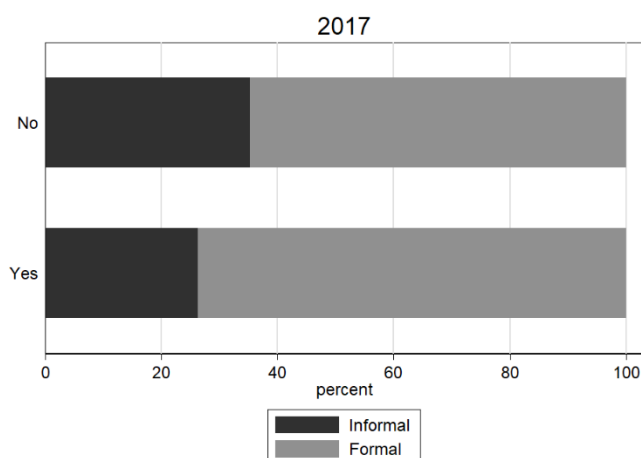
	First	Second	Third
Better access to financing	37.04	19.75	20.16
Better access to raw materials	15.64	9.47	5.35
Better access to markets	11.93	15.32	22.63
Better opportunities with formal firms	9.47	10.70	8.64
More access to government programmes	7.00	12.76	6.17
Easier to secure contracts with large clients	6.17	11.52	13.99
Less bribes to pay	4.12	8.64	5.35
Better access to infrastructure services	2.88	0.82	4.12
Better legal foundations on property	2.47	5.35	5.76
Better access to qualified workers	2.06	4.12	5.76
Other	1.23	1.65	2.06
Observations	243	243	243

Source: Authors' own calculations using IIM 2017 data.

When exploring one of the theoretical benefits of company registration, access to credit, we find that it is not unknown for both formal and informal companies to have a bank loan, as already indicated in Section 6. Therefore, being able to access credit is probably only a small incentive for companies to formalize. Several formal companies that were obtaining a loan in 2017 explained they had to 'create channels' in the bank before being able to get credit. Interestingly, access to credit for informal companies seems to have improved by 1 percentage point since 2011 when only 7 per cent got a loan. However, the situation for formal enterprises has deteriorated. This is in line with Castel-Branco's (2014: 42) findings that the proportion of credit distributed to the industrial sector deteriorated during the previous decade while it increased for construction, transport, communications, and other sectors (including mineral and energy resources). Therefore, the incentive to formalize due to a bank loan, which was already small in 2011, became even smaller in subsequent years. Figure 7.4 shows the shares of formal and informal companies that have a bank loan.

Figure 7.4: (In)formality and credit

Do you have a loan from a bank or financial institution?



Source: Authors' own calculations using IIM 2017 data.

7.3 Informal payments

Bribes, favour for favours, and nepotism have been reported to be common practices among companies in Mozambique. These practices have negative effects for enterprises, as they are expensive and reduce the opportunity for countries to attract foreign investment (Schudel 2008). Qualitative interviews found that Mozambican company owners are likely to pay small bribes in bureaucratic processes, such as their firm registration, because they perceive they would not succeed in obtaining certain documents in a legal way due to corrupt officials. Moreover, independently of size and formality status, company owners told of government officials coming to their offices and asking for very high fines, which were almost impossible to afford, to receive bribes. In the case of informal firms, whose workshops often do not even have walls but consist of small stands, officials would raise fines due to things as small as a leak in the ribbed roof. Representatives of medium-sized companies said the officials found small details in Mozambican law which they had violated, such as using self-made recycled oil for their machines instead of purchasing new oil. Thus, some interviewees stated that it was impossible to comply fully with Mozambican law because the authorities would always find reasons for fining companies.

To analyse the prevalence of informal payments among manufacturing companies in Mozambique, while not being too direct in asking about corruption, the first question about bribes related not to the owner's company but to other firms in the same sector. More

specifically, it aimed to find out if the owner knew how much other firms in the same sector were paying in bribes (as a percentage of sales). Half of the companies in the sample did not know or did not want to answer and indicated 0 per cent. The other half indicated diverse amounts ranging from 1 to 100 per cent of sales. Seven per cent of the interviewees indicated that they paid 1 or 2 per cent of sales, while 6 per cent of the interviewees indicated payments of 5 and 10 per cent. Only 20 per cent of company owners spoke of bribe payments being worth more than 10 per cent of sales. However, when asking directly about illegal payments made by their own company, only around 7 per cent admitted to having paid bribes during the previous three years. These numbers were like those from 2012. 'We take the indirect question to provide the most reliable measure of bribe payments and use it from here onwards' (DNEAP 2013: 110).

Unlike in 2012, medium-sized firms are now more likely to bribe, and the amount paid is higher than for micro and small firms. In 2012, micro firms declared having paid bribes worth 10 per cent of sales, on average, but this amount seems to have decreased to 7 per cent. The amount small firms admit paying, almost 10 per cent, stayed the same. It is difficult to find out why medium-sized firms are admitting paying more, but the difference between 2012 and 2017 is not very large. Therefore, as these numbers are based on estimates, it might be that company owners just estimated slightly differently in 2017.

Like 2012, informal firms are still more likely to make illegal payments than formal enterprises. However, the percentage of informal firms who are bribing has declined from 69 per cent to 51 per cent, which is only slightly more than what formal firms pay. The value of bribes paid by informal firms has also declined from 12 to 9 per cent. These numbers need to be read with caution, as they do not present the same number of observations for 2012 and 2017. Firm owners who were interviewed qualitatively said that bribing is a form of survival when the authorities come to their companies and demand fines which are impossible to pay due to their high value. Instead, they pay the inspectors a smaller amount, which does not flow into the government's funds but into the inspectors' own pockets. One company owner stated it was impossible to comply with all the legal standards in Mozambique because this would mean bankruptcy.

The differences between years and the bribes paid in the provinces are striking. In Maputo City, Gaza, Manica, Nampula, and Tete the percentage of firms paying bribes has decreased. Gaza province is particularly notable with only 33 per cent of the owners interviewed admitting

informal payments (by peers) in 2017, while in 2012, the number was 78 per cent. It is possible that the government might have fought against informal payments in this province or companies are more afraid of admitting them. The only province in which bribe payments seem to have increased is Sofala, from 36 per cent in 2012 to 65 per cent in 2017 (Table 7.4).

Table 7.4: Bribe incidence, percentage of firms and bribe value, average percentage of sales, by firm type (2017)

	Say others pay bribes	Per cent of own sales	Observations
All	48.08	7.63	520
Micro	47.91	7.17	382
Small	46.60	8.62	103
Medium	54.29	9.77	35
Companies without NUIT	51.12	8.29	178
Companies with NUIT	46.49	7.30	342
Maputo City	43.97	7.50	141
Maputo Province	44.30	8.44	70
Gaza	33.33	7.31	48
Sofala	65.35	8.70	101
Manica	58.57	10.36	70
Nampula	42.00	5.80	50
Tete	34.21	2.0	38

Source: Authors' own calculations using IIM 2017 data.

Table 7.5 portrays a transition matrix for bribe payments from 2009–11 and 2014–16. Overall, the number of firms admitting they were paying bribes has increased from 23 to 35 (out of 518). However, 19 of those companies paying bribes between 2009 and 2011 stated they had not paid bribes between 2014 and 2016. Only four companies admitted to having made informal payments in both periods. However, the number of companies paying bribes is probably much higher than the number of companies who admitted paying bribes. During qualitative interviews, company owners became much more talkative regarding informal practices.

Table 7.5: Bribe payments transition matrix (2012–17)

	Did not pay bribes in 2014–16	Paid bribes in 2014–16	All
Did not pay bribes in 2009–11	463	31	494
Paid bribes in 2009–11	19	4	23
Answer declined	1	0	1
All	483	35	518

Source: Authors' own calculations using IIM 2017 data.

8 Workforce

Of the estimated 14 million Mozambicans of active age (15–65) in 2017, according to National Institute of Statistics (INE) estimates (INE 2007), 67.2 per cent have an economic occupation, estimated to be around 9.6 million (INE 2016). More recently, the census of firms in 2014/15 reported close to 740,302 workers in companies and non-for-profit institutions in the country (INE 2017). Of these, the latest statistics for the third trimester of 2016 reported that 490,415 workers were registered and contributing to the country's pension system, and therefore had formal status. We should assume that this value underestimates the true number of workers in the formal economy, as a number have not undergone this legal registration step. 'Despite the fact that most of the population are economically active and have some form of job, only a minority of workers are fully employed. This suggests that low productivity, low-quality (or bad) jobs are prevalent' (Jones and Tarp 2013: 18). Formal sector jobs have the potential to improve productivity and legal protection and are therefore one of the most pressing development issues in Mozambique. Manufacturing jobs are considered 'good jobs' (DNEAP 2013). This section investigates different characteristics of the Mozambican manufacturing workforce.

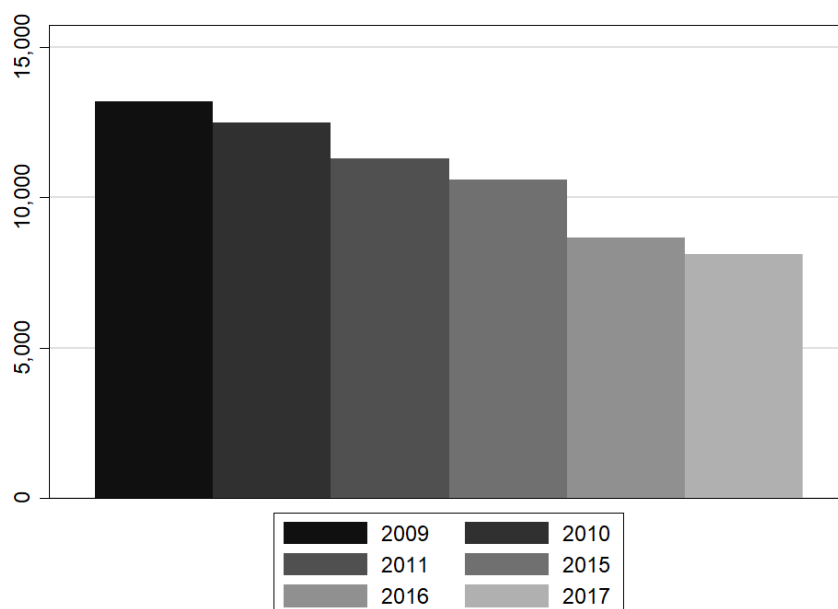
8.1 Employment

As Mozambique faces labour market challenges such as unemployment, underemployment, low productivity, and low-quality jobs, the creation of good employment is greatly needed. In general, the current 'generation of quality jobs is largely insufficient to absorb the growing supply of labor' (Sparreboom and Staneva 2015: 15). Every year, around 300,000 young people enter the Mozambican labour force and formal employment would have to grow by 10 per cent to absorb them (GIZ 2014).

The total number of permanent and temporary workers among the manufacturing companies interviewed has decreased over time. The statistics in Figure 8.1 illustrate that the number of employed workers in the firms that were in operation in both survey rounds dropped by one-third from 13,200 in 2009 to 8,100 in 2017. In addition, 4,376 jobs in the original sample were lost due to firm closures in the intermediate period. Although we do not know whether the affected workers largely have moved to firms not in the sample (e.g. firms that were founded after 2009), this seems unlikely due to the economic crisis, which has forced many companies to close (Club of Mozambique 2016c, 2016d). Therefore, the trend of dropping employment

rates is most likely also true for companies that are not part of the sample. However, further research needs to be done on this topic.

Figure 8.1: Sum of jobs in sampled companies



Source: Authors' own calculations using IIM 2017 data.

8.2 Labour force characteristics

Table 8.2 compares different kinds of employees by firm type over time. Independently of size, most firms have a high proportion of permanent full-time workers. However, this decreased from 91.1 per cent in 2011 to 81.1 per cent in 2015 and to 80.8 per cent in 2017. While the share of permanent full-time employees decreased, the shares of temporary and casual workers increased from 8.7 and 6.4 per cent to 10.6 and 22.5 per cent respectively up until 2015 but decreased thereafter to 9.8 and 13.0 per cent respectively in 2017. Overall, the higher share of temporary and casual workers and lower share of permanent full-time employees may reflect a reaction to the recent economic crisis in the country. The years 2016 and 2017 were particularly difficult, with the number of all types of workers decreasing.

The share of female employees increased from 8.1 per cent in 2011 to 14.2 per cent in 2015, and thereafter decreased to 10.6 per cent in the following two years.

As in 2012, micro-sized companies still employed relatively fewer permanent full-time workers, more temporary and casual workers, and fewer women than small and medium-sized

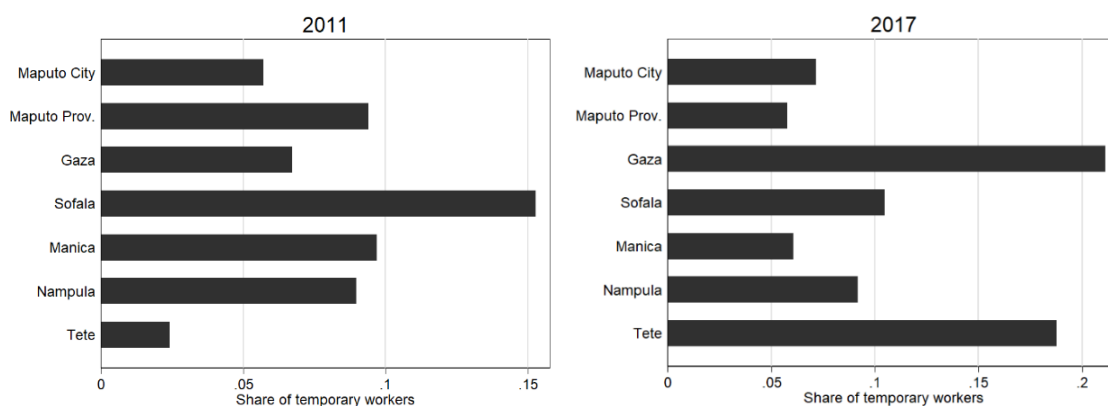
companies in 2017. The likelihood for informal companies to hire temporary or casual employees was already high in 2011 but increased over time, which may reflect a solution for company survival in times of crises (Table 8.1).

Table 8.1: Share of different kinds of workers, by firm type, per cent

2011	All	Micro	Small	Medium	No NUIT	NUIT
Permanent full-time workers	91.06	88.53	96.96	94.63	89.71	91.43
Temporary workers	8.74	11.18	3.04	5.37	10.29	8.32
Casual workers	6.45	8.48	1.63	3.84	6.77	6.36
Women	8.11	6.20	11.93	11.80	3.42	9.39
Observations	520	352	123	44	111	409
2015	All	Micro	Small	Medium	No NUIT	NUIT
Permanent full-time workers	81.10	76.29	91.80	93.50	75.43	84.04
Temporary workers	10.66	13.82	3.66	2.20	12.77	9.55
Casual workers	22.52	19.80	39.31	3.41	23.70	21.90
Women	14.26	12.01	16.84	26.20	4.31	19.45
Observations	520	382	103	35	178	342
2017	All	Micro	Small	Medium	No NUIT	NUIT
Permanent full-time workers	80.80	76.25	93.05	94.38	74.92	83.85
Temporary workers	9.78	12.23	3.07	2.76	12.71	8.26
Casual workers	12.97	17.06	0.83	4.06	20.91	8.85
Women	10.62	7.84	19.23	15.55	4.60	13.75
Observations	520	382	103	35	178	342

Source: Authors' own calculations using IIM 2017 data.

Looking at the share of temporary workers by province in Figure 8.2., the provinces of Gaza and Tete are especially notable. In Gaza, it increased from 7 per cent to 21 per cent over a period of six years, and in Tete, the share of temporary employees increased from 3 to 18 per cent. However, the shares in Sofala and Manica decreased. A closer look at the provinces' individual economic development is needed to understand these differences.

Figure 8.2: Share of temporary workers, by province

Source: Authors' own calculations using IIM 2017 data.

8.3 Labour force gains and losses in 2016 and 2011

As the previous sub-section has already shown that the number of permanent employees decreased among all firm sizes, it is not surprising that the share of companies hiring new workers fell by more than half from 29 per cent in 2011 to 13 per cent in 2016. The hiring patterns of Tete changed strongly; while 29 per cent of the firms in this province recruited new labour in 2011, only 5 per cent did so in 2016. Similar developments can be observed in Manica and Gaza. Companies without a taxpayer number also recruited considerably fewer workers in 2016.

Companies not only hired fewer workers, they also lost current workers, either because they left voluntarily or were made redundant. While only 14 per cent of the companies lost workers in 2011, this was the case for 37 per cent in 2016.

Table 8.2: Staff gains and losses in 2016 and 2011, share of firms

	2016 Hiring	2011 Hiring	2016 Leaving	2011 Leaving	Observations
All	13.08	29.04	36.54	14.09*	520
Micro	8.12	22.73	30.89	9.14*	382 (352)
Small	23.3	37.40	54.37	17.89	103(123)
Medium	34.29	54.55	45.71	43.18	35(44)
No NUIT	7.3	24.32	30.90	8.11	178 (111)
Maputo City	19.86	32.62	38.30	18.57**	141
Maputo Prov	14.29	32.86	50.00	27.14	70
Gaza	8.33	29.17	18.75	12.50	48
Sofala	10.89	24.75	35.64	5.94	101
Manica	8.57	31.43	34.71	7.25**	70
Nampula	14.00	18.00	34.00	12.00	50
Tete	5.26	28.95	36.84	10.53	38

Note: *Two missing observations **One missing observation.

Source: Authors' own calculations using IIM 2017 data.

8.4 Quality of labour

Overall, firm owners seem to be quite satisfied with their labour force as more than two-thirds of the interviewees stated the quality of local labour satisfied all needs of their firms (Table 8.3). Medium-sized firms were slightly more satisfied with local labour than small and micro enterprises. Over one-third reported that the local workforce partly satisfied the needs of companies, and only 5 per cent stated that it absolutely or generally did not satisfy the needs of firms. This is a notable difference compared with 2012 when more than 20 per cent of the companies stated that their workers were not sufficiently skilled.

Table 8.3: Quality of local labour and firm training

	Satisfies all needs	Cannot satisfy needs	Firm provides training	Observations
All	61.35	5.00	21.54	520
Micro	60.73	4.98	17.02	382
Small	62.14	4.55	27.18	103
Medium	65.71	5.72	54.29	35
No NUIT	61.80	3.94	12.92	178
Maputo City	60.99	7.09	28.37	141
Maputo Prov	68.57	4.29	30.00	70
Gaza	66.67	4.16	18.75	48
Sofala	59.41	3.96	21.78	101
Manica	55.71	1.43	7.14	70
Nampula	56.00	8.00	20.00	50
Tete	68.42	2.63	13.16	38

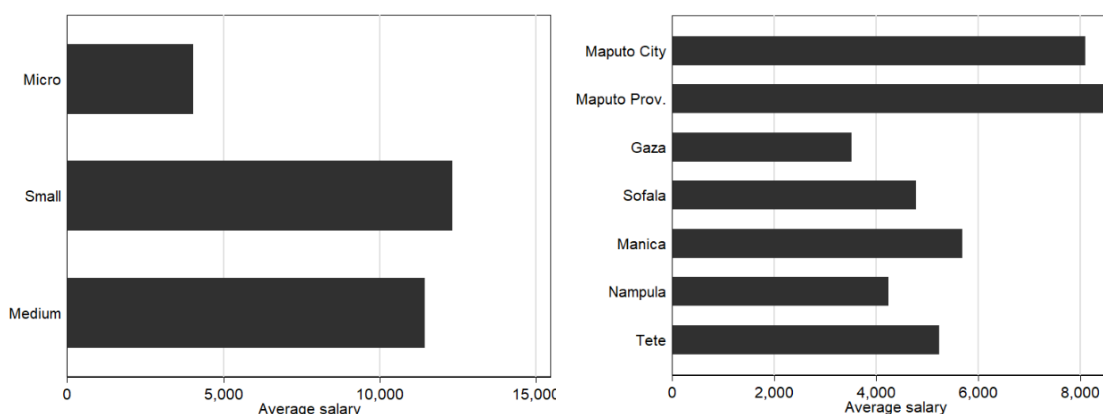
Source: Authors' own calculations using IIM 2017 data.

While only 9 per cent of firms provided training for their workforce in 2012, this share increased to around 21 per cent in 2016. Even 13 per cent of firms without a company taxpayer number provided training. Overall, the number of firms carrying out any kind of workers' training increased by firm size. Maputo City and Maputo Province had the highest share of firms offering training (around 30 per cent) and Manica the lowest (7 per cent).

8.5 Salary

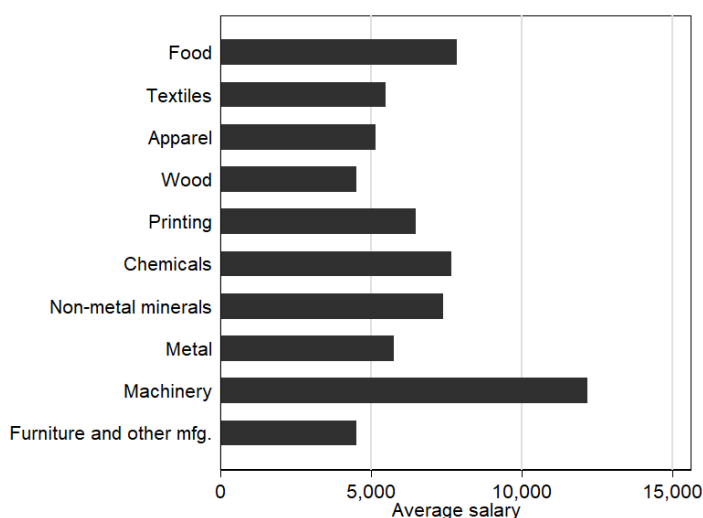
On average, workers in the companies interviewed earned MT6,200, which is slightly higher than the national minimum wage of MT5,965 (except for MT4,335 for bakeries) (Sapo Notícias 2017). However, there were major differences between the provinces. For instance, in Maputo Province workers tended to earn more than double (MT8,500) that of workers in Gaza (MT3,500) and Nampula (MT4,200). In Maputo City, the average salary of MT8,100 was also higher than in the other provinces (see 8.3). Thus, companies in all provinces except for Maputo Province and Maputo City were paying an average salary lower than the minimum wage. Again, this is partly reflective of the different sectorial composition of manufacturing in the different provinces of Mozambique.

Figure 8.3: Average salary, by province and firm size



Source: Authors' own calculations using IIM 2017 data.

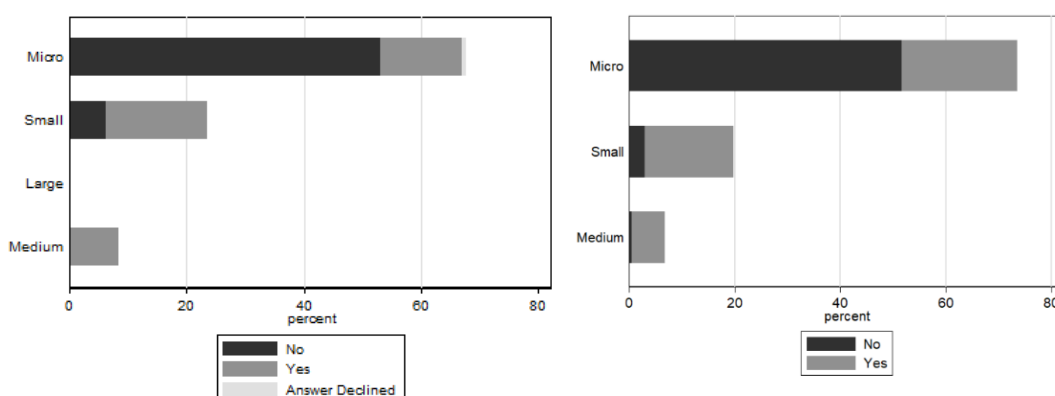
Figure 8.3 reports the average salary of company workers by firm size. The monthly salary that small companies pay is, at MT12,300, the highest and three times higher than that of micro companies (MT4,000). Surprisingly, the average salary of medium firms is MT11,500 and slightly lower than the that of small companies. This suggests the possibility of higher wage inequality within medium-sized companies, where it is more likely that production workers are less informed about management wages, while in small and micro firms it becomes harder for this type of information asymmetry to occur. Such hypotheses gain some strength when observing in Table 4.3 above that wages in medium-sized firms have a lower share of the value added than in either micro or small firms. Figure 8.4 shows that the average salaries in the wood and furniture sectors are the lowest (MT4,500), followed by apparel, textiles, and metal, which are all lower than the national minimum wage. The machinery sector is notable in that it pays an average wage of more than MT12,000. The salaries in the food, chemicals, and non-metal minerals sectors are also higher than the overall average.

Figure 8.4: Average salary, by sector

Source: Authors' own calculations using IIM 2017 data.

8.6 Social security

Figure 8.5 and the transition matrix in Table 8.4 show that of the firms interviewed, the number of companies contributing to social security had increased from 208 to 235. However, some of the firms that were paying social security for their workers in 2011 were not doing so in 2016. Almost all the medium-sized companies were paying social security fees, as it is probably impossible for a company of visible size to avoid this kind of payment. However, more than two-thirds of micro enterprises were not contributing to the Mozambican social security fund. For them, it is probably more difficult to pay, as their businesses often do not have regular cash flow. Qualitative interviews also found that some companies pretended to be contributing to the national institute of social security (INSS), while the money stayed within the firms.

Figure 8.5: Social security contribution, by firm size in 2011 (left) and 2016 (right), per cent

Source: Authors' own calculations using IIM 2017 data.

Table 8.4: Transition matrix: contribution to social security in 2011 and 2017

	No 2017	Yes 2017	Observations
No 2011	47.50	11.73	308
Yes 2011	6.73	33.27	208
Answer declined	0.58	0.19	4
Observations	285	235	520

Source: Authors' own calculations using IIM 2017 data.

9 Owner characteristics

The characteristics of firm owners or managers can profoundly affect a company's success. For example, Ogubazghi and Muturi (2014) found that in Eritrea, the owner's/manager's age is an important determinant for access to bank loans by small and medium-sized enterprises (SMEs). In other countries, educational levels of owners/managers strongly influence a company's overall performance (e.g. Teixeira 2002; Bhutta et al. 2008). This section describes some of the characteristics of Mozambican owners or managers if the owners were not available to be interviewed.

9.1 Gender, age, and ethnicity

Overall, female ownership seems to be increasing. In 2006, only 3.4 per cent of owners were found to be women (DNEAP 2006), while female ownership increased from 5 per cent in 2012 to almost 12 per cent in 2017. The number of female owners increased for all company sizes. While 4 per cent of micro company owners were women in 2012, almost 9 per cent were female in 2017. Female ownership of small and medium-sized enterprises is particularly notable, with 20 per cent of small and 14 per cent of the medium-sized firm owners being female, compared to 9 and 7 per cent in 2012. Only 2 per cent of female-owned businesses were informal in 2017 (see Section 7 for the criteria of (in)formality) and most operated in the food, wood, and apparel sectors (see Figure 9.1).

Table 9.1 shows that most owners were between 35 and 64 years old (71 per cent). The mean age was 47. The owners of medium-sized companies tended to be slightly older than the owners of micro and small companies: 33 and 36 per cent, respectively, of owners of micro and small companies are between 50 and 64 years old, while 43 per cent of owners of medium-sized enterprises are of this age. Almost 10 per cent of owners are 65 years or older, most of whom operate a micro company. Qualitative observations lead to the conclusion that most of these older firm owners might not be able to retire because they are working their entire lives only to survive, without being able to save for the future. Most have never contributed to social security funds, and therefore see no other option to working beyond retirement age.

Of the firms interviewed that survived after 2012, the number of owners with African ethnicity increased from 88 per cent in 2012 to 95 per cent in 2017, while European and Asian owners decreased from 7 and 6 per cent in 2012 to 3 and 2 per cent (DNEAP 2013: 66). This trend might

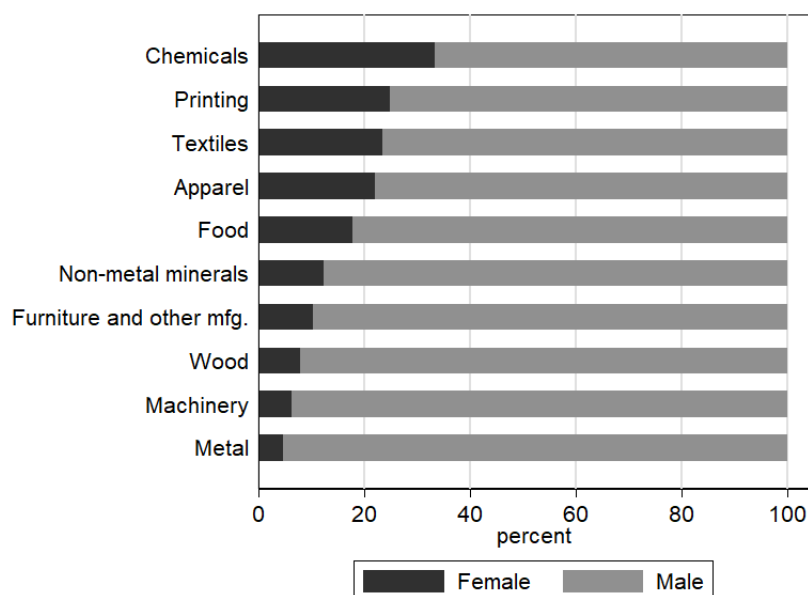
have something to do with the current economic crisis but must be analysed carefully as the comparison does not include the same number of observations for 2012 and 2017. Besides, as in 2012, semi-informal and ‘[i]nformal’ businesses are almost exclusively owned by people of African ethnicity.

Table 9.1: Gender, age, and ethnicity, by firm type

	All	Micro	Small	Medium	No NUIT
Female 2017	11.54	8.90	20.39	14.29	2.31
Female 2012	5.20	3.70	8.94	6.82	Missing obs.
<20 years	0.38	0.52	0.00	0.00	0.38
20–34 years	19.42	19.90	19.42	14.29	7.50
35–49 years	37.31	37.96	35.92	34.29	14.23
50–64 years	33.27	32.68	35.92	42.86	10.00
>=65 years	9.62	9.95	8.74	8.57	2.12
African	95.38	97.64	92.23	80.00	33.65
European	3.08	1.31	6.80	11.43	0.38
Indian	1.54	1.05	0.97	8.57	0.19
Observations	520	382	103	35	178

Source: Authors’ own calculations using IIM 2017 data.

Figure 9.1: Sector of firms, by gender of owners



Source: Authors’ own calculations using IIM 2017 data.

9.2 Education and party membership

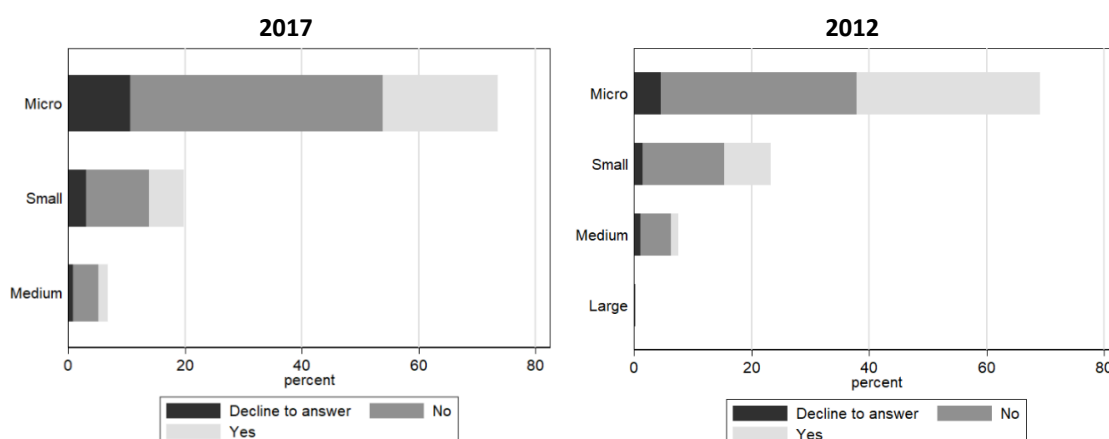
Table 9.2 illustrates the highest educational level obtained by firm owners. There was no specific educational level that most of the interviewees had obtained, but almost all seemed to have gone to school and around 40 per cent had obtained either a Secondary ESG1 or ESG2 education. About 14 per cent held a university degree and, interestingly, most owned a micro company, unlike in 2012 when those owners who had obtained a university degree mainly owned medium-sized companies (DNEAP 2013: 67).

Table 9.2: Education, by firm size

Level of education	Micro	Small	Medium	Total
Don't know	0.19	0.00	0.00	0.19
Literacy	0.96	0.00	0.00	0.96
No education	1.15	0.00	0.00	1.15
Primary EP1	15.19	1.92	0.00	17.12
Primary EP2	10.96	0.58	0.19	11.73
Secondary ESG1	15.38	3.85	0.19	19.42
Secondary ESG2	15.19	3.65	1.73	20.58
Technical school – basic	2.88	0.19	0.00	3.08
Technical school – elementary	0.58	0.00	0.00	0.58
Technical school – secondary	4.81	4.23	1.73	10.77
Tertiary education	6.15	5.38	2.88	14.42
Total	73.46	19.81	6.73	100.00

Source: Authors' own calculations using IIM 2017 data.

Many of Mozambique's political figures holding the highest office run a business or are strongly connected to the country's most important companies (Krause and Kaufmann 2011). Therefore, it is interesting to look at political affiliation of the companies sampled. Figure 9.2 illustrates that party membership of firm owners seems to have decreased since 2012. In 2012, 40 per cent of the owners interviewed indicated that they were a party member while only 27 per cent said this was the case in 2017. However, more interviewees declined to answer (14.42 per cent) in 2017 than in 2012 (7.12 per cent). Overall, owners of micro firms (27 per cent were party members) and small firms (30 per cent were party members) were still more likely to be party members than those of medium-sized companies (23 per cent). However, in 2012, there was a higher percentage of party members among owners of micro and small firms, 45 per cent and 34 per cent respectively. Qualitative participant observation found that many firm owners were not very eager to say they were party members. They may even have told the enumerators they were not members of any party even if they were.

Figure 9.2: Member of political party, by firm size in 2017 and 2012

Source: Authors' own calculations using IIM 2017 data.

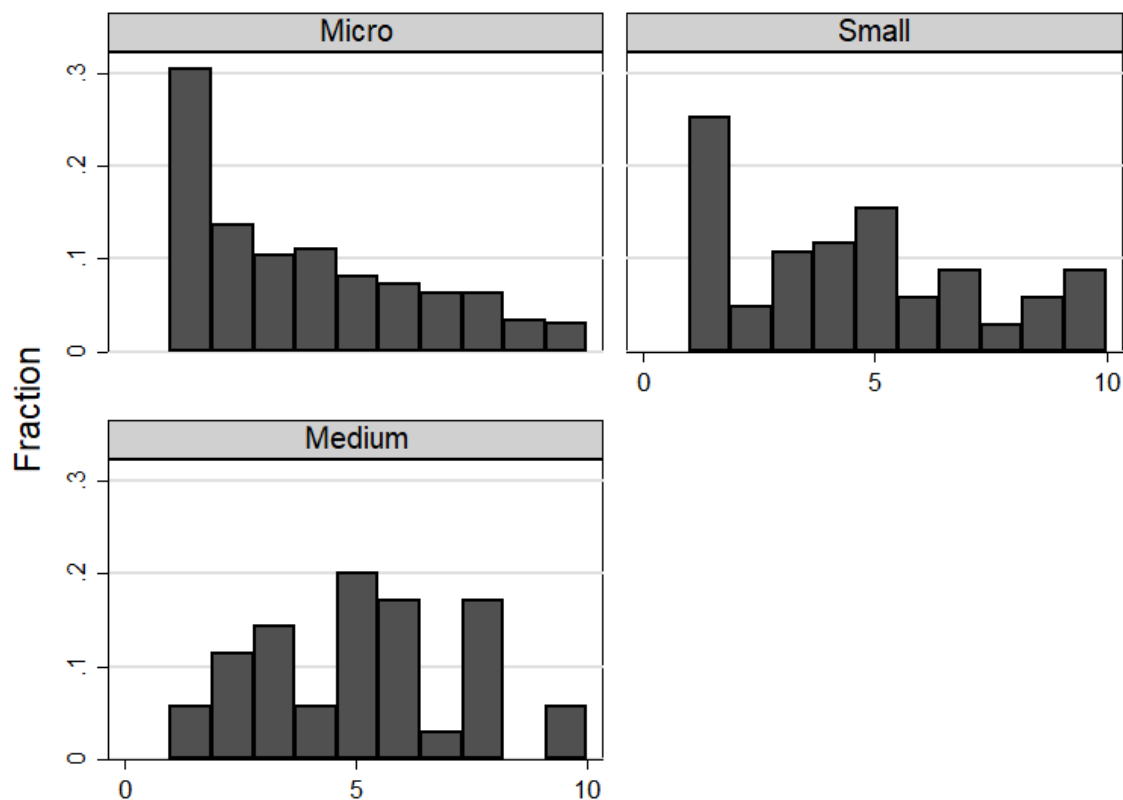
Like 2012, around 90 per cent of those owners who were party members in 2017 indicated they were members of FRELIMO. None of the medium-sized company owners said they were members of RENAMO, while 3.23 and 3.92 per cent of the owners of the small and micro firms sampled were RENAMO members.

9.3 Risk taking and trust

The firm owners or managers interviewed were asked for their levels of risk aversion on a scale of 1 to 10. Owners and managers of micro companies seem to be quite risk averse with 30 per cent of them stating they did not take any risk at all (1), and their mean risk level being 3.7. Only 35 per cent were ready to take risk at levels between 5 and 10. However, qualitative research showed that they tended to answer 'yes' or 'no' to the question instead of indicating a risk level, because it was difficult for many of them to imagine a scale. Instead, the enumerators often decided what would be an adequate risk level after a short conversation about risk taking. Moreover, they tended to answer what society expected from people, meaning that taking risks should be avoided, instead of talking about their personal behaviour towards risk. Small enterprise owners did not seem to be willing to take much risk either, with 25 per cent of them stating they would not take any risk at all and having a mean risk level of 4.5. However, their replies were more diverse, with almost half (48 per cent) indicating a risk level of between 5 and 10. Only 6 per cent of medium-sized company owners were highly risk averse, and 63 per cent

said they were taking risks at levels 5 to 10, with their mean risk level being 5.1. Distributions of risk-aversion by company size are shown in Figure 9.3.

Figure 9.3: Risk aversion, by company size

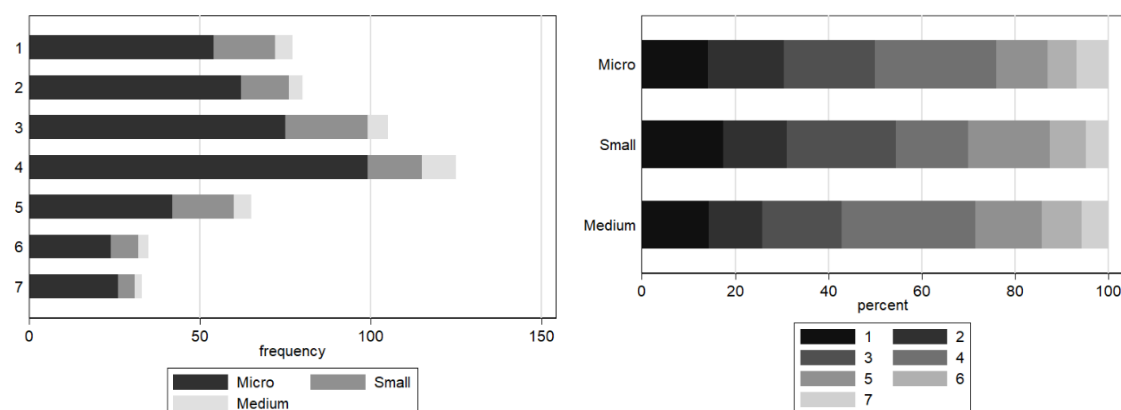


Graphs by Size category 2017

Source: Authors' own calculations using IIM 2017 data.

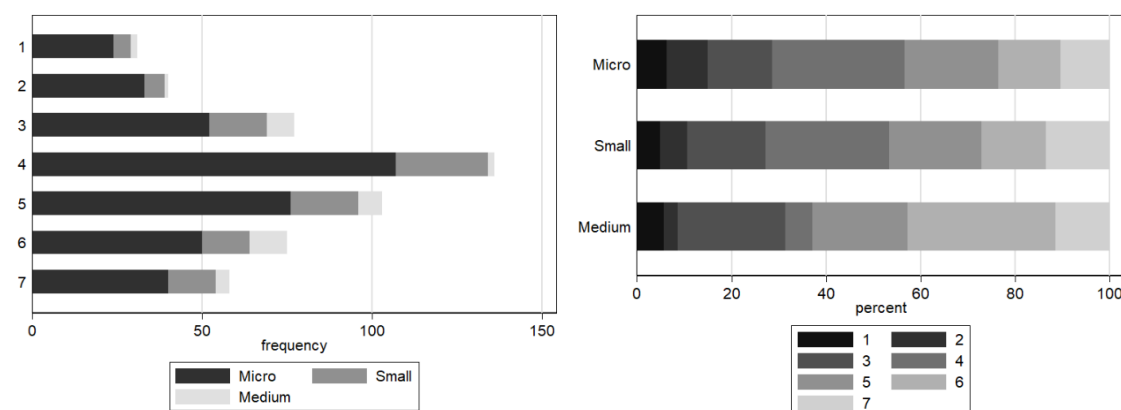
A high level of trust seems to be an important component of a well-working business environment. It 'makes partnerships, strategic alliances, and networks of small firms successful' (Sako 2006: 267). However, distrust seems to be a widespread phenomenon in Mozambican society. The mean value of the general trust level (1–7) indicated by the firms sampled, was relatively low at 3.5. As shown in Figure 9.4, micro and small firms trusted slightly less (general trust level of 3.5 and 3.45) than medium-sized businesses (3.66). Micro firms are probably less willing to take risks and do not trust others because they need their business for their family to survive. If their enterprises fail, there is no social security net bolstering them, and they do not have high savings levels either.

Figure 9.4: Level of general trust, by firm size



Source: Authors' own calculations using IIM 2017 data.

Figure 9.5: Trust in business partners, by firm size



Source: Authors' own calculations using IIM 2017 data.

However, Figure 9.5 depicts that company owners' trust in business partners is slightly higher than general trust. The mean trust level of the firms interviewed is 4.34 and increases slightly with firm size.

9.4 Determinants of labour productivity

Table 9.3 represents ordinary least squares (OLS) estimates of company owners' characteristics on labour productivity (log). Outliers and means are excluded. It shows that owners' educational level, foreign ownership, the risk level a company owner is willing to take, and the formality level of an enterprise are correlated with the labour productivity of Mozambican manufacturing firms. More specifically, column 6 shows that an owner having an educational level equivalent to a secondary degree or higher increases labour productivity by 35 per cent on a 5 per cent

level. A foreign owner strongly increases labour productivity by 99 per cent. An owner's risk aversion, i.e. an indicated risk of between 1 and 4 out of 10 possible levels, decreases labour productivity by 51 per cent on a 1 per cent level. Enterprises which are in possession of a NUIT are also likely to be more labour productive than those without one. Female ownership and party membership do not seem to be significant determinants of the manufacturing sector's labour productivity in Mozambique. However, this model only explains 11 per cent of the variance in labour productivity.

Table 9.3: Determinants of labour productivity, log, no means, no outliers

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Secondary education	0.573** * (1.378)	0.556*** * (0.138)	0.550** * (0.138)	0.498** * (0.137)	0.396** (0.140)	0.303 (0.142)	0.193 (0.146)
Female ownership		0.235 (0.222)	0.218 (0.221)	0.216 (0.215)	0.213 (0.212)	0.144 (0.212)	0.033 (0.205)
Party membership			-0.196 (0.156)	-0.167 (0.154)	-0.178 (0.154)	-0.177 (0.153)	-0.167 (0.152)
Foreign ownership				1.20*** (0.381)	1.17*** (0.412)	1.10*** (0.416)	* (0.377)
Risk aversion					0.394** * (0.137)	-0.359*** (0.136)	-0.330** (0.133)
NUIT possession						0.488*** (0.138)	0.283* (0.149)
(log) firm size 2011							0.292** * (0.698)
R²	0.034	0.036	0.040	0.066	0.082	0.104	0.143
Observations	457	457	457	457	457	457	457

Note: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. Risk aversion corresponds to risk level 1-4 of 10. Robust standard errors in parentheses.

Source: Authors' own calculations using IIM 2017 data.

10 Social networks

10.1 Business associations

Business associations are supposed to represent their members' interests and provide non-financial services (DNEAP 2013). While certain associations seem to provide effective support for their members, others are not very helpful, for example by being active rent-seekers (Doner and Ross Schneider 2000). Therefore, it is interesting to have a look at the situation of business associations in Mozambique. Table 10.1 shows that from 2012 to 2017, the number of firms sampled who were members of a business association had slightly increased from 74 to 83. However, this is only 15 per cent of all 520 firms interviewed in 2012 and 2017. Micro firms are quite unlikely to become part of an association, although their membership percentage has increased from 5.4 to 7.6 per cent. Around one-third of small firms participate in and almost half of medium-sized companies are part of an association. Unsurprisingly, firms without a company NUIT are very unlikely to be members. However, their number increased from 3 to 14 after 2012, with some of those companies having become members of the Association for the Informal Economy in Mozambique (AEIMO/WIEGO).

Table 10.1: Member of business association, per cent, by firm type

	All	Micro	Small	Medium	No NUIT
Member of b.a. 2017	15.96	7.6	35.98	48.57	7.86
Observations	520	353	103	35	178
Member of b.a. 2012	14.23	5.4	23.58	48.57	2.70
Observations	520	352	123	35	111
Role of association in 2017:					
Very important	23.08	19.11	36.89	25.71	15.73
Important	50.19	51.83	39.81	62.86	51.69
Little	19.04	20.68	15.53	11.43	22.47
No role	7.59	8.38	7.77	0	10.11
Observations	520	382	103	35	178

Source: Authors' own calculations using IIM 2017 data.

Overall, most of all types of firms believe business associations play a very important or an important role. A few of the smaller enterprises (8 per cent of both micro and small firms) and firms without NUIT (10 per cent) are more sceptical, stating that business associations do not play any role. This is 'perhaps because associations are likely to provide more useful non-financial services to larger firms due to their higher internal capacity and bargaining power towards the association' (DNEAP 2013: 89).

The most important benefits provided by associations to their members in 2017 were the provision of commercial and technical information, as well as being a forum for interaction with other firms (see Table 10.2). Interestingly, the provision of information was not regarded as the most important benefit in 2012. In 2017, the second and third most important benefits were the association being a place to identify trading partners and the definition and enforcement of norms and quality standards. While the identification of trading partners was not part of the top three benefits in 2012, the definition and enforcement of norms and quality standards was perceived as the third most important asset in both years. The reason for all the 2017 percentages being higher is probably the opportunity for interviewees to indicate more than three benefits due to a slip in the questionnaire.

Table 10.2: Benefits of business associations, per cent

	Percentage in 2017	Percentage in 2012
Lobbying the government	61.45	43.84
Commercial/technological fairs	50.60	30.14
Lobbying banks for access to credit	51.81	12.33
Facilitating access to key inputs	65.06	35.62
Providing commercial and technical information	74.70	41.10
Defining and enforcing norms and quality standards	68.67	42.47
Resolving business disputes	61.45	34.25
Providing a 'moral guarantee' to foreign partners	50.60	19.18
Forum to interact with other firms	74.70	50.68
Place to identify trading partners	69.88	29.17
Other	1.20	0
Observations	83	73

Source: Authors' own calculations using IIM 2017 data.

Looking at the reasons for not being a member of a business association, the results are like those in 2012. Table 10.3 reports that the most important reasons for non-membership were the non-existence of a relevant association and the perception that existing associations were not beneficial. Unfortunately, the problem of lack of personal connections to other association members or its authorities as a reason is as relevant as it was in 2012. An important aspect, which is not only a problem for business associations but also a general challenge in Mozambique, is missing information, which several firm owners specified as an 'other' reason for non-membership. A qualitatively interviewed informal shoemaker explained he did not see

any benefit in the shoemaker association because it did not provide him with any information about how to become formal and how to get access to finance.

Table 10.3: Reasons for non-membership, per cent

Reasons for non-membership	Percentage
No relevant association	49.66
Existing associations provide no tangible benefits	14.42
The association did not renew my membership	0.69
Membership fee is too high	3.20
Membership is restricted to enterprises with specific interest	18.54
Lack of personal connections to other members	23.34
Lack of connections to association authorities	21.05
Other	9.15
Have applied, but was rejected	1.83
Observations	437

Source: Authors' own calculations using IIM 2017 data.

10.2 Business contacts

Business networking, including learning from the success of others and letting other firm owners know about one's own business, can be fruitful for companies. In Mozambique, where access to finance is scarce, an alternative for enterprises could be to get financial or non-financial assistance from business contacts. However, Table 10.4 reports that only 33 of 520 companies received assistance from a contact. Interestingly, most of these were micro companies and 23 did not have a company NUIT. Only three medium-sized enterprises received assistance from their contacts. This might reflect the non-existence of finance for very small, semi-formal, and informal companies. Looking at the sectors of the companies which did receive support from other businesses, 16 produced wooden products or furniture, while five produced food. Most of the assisted companies (17) received informal loans, i.e. direct money transfer or additional credit.

Table 10.4: Company types that received assistance from business contacts

	All	Micro	Small	Medium	No NUIT	Wood	Furniture	Food
2017	33	19	11	3	23	11	5	5
Observations	520	382	103	35	342	139	67	73

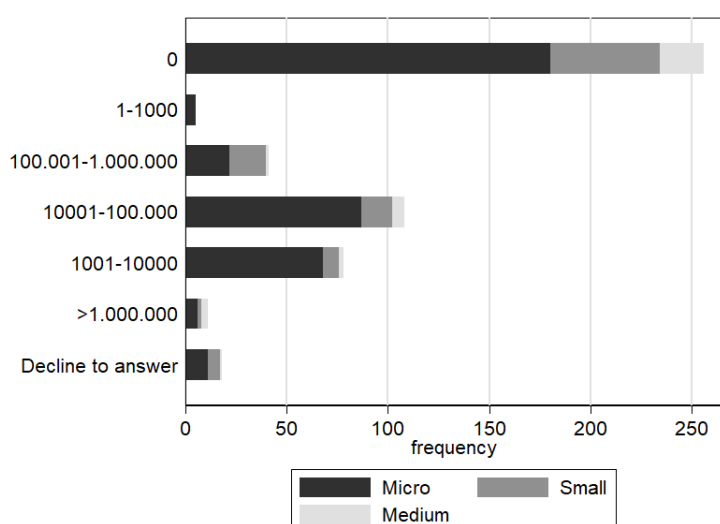
Source: Authors' own calculations using IIM 2017 data.

When reversing the questions, firm owners were asked for the largest amount they would lend to a business contact. Almost half of the 519 owners interviewed stated they would not lend anything to a contact. Around 15 per cent said they would lend between MT1,001 and

MT10,000, and 21 per cent would lend between MT10,001 and MT100,000. Only 10 firms indicated they would lend more than MT1 million to their contacts.

Those willing to lend money were mainly owners or managers of micro companies. Around 87 per cent of those company owners who would lend between MT1,001 and MT10,000, and 81 per cent of those willing to lend between MT10,001 and MT100,000, managed micro companies. However, where managers of small and medium-sized companies were willing to lend money, they seemed willing to lend higher amounts; 14 per cent and 6 per cent of small and medium-sized enterprises would lend between MT10,001 and MT100,000, while only 10 per cent and 3 per cent would lend between MT1,000 and MT10,000 (Figure 10.1).

Figure 10.1: Largest amount companies would lend to a business contact

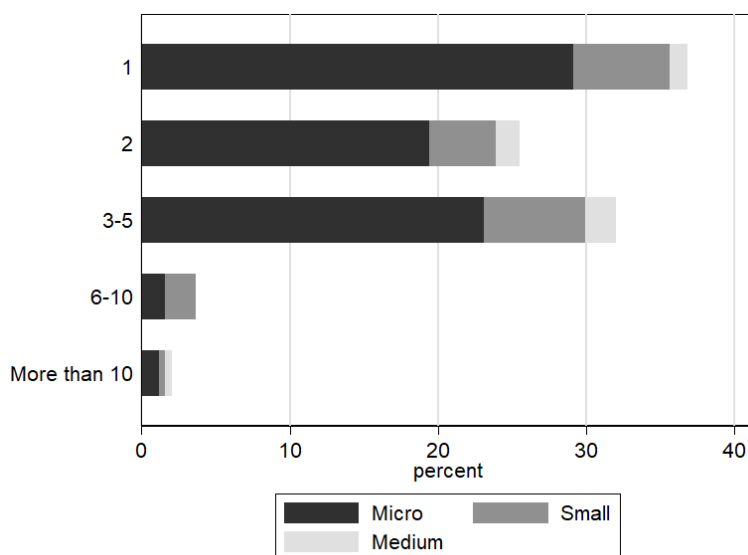


Source: Authors' own calculations using IIM 2017 data.

Interviewees also reported the number of contacts they would expect to get assistance from in a situation of crisis or investment, even though they would not help them out if they were asked to assist them. Overall, 34 per cent of the firms stated they would not expect to get assistance from anyone (see Figure 10.2 and Table 10.5). Twenty-two per cent of owners hoped to get help from one business contact, and 19 per cent of the firms expected assistance from two contacts. Twenty-one per cent of companies expected assistance from between three and five contacts, and only 3 per cent expected assistance from between six and ten contacts. Most of the contacts companies expected to get help from were in the same sector. Firms abroad and people in politics were least likely to be expected to help. Moreover, company owners seemed to be aware that access to finance through banks was scarce and difficult to obtain, as more than 83

per cent did not expect any assistance from a bank or similar financial institution. However, there seemed to be an awareness that non-governmental organizations (NGOs) might be a potential source of help, as 4 per cent of the firms stated they expected assistance from one NGO.

Figure 10.2: Number of business contacts from whom companies hoped to get assistance



Source: Authors' own calculations using IIM 2017 data.

Table 10.5: Number of business contacts expected to give assistance by sector, per cent

	All	Same sector	Another sector	Firm abroad	Bank	Politics	NGO
None	33.65	59.62	64.45	97.50	83.08	97.88	95.00
One	21.54	16.92	16.21	0.96	13.08	1.35	4.23
Two	18.85	8.65	6.25	0.38	2.31	0.19	0.19
Three to five	20.58	7.12	5.66	0.87	0.19	0.00	0.00
Six to ten	3.46	1.15	1.17	0.00	0.19	0.00	0.00
>10	0.58	5.96	5.66	0.00	0.58	0.00	0.00
Answer declined	1.35	0.58	0.59	0.87	0.58	0.58	0.58
Observations	520	520	512	520	520	520	520

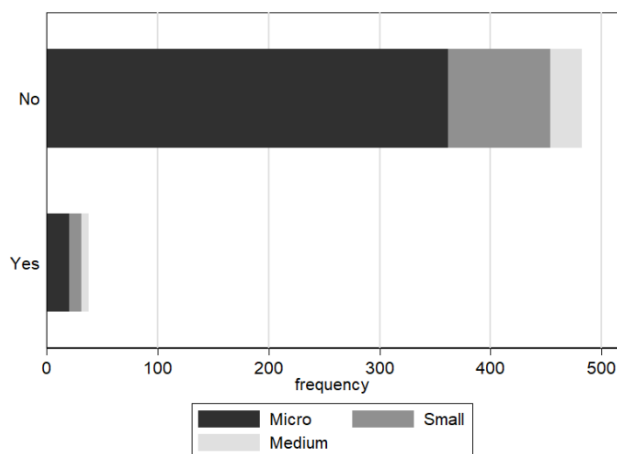
Source: Authors' own calculations using IIM 2017 data.

10.3 Social media

Facebook is an important channel for companies to reach potential customers and promote their products. However, only 38 of the 520 companies interviewed said they had a Facebook account (Figure 10.3). The likelihood of having an account increased with size, but even the share of medium-sized companies having an account was small (20 per cent). Membership of other

social media networks such as LinkedIn, Twitter and Instagram were even smaller since less than five interviewed companies were registered with each of these networks.

Figure 10.3: Does your company have a Facebook account?



Source: Authors' own calculations using IIM 2017 data.

Overall, business associations seem to play different roles in Mozambique. Some companies regard them as very important while others do not attribute any role to them. Moreover, business contacts do not seem to support one another very much despite the numerous challenges they are facing. However, it might also be possible that the companies do not have the necessary capacities to support their business contacts. It is also not common for companies in Mozambique to have a social media account.

11 Conclusions

This report has documented the main findings of the 2017 survey of manufacturing firms in Mozambique, *Inquerito as Industrias Manufactureiras 2017*. The results are based on interviews with 523 companies that were also interviewed in 2012, meaning that the final database constitutes the second round of a detailed panel data set of micro, small, and medium firms in six provinces of Mozambique.

The implementation of the survey was a success overall, despite institutional challenges related to the payment of enumerators. Two specific improvements over the previous survey round are worth highlighting: the use of tablets made it easier to supervise, follow, and validate the data, and the employment of enumerators with a background in accounting and management was instrumental for ensuring a higher quality of the economics account data, which is crucial for research within this field. While the results presented in this report are of a descriptive nature, they will spur a series of interesting research papers revolving around Mozambique's manufacturing sector.

Most of the policy advice outlined in the report on the 2012 survey still applies. However, the economic situation has worsened markedly for the manufacturing sector in Mozambique due to the overall economic climate, and the obstacles to firm growth persist. The following list highlights some of the most relevant findings from a policy perspective:

- **The average size of the firms in the sample declined from 20 employees in 2012 to 14 employees in 2017.** The median firm size declined from 6 to 4. This has resulted in total job losses of 5,100 jobs in the sampled firms alone with a further 4,376 in the firms that have closed. Firms have closed at a rate of 28 per cent (6.5 per cent per annum). This might be interpreted as a positive sign of the persistence of Mozambican manufacturing firms; however, it could also lead to the conclusion that many firm owners do not have options other than to continue with their unprofitable operations because formal jobs are unavailable.
- **The difficult conditions are also reflected in firm owners' perceptions about their firm's performance.** Almost 20 per cent of the firm owners said they had experienced large losses in 2016, almost three times as many as in 2011. Of those that reported losses, two-thirds stated that they were larger than expected, while

among the firms reporting profits, three out of four said that they were smaller than expected. Many firm owners referred to a lack of demand or low money circulation as a reason for the downturn.

- **Many key economic indicators that were previously not available are now recorded for the years 2015 and 2016.** These include total value added, gross profits, and total equity. Overall, the small and medium-sized companies reported significantly lower profits and value added in 2015 than in 2016, indicating that demand might be slowly returning for some products. On the other hand, micro-sized companies saw a decline in value added and profits from 2015 to 2016, which might show a delay in the economic crisis hitting the subsistence manufacturers.
- **Inputs to production are often of low quality or missing.** Around half of the companies in the sample reported that they sometimes ran out of input stock and had to halt production. The situation seems to be worst in Sofala and best in Tete, and worst for the wood, printing, and non-metal minerals sectors, although the difficulties apply to all provinces and sectors.
- Productivity as measured by value added per unit of labour as well as total factor productivity increased from 2015 to 2016 for small and medium-sized companies, while it declined for the micro-sized firms. Companies located in Maputo Province and Maputo City were generally more productive by a factor of four to the least productive province in the sample, Gaza. This in part reflects the composition of firms in the sample across provinces.
- **Exports are rare in the sample with only 19 companies reporting exporting goods.** However, the number is up from 10 firms in 2012. Most company owners blamed the high costs of getting an export licence as a reason for not exporting.
- **Almost half the companies fear being closed by the authorities.** The main reason for this is difficulties in conforming to laws—both tax laws and other laws. The number is somewhat lower for small and medium enterprises at around 30 per cent.
- **Many firms still operate informally, i.e. without a registration licence.** While most of the small and medium-sized companies possessed a NUIT, only around 60 per cent of micro firms had one. Non-transparency and corruption around registration procedures kept many firms informal, while registration occurred at different levels with little consistency. In a similar vein, it seemed almost impossible to comply with

all rules since officers would sometimes visit and find arbitrary violations of laws to fine the firm owners.

- **Lack of information, collateral, and high interest rates are major constraints to firms' credit.** Around 40 per cent of the companies in the sample were credit constrained by a definition that also included self-selection. Eleven per cent had had their bank loan applications denied. These numbers were high since around 60 per cent of the firms showed a demand for credit.
- **Compared to 2012, fewer employees are hired on permanent contracts, while the use of temporary and casual workers has increased.** A positive development for labourers is that more firms now make payments to social security.
- **Around 12 per cent of firm owners are female according to the recent interviews.** This number has doubled since the previous survey round in 2012. While there is no qualitative evidence on the reasons for this change, the increase in female ownership is consistent across micro, small, and medium-sized firms.
- **Company owners generally exhibit risk aversion and low levels of trust.** The owners of micro-sized firms, in particular, describe themselves as extremely risk averse. This is manifested in, for instance, low willingness to lend money. Social networks are limited as well, and the use of social media is generally non-existent.

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