

Firm Size Distribution in Lesotho Manufacturing Sector: Implications for Job Creation¹

By Rethabile Masenyetse, Mookameli Fuma and Malefu Manamathela²

Abstract

UNDERSTANDING FIRM firm size distribution is critical for informing policy intervention for sustainable job creation. The focus of the Government of Lesotho industrial policy has been to create jobs through growth of the manufacturing sector. To date, this has produced desirable results as witnessed by the surge in the production of textile and clothing resulting in manufacturing sector being the largest formal employer in the country. Using the unique dataset covering companies that are assisted by Lesotho National Development Corporation (LNDC) during the period 2004-2015, the paper evaluates the company survival patterns, investigate the evolution of firm size distribution in the manufacturing sector. The methodology employed takes into account the possible impact of the global financial crisis on the sector which presented a major shift in the global economic developments. The results show that the size distribution of the Lesotho manufacturing sector is dominated by the companies in the middle sized and large sized categories and they possess high survival rate. It is further found that majority of the companies in the sector remain in their size classes suggesting little growth by the sector. Smaller companies in the sector seem to be the ones registering faster growth. There is plethora of reasons underneath the differing survival patterns between the large and small firms and therefore different policy interventions should be explored for each category. The arising policy implications is that, for job creation effort should be put in place to increase the number of large companies and also support should be extended to the lower sized companies to increase their survival.

Keywords: Firm Growth, Size Distribution

JEL classification: L25, L6

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1 INTRODUCTION

ATTAINMENT OF HIGH inclusive economic growth and job creation remain the core macroeconomic priorities of the Government of Lesotho. This is rightly so because a fast growing economy that is capable of generating sustainable jobs is the foundation for addressing a prevalence of high levels of poverty and inequality. The National Strategic Development Plan 2012-2016 also targets at amongst others, to create high, shared and employment generating growth. The 2008 Labour Force Survey conducted by the Bureau of Statistics, estimates the unemployment rate in Lesotho to be at 25.3 per cent. At that level, it is indicative that unemployment is a major challenge for Lesotho. Although unemployment is not observed across all age categories, it is believed to be most prevalent amongst the youth. Historically, the South African mining industry has provided significant employment to Basotho, particularly in the gold and platinum mines. However, the continued decline in the price of gold coupled with the unstable labour market situations in South Africa and the changing global economic conditions resulted in the deterioration of the number of Basotho employed in this sector over time. The number fell from more than 127,385 in 1990 to less than 40,000 as at the end of 2015. Several studies have assessed the effects of the declining number of Basotho migrant workers in South Africa and the impact of remittances (Foulo, 1990, Crush et al, 2010). It is clear that the developments in the mining sector in South Africa have exacerbated unemployment conditions in Lesotho.

There have been other employment opportunities for Basotho in South Africa although not well documented in the literature. Some thousands of Basotho are employed in the South African agricultural sector every year as seasonal workers. In the post 1994 period there has also been a steep increase in Basotho employed in white collar jobs and domestic workers category. Going forward, the employment opportunities in South Africa may be difficult in light of the recent developments in South Africa relating to employment of foreign nationals. There are indications that in future conditions may be tighter. As such Lesotho may want to put more emphasis on creating more jobs through the domestic industrial sector. The industrial sector in Lesotho is estimated at 31.8 per cent of GDP in 2014 slightly above 30 per cent in 2000¹.

The issue of who creates most jobs has been well investigated in developed countries. However, despite its importance, little research has been done on the issue in developing countries, particularly in Sub-Saharan Africa. This is partly because of the scarcity of firm level data in developing countries. Company level data is normally obtained through industrial censuses which unfortunately are very scarce in developing countries due to the high cost of conducting frequent surveys. For instance, in Lesotho, the World Bank enterprise survey was first done in 2007 and the second wave in 2016. The Bureau of Statistics undertook the census of business enterprises in Lesotho. It is expected that going forward the census will be the valuable source of data for understanding business dynamics. This paper contributes towards filling that gap in the economic literature by assembling a panel of manufacturing companies in Lesotho and analyzing the size distribution. Because the paper uses the employment as the measure of firm size, then it directly addresses the questions on job creation by the sector.

Most studies on Lesotho manufacturing sector have adopted the macroeconomic approach to understanding the dynamics within the textile and clothing industry with exception of Staritz and Morris (2013) that analysed Lesotho textiles sector integration to the global value chains. This paper adopts a microeconomic approach, which can yield additional revelations about manufacturing sector and recommend appropriate policies with a view to ensuring creation and sustainability of jobs within the textile and clothing industry. The distribution of firms across different sizes and their survival patterns plays an important role in understanding the potential

¹ According to the World Bank Development Indicators, Industry corresponds to ISIC divisions 10-45 and includes manufacturing (ISIC divisions 15-37). It comprises value added in mining, manufacturing (also reported as a separate subgroup), construction, electricity, water, and gas.



for job creation, sustainability and innovation. The recent upgrading of the Department of Small Businesses to the level of a Ministry bears testimony to the growing importance of understanding firm dynamics.

The analysis of firm size distribution has been dominated by the use of the framework proposed by the Gibrat law. The law belongs to the stochastic growth models and can be traced to Gibrat's thesis in 1931. They argue that the determinants of firm growth rates, including product demand, managerial talent, innovation and government policy, are complex and determined by a range of factors and behaviour that make treating growth as a random shock on initial firm size. That is the shape of the distribution is the result of extremely complex economic processes (Biggs and Oppenheim, 1986). According to the Gibrat law the growth of the firm is independent of its initial size. The model implies that all firms grow at the same rate proportionate to their sizes. Therefore the probability distribution of growth rates was the same for all sizes of firms. That is the shape of the logarithm of size is log normal. Thus, over time, the size distribution will begin to be characterised by few large firms and many small ones. The distribution will be positive skewed, indicating increased concentration. While the Gibrat law has been the workhorse in industrial economics, it has been greatly criticized for its lack of theoretical underpinnings (Sutton, 1997, Coad, 2009). But because of its tractability it has been widely used in empirical work analysing the growth of companies and the changing size distribution of firms.

Testing the validity of the Gibrat's law has attracted a lot of attention in the empirical literature since the 1960s mostly in developed countries, for instance Mansfield (1962), Hart and Oulton (1996, 1999), Dunne and Hughes (1994), Evans (1987a, 1987b) and Hall (1987). Initial studies overwhelmingly supported the validity of the law but it has been continually rejected by recent evidence (Hart, 2000). For survey articles see Sutton (1997), Caves (1998) and Santarelli et al (2006). Empirical evidence from Sub-Saharan Africa has shown that small firms grow faster than the large ones (Page and Soderbom, 2012, Bigsten and Gebreeyesus, 2007). Interestingly there is evidence from Lesotho, McPherson (1996) tested of the law in five Southern African countries South Africa, Swaziland, Botswana and Zimbabwe including Lesotho using survey data. The study found that smaller firms grow faster than large ones. Furthermore, the evidence by Page and Soderbom (2012), Bigsten and Gebreeyesus (2007) and Gunning and Mangistae (2001) on Ethiopia, Sleuwaegen and Goedhuys (2002) on Cote d'Ivoire, Teal (1998) on Ghana and Dunne and Masenyetse (2014) on South Africa also reject the validity of Gibrat's law. Overall, previous

empirical research on which firms create most jobs provides mixed results. However, the prevailing narrative in developing countries and among donors is that small businesses create more jobs (Page and Soderbom, 2012). This has called for a more balanced policy intervention towards support for small and medium sized firms but not at the expense of large ones.

The objectives of the paper are threefold. Firstly, to compile firm level data for companies assisted by Lesotho National Development Corporation (LNDC) into a panel suitable for analysis of the industrial structure and analyse the evolution of the firm size distribution in Lesotho manufacturing sector in the pre and post global financial crisis periods. Secondly, to examine the patterns of company survival within the sector using transition matrices. Third, to investigate the relationship between firm size and growth using both the non-parametric and mean analysis methods. The findings of the paper are in line with the some stylized facts established in the empirical literature on firm dynamics but raise some interesting policy implications particularly on the crafting of industrial policy to ensure that small companies are able to create job. The results can be summarized by the following key points; first, the majority of the firms remain in their original size groups suggesting low dynamism in the sector. In essence, the sector has not been growing for some time suggesting deeper growth challenges. Second, the overall survival rate is high and is mainly observed amongst the large companies employing above 1000 employees. The lower size groups employing below 50 employees still face high death rate. Last, the overall participation in the sector is still dominated by large players mainly foreign owned. This has implications for innovation, indigenization and job creation.

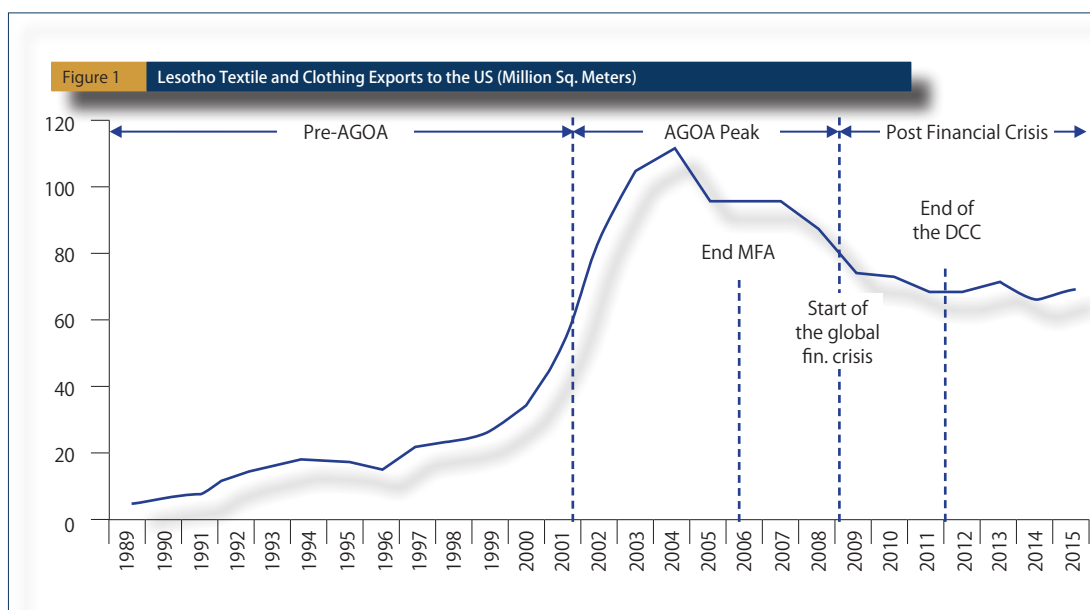
The remainder of the paper is structured as follows. The next section traces the evolution of the manufacturing sector in Lesotho and how it has impacted on macroeconomic performance and job creation. Section three discusses the data collection and panel construction and analyse the main characteristics emerging from the data. Section four presents the main results on the patterns of company survival, the changing size distribution and the relationship between firm size and growth. Section five discusses the constraint to doing business in Lesotho. The last section is the policy implications and conclusions.



2 EVOLUTION OF MANUFACTURING SECTOR IN LESOTHO

The evolution of manufacturing sector in Lesotho can be separated in three distinct periods, i) Pre AGOA Period, ii) AGOA Peak Period and iii) Post Global Financial Crisis Period. Figure 1 below presents Lesotho textiles and clothing exports to the US during the period 1989-2015. Lesotho's pursuit of export led industrialization strategy saw the surge in the manufacturing of textiles and clothing products driven by the increase in the number of Asian companies that relocated to Lesotho to take advantage of cheap labour and access to the United States (US) and other markets through Generalised System of Preferences (GSP) and the Multi-Fibre Agreements (MFA).

The coming into effect of African Growth Opportunities Act (AGOA) which allowed Lesotho exports duty free access to the US took the sector to the next level. The phenomenal growth led Lesotho to be considered among the leading exporters of garments through AGOA to the United States (US) in the early 2000. Understandably, the manufacturing sector is the largest formal employer in Lesotho. The manufacturing has not always been a major sector in Lesotho. In years prior to enactment of AGOA, it constituted mainly the food and beverages industry and quite a small clothing manufacturing industry. Subsequent to enactment of AGOA, the setting changed quite drastically. The manufacturing sector's contribution to the overall gross domestic product increased sharply, from less than 10.0 per cent to more than 20.0 per cent; and this was propelled by manufacturing of textiles and clothing. Between 2000 and 2003, exports of textiles and clothing increased by 202.0 per cent. The enactment of AGOA brought peculiar preferential incentives to producers in Sub-Saharan Africa. The producers from the East Asian countries took advantage of AGOA and set-up operations in Lesotho. That saw employment increasing to more than 50,000 employees as at 2004. Presently, the Lesotho textile and garment industry employs more than 40,000 workers, mostly women and remains the second largest employer. As figure 1 below shows, the quantity of Lesotho's exports to the US averaged 30 million square metres in 2000. However, following the period post enactment of AGOA, export of textiles and clothing to the US increased exponentially.



Overtime, a number of events affected the performance of the textile and clothing sector: The first major blow was in 2005, when the MFA came to an end. The MFA was an agreement amongst the western countries to limit imports from other textile producers such as Asia, which could produce these products more cheaply. That expiry saw fierce competition from textile producers in Asia which could produce these products more cheaply than Lesotho. In 2005, exports to the US declined quite significantly following the expiry of the MFA. The industry further took a knock during the global financial crisis of 2008. The financial crisis led to low import demand by the US buyers in response to weakened consumer demand. The coming to an end of the duty credit certificate facility in 2011 also made it difficult for local firms to compete with foreign firms. These developments have continued to threaten the sustainability of this sector unless there is a deeper understanding of the various challenges that confront this sector.

The observed pattern reflects the dynamism in the global value chains in recent years. Staritz and Morris (2013) shows Lesotho textiles sector operates in two distinct global value chains, the US based value chain operated by the Asian companies. The value chain was severely



affected by the financial crisis. The second value chain is the South African based value chain which is operated by the South African companies. The chain is driven by the high labour costs in South Africa and has been on the increase. This presents huge opportunities for the economy of Lesotho as most of the competitiveness issues inherent in the US value chain do not apply.

3 DATA

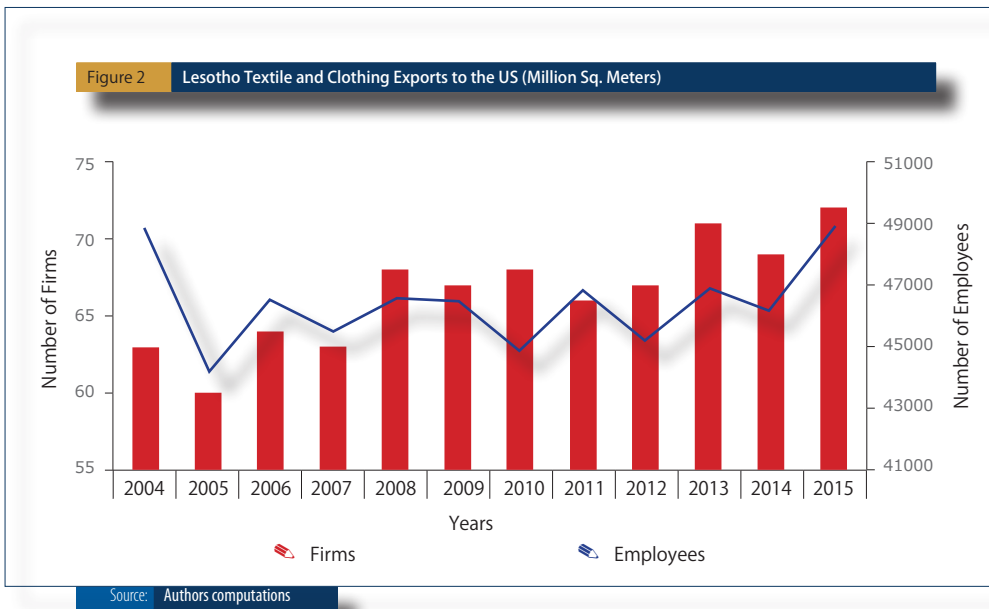
The study uses information collected from Lesotho National Development Corporation (LNDC) on its assisted companies during the period 2004 - 2015. Lesotho National Development Corporation is the government owned investment Promotion Company with the primary mandate to initiate, promote and facilitate the development of manufacturing and processing industries, mining and commerce in a manner calculated to raise the level of income and employment in Lesotho². In pursuing this mandate, the corporation collects employment statistics on companies that they assist. The assistance is mainly through provision of factory shells and setting up. The database of LNDC assisted companies constitute the largest proportion of firms operating in Lesotho manufacturing sector. This feature makes the database suitable for undertaking this study. The other database is by the manufacturing survey undertaken by the BOS which is based on a sample. The manufacturing survey is only used for comparison and is not reported in the paper. It is worth noting that the data is at firm level so there is no need for aggregation.

While LNDC collects the data on quarterly basis, the data is not organised into a panel. So data was collected going back from previous files in the Bank and at LNDC. Then, the data was merged into a single panel data. Significant effort was exerted in ensuring that the merging of the different files is consistent. This involved checking that the entrants and exits are placed in their correct periods. The database has both quarterly and annual dimensions. And this study uses the annual dimension. The resulting database has 125 companies over the entire period. The next section unpacks some of the characteristics of the dataset.

² LNDC Order 1990 and Amended in 2000.

3.1 Basic Facts on the Data

To understand the relationship between the overall employment generated and the number of companies, Figure 2 shows the evolution of the number of companies and total employment. The left axis shows the total employment while the right axis is the number of firms. During the period, the number of companies in the database averaged about 66 companies reaching a peak of 72 in 2015 and a low of 60 in 2005. Total employment averaged 46 473. The high for total employment was reached in 2004 and 2015 while the low was 44 222 recorded in 2004. Looking at the two variables, they seem to be moving together albeit with a lag. This is because when a company is faced with difficulties it begins by laying off the casual employees and if they persist then it closes down. From the figure 2 the impacts of the external shocks to the sector such as the end of multi fibre agreement in 2005 and the global financial crisis in 2008-2009 can also be deduced.



Looking at the sectoral distributions, Lesotho manufacturing sector is built around the production of textiles and clothing. Table 1 below presents the sectoral distribution of companies in the data. As expected in line with that overall structure of Lesotho manufacturing sector; most of the companies in the dataset seem to be in the knit garments category. Over time there has been relative stability in terms of the shares, the knit garments comprised about 43.7 per cent of the total during the period 2010-2015. This is followed by woven garments with an average of 11.6 per cent and embroidery, screen printing and packaging with 10.6 per cent. The category of embroidery, screen printing and packaging is quite interesting since it has some presence of local companies and reflects the linkage with the local economy which is the major criticism of Lesotho industrial development (Staritz and Morris, 2013). Overall, the sectoral distribution indicates some progress towards diversification despite high concentration in textiles and clothing. This is reflected by the presence of automobile industries at 1.4 per cent and electronics at 5.6 per cent.

Table 1		Sector Distribution				
Sector	Average 2004 - 2008	2012	2013	2014	2015	Average 2010 - 2015
Automotive	1.6	0.0	1.4	1.4	1.4	1.4
Construction	6.6	6.0	5.6	5.8	5.6	5.8
Electronics	3.8	6.0	5.6	4.3	4.2	5.1
Embroidery; Screen printing; Packaging	8.5	11.9	9.9	10.1	8.3	10.9
Fabrics	1.6	1.5	1.4	1.4	1.4	1.4
Food and Beverages	7.9	6.0	5.6	4.3	5.6	6.0
Footwear	5.3	4.5	4.2	4.3	4.2	4.3
Green Industries	0.0	1.5	1.4	1.4	1.4	1.4
Knit Garment	43.4	41.8	42.3	43.5	45.8	43.7
Other	4.1	7.5	9.9	10.1	9.7	8.0
Pharmaceutical Products	1.6	0.0	0.0	0.0	0.0	0.0
Tobacco products	0.0	1.5	1.4	1.4	1.4	1.4
Woven Garment	16.4	11.9	11.3	11.6	11.1	11.6
Total	100.0	100.0	100.0	100.0	100.0	100.0

Source: Authors computations .

An important variable in this study is the size of the firm. The number of employees is used as the appropriate measure of firm size in this paper because it focuses on job creation (Hart and Oulton, 1996). In defining the firm sizes, the National Policy on Small Medium Enterprises and empirical literature on African countries are used. The national policy defines a small firm as comprising 3-9 employees while medium is 10- 49 employees. This may be too narrow for the nature of manufacturing being followed in Lesotho. As a result, the paper departs from the national definition and disaggregates the data into the following six size categories as 1-9 employees, 10-49 employees, 200-499 employees, 500-999 employees, 1000-1999 employees and 2000 employees and above. This is informed by the empirical literature in the area.

Table 2 presents the size distribution for selected years. The middle size categories (50-199, 200-499 and 500-999) seem to have the highest number of companies. This is followed by the large sized companies (1000-1999, 2000+). Surprisingly, the small sized firms (1-9, 10-49) have the smallest share. This is rather worrying since healthy industrial structure should have many small companies and fewer large ones. While we are cautious on this observation as it may be the result of our database but it is indicative of the constraints faced by the small sized companies in manufacturing sector.

Table 2		Size Distribution						
Years	Size of Firms							Total
	1-9	10 - 49	50 - 199	200 - 499	500 - 999	1000 - 1999	2000+	
2004	1	6	9	16	15	10	6	63
2008	4	8	9	18	17	6	6	68
2010	3	9	12	18	11	9	6	68
2015	1	11	14	16	15	9	6	72

Source: Authors computations.

Another important aspect to consider when analysing the industrial structure is the age of the companies. Young firms are more productive and innovative (Van Biesebroeck, 2005). Age of the firm is calculated as the current year minus the year that the company was established. Table 3 shows the distribution of firms for the selected years. Age is categorised into three categories young firms which are less than five years old, middle aged which are between 5 years and 10 years and the last category is for mature companies which are above 10 years. It seems that the largest category is the mature companies accounting for 55 per cent in 2015. The middle

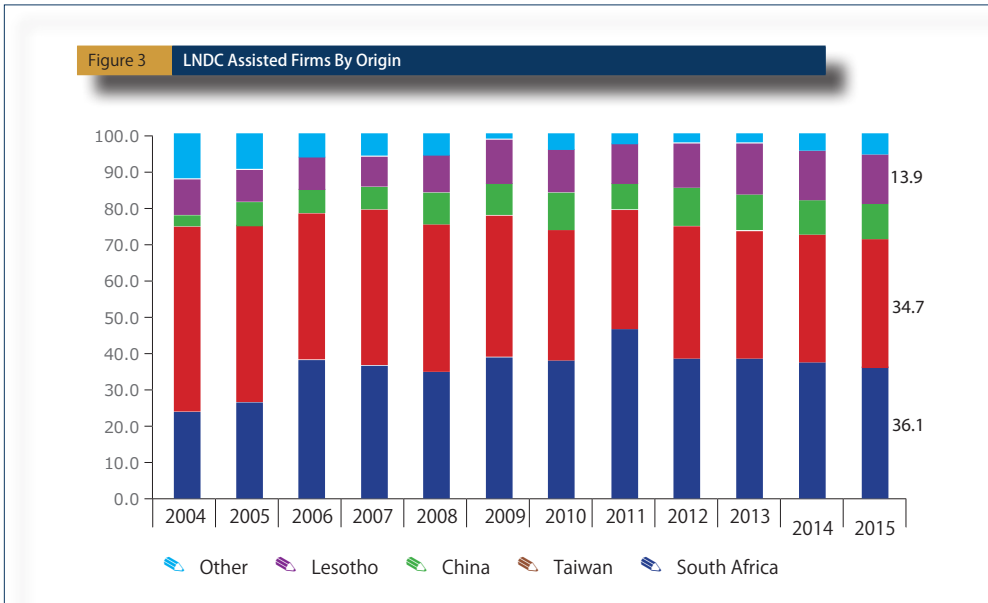


and young companies account for 12.5 per cent and 33 per cent respectively. The dominance of mature companies is in part explained by the over representation of large companies. A large company is likely to stay in the market for a longer period.

Table 3		Age Distribution			
Years	Age Categories				
	Young	Middle-Age	Mature	Total	
2004	9	12	42	63	
2008	5	17	46	68	
2010	5	18	45	68	
2015	23	9	40	72	

Source: Authors computations.

The origin of the investment in the manufacturing sector is also important. As shown by Figure 3 below, most of the investment originated from South Eastern Asia entrepreneurs, mainly Taiwan. Taiwanese investors were among the first to relocate in Lesotho. However, it appears that the share of the Taiwanese investors has been declining over time to the current 34.7 per cent compared with 50.8 per cent in 2004. The share of firms from Taiwan took a huge knock during the global financial crisis and has not recovered to the pre-crisis levels. Nonetheless, South African companies have also been growing providing a much needed diversity of markets and products. In 2015, the share of investment from South Africa was the largest with 36.1 per cent compared to 23.8 per cent in 2004. Interestingly, there are some domestic investors in the sector representing 13.9 per cent in 2015.



4 EMPIRICAL ANALYSIS

4.1 Survival Analysis

Before analyzing the size distribution, it is important to investigate the patterns of survival. In order to isolate the impact of the financial crisis on firm dynamics given that the financial crisis represented major shift in the evolution of the manufacturing sector in Lesotho. As such the analysis is divided into two periods, the pre-crisis period (2004-2008) and post crisis period (2010-2015). The choice of the actual point of the crisis varies from country to country and has been debated extensively in the literature. In the case of Lesotho, looking at the data the effects were felt in 2009.

Looking at the pre-crisis period, out of the 65 companies that were alive in 2004, 48 companies (73.8 per cent) survived to 2008. Disaggregating the survival rate by size groups shows that the highest survival rate is observed in higher size groups (2000+ employees). The size category



of 2000+ recorded 100 per cent survival rate. As expected the smallest size category has the lowest survival rate of 50 per cent. In the post crisis period, the overall survival declined slightly to 72 per cent. But it still remained high indicating that the crisis had minor effect on the firm dynamics. In the disaggregated analysis, the similar pattern is observed in the post crisis period. The results suggest that survival rate tends to increase with the size of the firm indicating that smaller firms face more difficulties compared with the large ones. The reliance of the manufacturing sector during the global financial crisis was partly due to the dominance of large firms. While it is noted that the number of small firms in the database is small this result is not likely to be changed if the sample is increased.

	Employment Categories	Post Crisis			Pre Crisis		
		Number of firms alive in 2010	Number of firms surviving to 2015	Survival rate	Number of firms alive in 2004	Number of firms surviving to 2008	Survival rate
0	1-9	3	1	33.3	2	1	50.0
1	10-49	9	6	66.7	7	6	85.7
2	50-199	12	9	75.0	9	6	66.7
3	200-499	18	8	44.4	16	13	81.3
4	500-999	11	11	100.0	15	10	66.7
5	1000-1999	9	8	88.9	10	6	60.0
6	+2000	6	6	100.0	6	6	100.0
		68	49	72.0	65	48	73.8

Source: Authors computations .

4.2 Transition Analysis

In this section, the changing size distribution of companies in the pre-crisis period 2004-2008 and post crisis period is analysed. This is done through the use of the transition matrices in the two periods. The matrix considers how firms moved (or didn't move) across size groups. Table 5 presents the pre-crisis scenario. About 30 companies of those that survived through 2004-2008 remained in their size groups. This is represented by the diagonal line of the transition matrix. A large portion of the surviving firms are not growing their employment. The second largest category is for those above the diagonal line which are the companies that moved up to the next size group. It is worth noting that fewer companies are moving beyond two groups.

The exception is a company in electronic that moved from the group 10-50 to group 1000-1999. A smaller number of companies moved to lower size groups. The notable downward movement was the companies that declined from the size groups 500-999 to the size group of 10-49. The pattern is similar for the post crisis period 2010-2015 as presented in Table 6. About 31 companies remained in their size categories between 2010 and 2015. Overall the results reveal that the sector has not been realizing robust growth with more firms remaining in their size groups and that has implication on the job creation.

Table 5		Transition Matrix Pre Crisis						
Employment Size of Firms in 2004	Employment Size of Firms in 2008							Total
	1-9	10 - 49	50 - 199	200 - 499	500 - 999	1000 - 1999	2000+	
1 - 09	1	0	0	0	0	0	0	1
10 - 49	0	3	1	0	0	1	0	5
50 - 199	0	1	4	2	0	0	0	7
200 - 499	0	0	0	10	2	0	0	12
500 - 999	0	0	1	1	7	2	0	11
1000 - 1999	0	0	0	0	1	3	1	5
2000+	0	0	0	0	0	0	5	5
Total	1	4	6	13	10	6	6	46

Source: Authors computations.

Table 6		Transition Matrix Post Crisis						
Employment Size of Firms in 2004	Employment Size of Firms in 2015							Total
	1-9	10 - 49	50 - 199	200 - 499	500 - 999	1000 - 1999	2000+	
1 - 09	1	1	0	0	0	0	0	2
10 - 49	0	4	1	1	0	0	0	6
50 - 199	0	1	8	0	0	0	0	9
200 - 499	0	0	0	5	2	2	0	9
500 - 999	0	0	0	2	6	1	0	9
1000 - 1999	0	0	0	0	3	4	1	8
2000+	0	0	0	0	0	1	5	6
Total	1	6	9	8	11	8	6	49

Source: Authors computations.

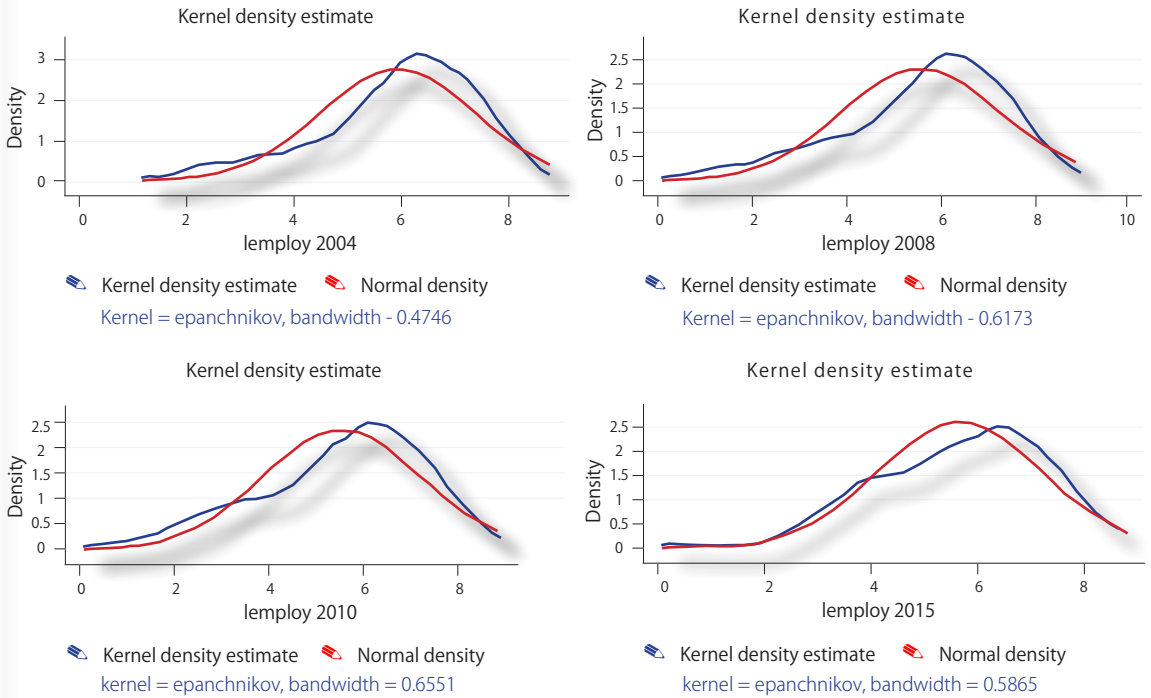


4.3 Non-Parametric Analysis of Firm Growth and Size

This section uses non-parametric methods to investigate whether growth of companies in the industry could be linked to their size categories. This is important since the policy intervention can be directed to the relevant size groups. Following Bigsten and Gebreeyesus (2005) we use non-parametric method to test whether the logarithm of employment is log normal as implied by the Gibrat law. If it deviates from normal then we reject Gibrat law that growth of firms is explained by stochastic factors. We analyse the distributions of the logarithms of employment in the selected years 2004, 2008, 2010 and 2015³. Figure 4 below shows the kernel density functions for logarithm of employment in the selected years overlaid by the normal distribution. In all periods, the distributions are not normal they are skewed to the right indicating the dominance of large firms. Clearly, even without testing normality of the functions the normality tests will be rejected suggesting that growth of the firms will not be random. This indicates that size groups are growing at different rates.

³ Full distributions are available from the authors.

Figure 4 Kernel Density Functions



Source:

Then, we assume that the factors that explain firm growth are complex as posited by the stochastic models of growth and that there is no obvious systematic pattern across different sizes of firms then the probability distribution of growth rates is the same for all sizes. To check whether this holds, we follow Dunne and Hughes (1994) method and look at the distribution mean growth rates. They should be the same across size classes if the size distribution is log normal. Thus, there should not be any differences in the mean growth rates across the size classes. Table 7 below shows mean employment growth and standard errors tabulated across all the size classes in both pre and post crisis periods. In the pre - crisis period, the lowest size category registered a contraction indicating that companies in that category were more susceptible to



the financial crisis and a lot of jobs were lost in that category. The largest category of 2000 employees and above no growth was registered. During this period, growth was generated in the middle size group with exception of 1000-1999 category which registered a contraction. The picture seems to be clear in the post-crisis period where the smaller categories are growing faster than the larger ones. The two lowest size classes registered the highest growth during the period. The largest size class shows no growth at all while the following two categories are contracting. It can be observed that while the sector is dominated by relatively large companies they have not been growing in both periods. This indicates that small employment increases observed recently is mainly driven by companies employing less than 500 employees.

Table 7		Company Growth and Size						
Size of Firms	Post-crisis growth (2010-2015)				Post-crisis growth (2010-2015)			
	Mean	Std. Error	95% Confidence Interval		Mean	Std. Error	95% Confidence Interval	
			Lower Limit	Upper Limit			Lower Limit	Upper Limit
01 - 09	-0.9				0.5	0.5	-6.1	7.1
10 - 49	1.1	0.5	-0.3	2.6	0.7	0.4	-0.4	1.8
50 - 199	0.1	0.1	-0.2	0.3	0.1	0.1	-0.1	0.4
200 - 499	0.1	0.1	-0.1	0.4	0.3	0.2	-0.1	0.7
500 - 999	0.0	0.2	-0.4	0.5	-0.1	0.2	-0.5	0.3
1000 - 1999	-0.1	0.2	-0.5	0.4	-0.1	0.1	-0.4	0.3
2000+	0.0	0.0	-0.1	0.1	0.0	0.2	-0.4	0.5

Source: Authors computations.

5 CONSTRAINTS TO DOING BUSINESS

In order to give the results some policy perspective and highlight some of the factors that negatively affect firm growth, this section draws from the recent Africa Competitiveness Report 2017 and discusses the most problematic factors for doing business. Table 8 below shows the top ten constraints to doing business in Lesotho, Botswana, Namibia and South Africa. The other three countries are included for comparison. This is because these countries are members of the Southern African Customs Union (SACU) and they share common external

tariff⁴. Also there are discussions at the level of SACU for common industrial policy. Access to financing is rated first most problematic constraint facing businesses in Lesotho and Namibia and second in Botswana. However, access to finance is not in the top ten in South Africa which has a well-developed financial sector with an array of products for financing businesses. The lack of access to financing is most likely to be acute among the small and middle sized firms. This is likely to retard growth of these firms. The second factor is corruption. This is ranked among the top five in all the countries except for Botswana where it is ranked number eight. Inadequate supply of infrastructure is ranked third. Most developing countries are experiencing huge infrastructure deficit. This includes roads, electricity and information technology. Overall there is a menu of factors that affect firms differently across the size distribution.

Table 8 Ten Most Problematic Factors for Doing Business in SACU Countries*			
Lesotho (120)	Namibia (84)	Botswana (64)	South Africa (47)
Access to financing	Access to financing	Poor work ethic in national labor force	Inefficient government bureaucracy
Corruption	Inadequate educated workforce	Access to financing	Restrictive labor regulations
Inadequate supply of infrastructure	Inefficient government bureaucracy	Inadequate educated workforce	Inadequate educated workforce
Insufficient capacity to innovate	Poor work ethic in national labor force	Inadequate supply of infrastructure	Policy Instability
Inefficient government bureaucracy	Corruption	Inefficient government bureaucracy	Corruption
Policy instability	Inflation	Restrictive labor regulations	Crime and Theft
Inadequate educated workforce	Insufficient capacity to innovate	Insufficient capacity to innovate	Poor work ethic in national labor force
Government instability/ Coups	Tax rates	Corruption	Inadequate supply of infrastructure
Poor work ethic in national labor force	Restrictive labor regulations	Crime and theft	Tax rates
Crime and theft	Inadequate supply of infrastructure	Policy instability	Inflation

Source: Authors computations.

⁴ The other SACU member Swaziland is not reported in the report.



6 CONCLUSION

The paper set out to investigate the firm size distribution in the manufacturing sector in Lesotho and evaluate its implications for job creation and sustainability. Using unique database of LNDC assisted companies; the paper examined the evolution of firm size distribution, survival patterns and the relationship between firm size and growth. The manufacturing sector remains an important sector in Lesotho given the size of employment it generates. However, the varying developments within that sector threaten the existence of that sector and sizable employment opportunities are at risk. While the challenges that affect the manufacturing sector are well understood at the macro level, there is still a dearth of knowledge in so far as the extent to which the firm size may determine its sustainability and its potential to grow and therefore generate more jobs. Therefore, this paper contributes towards understanding the role of firm level dynamics in ensuring sustainability of the firms and employment.

The results show that the overall survival rate in the sector is relatively high registering 73.8 per cent after the crisis. In the lowest size category survival ranges between 33 per cent and 50 per cent in five years comparable with rates reported in other countries. While the paper has covered a limited number of small companies but it is evident that the companies in the lowest category are facing more difficulties. This is a stylized fact in firm dynamics that small companies have low survival rate. This is mainly due to their inability to compete with bigger companies given their lower economies of scale. This contrasts with the observation made on large firms which depict long lifespan. One of key reasons for the high survival rates amongst the large firms is that in times of distress they are able to enjoy financial support from their parent companies. As a result there is urgent need to support small local companies for sustained impact on job creation. The support can be in various forms including financial support in times of distress and access to finance to meet their operational expenses. These issues are clear from the interviews conducted with local operators in the sector.

Using the transition matrices, the results indicate that there is no dynamism in the sector. Interestingly, the phenomenon exists even before the global financial crisis suggesting that the country probably long reached the capacity ceiling. Most surviving companies remain in their size classes and this is supported by data from the quarterly manufacturing surveys. Importantly,

the result says that the manufacturing sector is not creating new jobs. Also the results show that the modest growth observed, is limited to companies employing less than 500 employees. For creation of new jobs it is imperative that the industrial policy should employ new strategies. There are a number of policy lessons. First, there is need to fully understand the challenges that affect the large firms and address them. This will sustain employment in the current levels. Second, there is need to also critically analyse the nature of small operators in the sector and the challenges they face and come with appropriate remedies. While these results are very preliminary, it is clear that representation of small sized manufacturing firms in Lesotho is vital for job creation. Otherwise, the country needs to continually attract large investors. Overall the results collaborates the view that in order to unlock growth in developing countries, it is important that the constraints of doing business should be addressed urgently. For Lesotho, according to Africa Competitiveness Report 2017, the top three most problematic factors for business are access to finance, corruption and lack of infrastructure.

The study has a number of limitations that may be subject to further research. First, the paper did not evaluate the participation of Basotho at the strategic management level of the large foreign owned companies. This assessment will lend a hand in whether there are potential Basotho industrialists undergoing mentoring. This is important given the complexity of the industry. Consultations with local entrepreneurs in the sector articulate this complexity very well. Second, the paper has not assessed the type of innovation that is occurring in the sector. Small and middle sized firms are known to be good innovators which will give Lesotho some edge over its competitors. Our suspicion is that the level innovation in the sector is likely to be very low due to the dominance of large companies. Innovation can be important in ushering in the process of indigenization of the sector.



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