Segmenting the market into powerful pictures: Application of the Business Facilities Measure (BFM)

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About this publication

This report forms part of the findings of the Zambia Business Survey (ZBS). The ZBS comprised two separate surveys. The MSME Survey was a nationally representative survey across all nine provinces of individuals who owned and ran their own businesses and employed up to 50 individuals. The supplementary Large Business Survey (LBS) was a survey of 161 large enterprises employing 51 or more individuals.

The results of the ZBS are in the main summary report, *The profile and productivity of Zambian businesses*. Analysis of the data resulted in four technical papers, including this one. The other papers cover:

- The business landscape, which looks at the environment in which Zambian businesses operate (*The business landscape for MSMEs and large enterprises in Zambia*)
- Productivity, which examines the productivity of Zambian enterprises (*Who’s productive in Zambia’s private sector? – Evidence from the Zambia Business Survey*)
- Access to finance, which explores the demand-side data relating to access to financial services (*Demand-side analysis of access to financial services for businesses in Zambia*)

These reports are available via the web or from the offices of the four partner agencies that produced this work: Zambia Business Forum (www.zbf.org.zm, secretariat@zbf.org.zm); Private Sector Development Reform Programme (www.psdrp.org.zm); FinMark Trust (www.finmark.org.za, julietmunro@iconnect.zm); and World Bank Zambia Country Office (www.worldbank.org/Zambia, Pyramid Plaza, Plot No 746 Church Road, Lusaka. Tel: 260-1 252 811).

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Contents

1. EXECUTIVE SUMMARY .................................................................................................................... 4

2. INTRODUCTION, METHODOLOGY AND APPLICATION ........................................................... 10
   2.1. What is the BFM? ...................................................................................................................... 10
   2.2. What the BFM can tell us ........................................................................................................ 12

3. BUSINESS PROFILES BASED ON THE BFM ............................................................................. 20
   3.1. Key elements of the MSME BFM profiles .............................................................................. 20
   3.2. Perceived obstacles to doing business among MSMEs .......................................................... 24
   3.3. Key elements of the large business BFM profiles .................................................................. 26
   3.4. Perceived obstacles to doing business among large enterprises ........................................... 26
   3.5. Significant differentiators by large business BFM ................................................................. 30

4. KEY DYNAMICS WITHIN THE MSME BFMs ............................................................................. 33
   4.1. Gap between BFM 4 and BFM 5 ............................................................................................ 33
   4.2. The continuum from BFM 1 to BFM 4 ................................................................................. 35
   4.2. Other differentiating factors along the BFM continuum ....................................................... 39
   4.4. Specific zones of transition ..................................................................................................... 41

5. CONCLUSIONS ............................................................................................................................. 42

6. ANNEX 1: Variables used in developing the MSME BFM ............................................................. 45

7. ANNEX 2 – Detailed descriptions of BFMs 1 to 8 ......................................................................... 50

8. ANNEX 3 – Detailed Descriptions of BFMs 9 to 12 .................................................................... 52

Abbreviations

BFM  Business Facilities Measure
BSM  Business Sophistication Measure
ICT  Information communication technology
LBS  Large Business Survey
MSMEs  Micro, small and medium enterprises
NAPSA  National Pension Scheme Authority
NRC  National registration card
PACRO  Patents and Company Registrar
PCA  Principal component analysis
PAM  Partitioning about medoids
PAYE  Pay As You Earn
PLC  Publicly listed company
TPIN  Tax identification number
VAT  Value added tax
ZBS  Zambia Business Survey
1. Executive summary

Policymakers, service providers, donors and other market actors often need to segment businesses into groups that show differences among businesses, within a defined continuum. Dividing the business landscape into component parts can facilitate the targeting of policy, assistance, products and services to different market segments, making these more efficient and effective. To be useful, the segments must be well defined, and while related to each other within defined parameters, sufficiently differentiated to discern one segment from the next. The segments must not be so small that they are too numerous to address, but also not so large that they are barely discernible from the overall market.

Traditionally policymakers and service providers have tried different ways to segment businesses in Zambia and around the world. Many use the number of full-time employees as a way to define and segment the market. Others may cluster businesses according to whether they are registered or not. Annual income, asset sizes, business sectors, and demographic attributes, such as age of the business owners, also offer potential axes on which to segment the market.

The literature on Zambia shows application of all of these approaches to market segmentation, as well as others. A predominant method in Zambia is the classification of businesses by the number of employees. Also, much debate about enterprises in Zambia focuses on whether or not businesses are formally registered.

Yet, it would seem that both of these measures may not meet the basic tests of useful segmentation to support efficient and effective targeting of policy, support, and product and service provision. As the data from the Zambia Business Survey (ZBS) shows, no other typical ways of describing businesses in Zambia offer either sufficient differentiation or relevance. For example, 65% to 70% of all enterprises are micro or single-person enterprises; 95% of all enterprises in Zambia may be classified as informal as they are unregistered; more than 70% of Zambian enterprises are based in rural areas, and/or trade in the agricultural sector. Thus traditional ways of segmenting the market, i.e. by size, formality, sector or location, all yield blocks of undifferentiated enterprises, which, in turn, would complicate policymaking, programme development and service delivery.

Attempts to divide the market by bands of turnover or assets may provide more differentiation, but as the ZBS and other surveys have shown, these numbers, as reported by Micro, Small and Medium Enterprises (MSMEs) (especially with such a large proportion being unregistered and not keeping reliable financial records), are often questionable and incomplete, thereby undermining the integrity of any segmentation based on such figures.

To assist in providing greater insight into the MSME market, FinMark Trust has developed the Business Facilities Measure (BFM), which provides a uniquely differentiated and directly relevant model by which to segment the entire landscape of enterprises in Zambia. Spanning every type, size and location of enterprise in Zambia, the BFM includes 12 segments – 1 through 8 for MSMEs, and 9 through 12 for large enterprises – that define the gradation of enterprises in Zambia. Each segment is comprised of a composite picture of the unique set of characteristics that define each cluster of enterprises. Table 1 captures these pictures along the continuum for MSMEs.
<table>
<thead>
<tr>
<th>BFM cluster (Picture of all MSMEs)</th>
<th>Urban/ Rural</th>
<th>Provinces</th>
<th>Sectors</th>
<th>Predominant aspects of key variables</th>
<th>Gender</th>
<th>Marital status</th>
<th>Age</th>
<th>Form of ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>BFM 1 (32%)</td>
<td>R</td>
<td>Western, Eastern</td>
<td>Agricultural Production, Wild Fishing, Manufacturing and Selling Household Cleaning Products, Making Table Cloths</td>
<td>M</td>
<td>Married</td>
<td>40+</td>
<td>None / Chief</td>
<td></td>
</tr>
<tr>
<td>BFM 2 (8%)</td>
<td>R</td>
<td>Luapula, Northern, Eastern.</td>
<td>Agricultural Production, Construction, and Manufacturing and Selling Household Cleaning Products</td>
<td>M</td>
<td>Never Married, Widowed or Separated</td>
<td>30-49</td>
<td>NRC</td>
<td></td>
</tr>
<tr>
<td>BFM 3 (21%)</td>
<td>R</td>
<td>Northern, Western, North Western, Central</td>
<td>Agricultural Production, Mining And Excavation, Electricity, Manufacturing and Selling Household Cleaning Products, Retailing Vegetables at the Market, Brewing Local Beer</td>
<td>M</td>
<td>Married</td>
<td>18-39</td>
<td>NRC / Chief</td>
<td></td>
</tr>
<tr>
<td>BFM 4 (11%)</td>
<td>R</td>
<td>Southern, Eastern, Luapula</td>
<td>Agricultural production</td>
<td>M</td>
<td>Married</td>
<td>30+</td>
<td>Driver License</td>
<td></td>
</tr>
<tr>
<td>BFM 5 (13%)</td>
<td>U</td>
<td>Copperbelt, Lusaka</td>
<td>Wholesaling, Real Estate, Leasing, Business Services, Manufacturing, Running Small Shops, Hotels and Catering, Finance, Information Communication Technology, Construction.</td>
<td>F</td>
<td>Never Married</td>
<td>18-44</td>
<td>Driver License, Passport</td>
<td></td>
</tr>
<tr>
<td>BFM 6 (8%)</td>
<td>U</td>
<td>Lusaka, Southern, Copperbelt</td>
<td>Wholesale Trade predominantly, but lots of diversity</td>
<td>F</td>
<td>Never Married, Widowed, Separated, Divorced</td>
<td>18-44</td>
<td>Passport</td>
<td></td>
</tr>
<tr>
<td>BFM 7 (7%)</td>
<td>U</td>
<td>Lusaka, Copperbelt, Southern, Northwest</td>
<td>Wholesale Trade, Salons, Raising Chicken, and the Hardware Trade.</td>
<td>F</td>
<td>Never Married, Divorced</td>
<td>25-29</td>
<td>Driver License</td>
<td></td>
</tr>
<tr>
<td>BFM 8 (1%)</td>
<td>U</td>
<td>Lusaka, Central</td>
<td>Hotels, Catering, Food and Beverages, Manufacturing, Construction, Car Motorcycle and Household Goods Repair, Transportation and Storage, Information Communication Technology, Finance, Health, and ‘Other’</td>
<td>F</td>
<td>Divorced, Separated, Widowed, Living Together / Cohabiting</td>
<td>25-49</td>
<td>Driver License, Passport (Foreigners)</td>
<td></td>
</tr>
</tbody>
</table>

The BFM divides the market into more manageable segments, and it also expresses those divisions based on predominant factors that specifically differentiate one Zambian business from another. For MSMEs, these characteristics tend to be a series of indicators that relate to access to, and usage of, business facilities that contribute to enterprise competitiveness. They include, among others, access to and usage of electricity and water, levels of education, and finance.

**Key trends within the MSME BFMs**

Sixteen obstacles to doing business were identified. These were grouped into four categories: the legal and regulatory environment (includes business registration, labour regulation, tax administration, tax rates, and trade regulation), the general societal environment (includes macroeconomic instability, corruption, crime and political environment), business infrastructure
(includes electricity, transportation, telecommunications, access to land and worker skills), and finance (includes cost of finance and access to finance).

Grouping these 16 obstacles across the eight MSME BFMs shows that the only substantial changes in perception are within the legal and regulatory cluster, which makes intuitive sense, since the BFM is a measure of robustness, or is, in other words akin to formality. In turn, the data shows that legal and regulatory issues are of demonstrably greater concern to the higher BFMs.

The lower end BFM groups from 1 to 4 tend to be a lot more rural than the top-end BFM groups from 5 to 8. The major break between BFM 4 and 5 is mainly because of the drastic reduction in the number of agricultural businesses. When viewed through the BFM lens, there is clear evidence of greater percentage of female participation in the higher MSME BFM groups. In all four of the upper BFMs, women comprise no less than 41% of the sample, while comprising only 33% of the overall MSME population. Women are also a disproportionately higher percentage of wholesale/retail businesses, which tend to yield higher levels of productivity than the male-predominated agricultural businesses.

BFMs 5 to 8 share common problems with variables such as tax rates, licensing and permits, labour regulations and electricity problems being perceived as the most serious. Conversely, BFMs 1 and 2 share common problems of crime, theft and disorder and transportation problems.

Zones of transition within the MSME BFM continuum

We gauged the potential for growth and assessed opportunities for innovation in product and service delivery by determining where the largest potential for growth lies within two of the MSME BFM continuums. There is a clear schism between BFM 4 and 5. Direct comparison clearly shows that BFM 4 and below are rural, while BFM 5 and above are urban. BFM 4 and below tend to be more male and older, whereas BFM 5 and above trend toward being younger and female. BFM 4 and below also are less educated than BFM 5 and above. Thus, we looked at BFM 1 to 4 and BFM 5 to 8 separately.

Plotting the many different variables along the business continuums made it possible to determine at what point businesses are starting to show signs of growth and operating effectively. The ability to pinpoint these businesses can assist organisations providing support and financial access to MSMEs and large firms. Furthermore the segmentation of businesses enables identification of long and short term intervention strategies. A useful tool in determining the impact points is the analysis of the “zones of transition”.

The first zone of transition in Zambia appears to be between BFM 2 and 3, where attaining secondary education appears to important in moving MSMEs from the lowest two segments, at least to the third or fourth segments. Moving from a BFM 3 to segment 4 appears to be related to the type of agriculture, whereas the higher BFMs tend towards livestock rearing as opposed to growing crops.

Another zone of transition appears among BFM 6, 7 and 8, where two phenomena stand out. Firstly, attaining vocational education seems to align closely with upward BFM mobility. Secondly, marked entrepreneurial attitude emerges in BFM 8, suggesting ample opportunity for more aggressive support to enterprises that will look to thrive and compete, not just survive.

Generally, the businesses in BFM 5 and above are where stakeholders should most quickly see the results of their interventions at relatively reasonable costs, including many prospects for public and private sector led approaches. Businesses in BFM 5 and 6 show the greatest potential of becoming sustainable contributors to the economy and job creators. Longer-term strategies and significant
resources are needed to support the lower BFM entities, and in many instances this means systemic investments in basic infrastructure and education.

**Large enterprise BFMs**

Although the survey methodologies between the MSME Survey and the Large Business Survey (LBS) were different, an attempt was made to integrate the two surveys to link them to allow analysis across them both. As expected, large businesses formed the basis for an exclusive stand-alone cluster. To extend the continuum and create the necessary differentiation among large enterprises, a separate analysis of the differentiating variables within the LBS data alone was conducted.

For large enterprises, access to and usage of business facilities still provides a robust basis on which to segment the market; but measuring this involves the use of more sophisticated products. Access to and usage of basic inputs, such as electricity or water, offers sufficient differentiation among MSMEs; however, access to and usage of things like the internet, email, outsourced business services (e.g. accounting or legal services), as well as higher order financial products such as insurance or foreign currency accounts, were used to yield a more insightful analysis of large enterprises, ultimately resulting in BFM 9 to 12. Table 2 provides a summary of defining characteristics within the BFM 9 to 12 spectrum.

### Table 2: Characteristics of enterprises across BFM 9-12

<table>
<thead>
<tr>
<th>BFM Cluster (percent of all large enterprises)</th>
<th>Predominant Aspects of Key Variables</th>
<th>Provinces</th>
<th>Sectors</th>
<th>Business Premises</th>
</tr>
</thead>
<tbody>
<tr>
<td>BFM 9 (18%)</td>
<td></td>
<td>Lusaka, Southern, Copperbelt</td>
<td>Agricultural production</td>
<td>Agricultural plot (mostly own)</td>
</tr>
<tr>
<td>BFM 10 (22%)</td>
<td></td>
<td>Lusaka, Copperbelt, and small distributions across several others</td>
<td>Electricity, gas and water, construction, and transport and storage</td>
<td>Rental of offices or industrial space</td>
</tr>
<tr>
<td>BFM 11 (26%)</td>
<td></td>
<td>60% in Lusaka, and some Southern</td>
<td>First substantial presence of ‘white-collar’ industries, such as education, finance, insurance, and health</td>
<td>Substantial ownership of business premises (i.e. offices and industrial sites)</td>
</tr>
<tr>
<td>BFM 12 (34%)</td>
<td></td>
<td>Evenly split between Lusaka and Copperbelt, with a small percentage in Eastern</td>
<td>Vehicle repair, ICT, and wholesale or retail trade</td>
<td>Near total ownership of business premises (i.e. offices and industrial sites)</td>
</tr>
</tbody>
</table>

**Key trends within the large enterprise BFMs**

Concerns about access to and cost of finance, along with electricity, are common to most businesses along the large business BFM spectrum. However, unlike the MSME BFMs, the relative importance of all other problems tends to diverge substantially from one large BFM segment to the next. For example, the macroeconomic environment is substantially more important to BFM 12s than to any other BFM group. Similarly, BFM 11s seem to feel the bite of crime, theft, disorder and corruption much more than any of their counterparts.

Among all large enterprises, access to land only ranked 11th out of 16 options for business obstacles. Nonetheless, agriculture remains an important sector, even through BFM 9, 10, and 11, with only BFM 12 showing any significant diversification into other sectors. Nonetheless, anecdotal information and other studies confirm the existence of several larger firms in the higher value-adding crops and export-oriented agricultural businesses, whereas their smaller MSME counterparts predominate in basic food crops mostly for domestic sale and consumption. Of those which claimed that land was an obstacle, regardless of BFM, the procurement process and cost far outweigh other factors.
All large businesses have access to and use electricity. The main source of energy is from the national grid for most large businesses, although BFM 9 shows meaningful use of generators instead of grid electricity – indicating that even into the large enterprise segment, consistent access to electricity remains as a business challenge.

Looking at access to finance as an obstacle to doing business, we see the most concern among BFMs 9 and 12. We suspect these trends reflect two different sets of impetuses. For BFM 9s, their perceived high cost of finance may reflect their relatively weak bargaining positions with the banks. For BFM 12s, the seriousness of this obstacle may reflect less on the actual price of finance, but on its cost, relative to overall firm profitability. Also, as the access to finance paper illustrates, even large businesses transact heavily in cash (deposits and withdrawals), which are typically among the most expensive banking transactions.

In terms of loan products, a loan from a bank is greatest in the BFM 12 group, with microfinance and other loan finance used by businesses in BFM 9. Although, as noted in the access to finance paper, nearly 50% of respondents in each large enterprise BFM category indicated that they do not have a loan from any institution.

With the highest levels of formal registration, including for tax purposes, BFM 12s demonstrate the greatest sensitivity to tax rates. On the other hand, BFM 9s have lower levels of formal registration, perhaps because they perceive tax rates as high.

There is wide membership of business associations across all large business BFM groups with the exception of BFM 9, which reflects a profile much more akin to that seen among MSMEs, i.e. lower business association membership.

There are no distinct patterns in the type of customers across the upper BFM groups, with all groups having customers in much the same areas. All of the large business BFMs report that about 40% of their customers come from among MSMEs, including individuals.

There is not a strong trend towards any type of suppliers across the upper BFM groups. It is interesting to see nearly a third of all suppliers across all four large enterprise BFMs coming from among individuals.

There may be some relationship between the slightly greater tendency toward international supplier relationships among the large business BFMs and their relatively higher sensitivity to the macroeconomic environment. They also tend to have higher awareness of cost and price shifts in the market than their smaller counterparts.

Credit control appears to be marginally better in BFM 9, with a lesser percentage of firms reporting bad debt, as compared to their large enterprise peers. Nonetheless, all upper BFM groups show high levels of bad debt.

In terms of savings and investment, BFM 12 businesses tends to invest the most in new technology, although this is in evidence across all groups. Most groups also claim to invest most heavily in the expansion of their businesses.

Conclusions

The BFM offers public, private and donor stakeholders a targeted and nuanced approach to delivering policy, support and services to the full range of MSMEs and large enterprises in Zambia. In particular, the methodology should allow easier and more vigorous identification of those MSMEs that show the greatest promise of growth and competitiveness in the short to medium term. Similarly, the BFM has revealed priority interventions for large enterprises that should yield the greatest benefits to them in the most efficient manner.
This segmentation approach should prove much more useful than traditional ways of looking at the business landscape, especially among MSMEs. In short, the BFM provides a view of the market that clearly shows that not all informal enterprises are the same, and that not all microenterprises are survivalists. This segmentation tool offers composite sketches of groups of MSMEs and large businesses that share a substantial set of common attributes, which in turn, can help to differentiate and pinpoint varying approaches to supporting and interacting with them.

Our zone of transition analysis tells us that BFM 5 enterprises, estimated at about 13% of businesses nationwide, represent the ‘sweet spot’ of high potential, but experience low service penetration. Although markedly more urban than their lower BFM counterparts, 60% of BFM 5 businesses are still found in rural areas, meaning that this segmentation methodology need not leave rural enterprises out, but instead encourages a national spread, albeit with the rural component focussing on the fringe towns of Lusaka and Copperbelt provinces and their neighbouring areas. Several characteristics of this segment indicate that many would fall in the more easily achieved financial service access ‘market enablement zone’\(^1\), and therefore could be reached more easily and quickly than lower segments.

Interventions in the lower four BFM segments, making up 77% of the MSME market, require systemic, cross-sectoral, and cross-ministerial cooperation and solutions. This will command greater depth and breadth of resource commitments that are likely to cost more and take longer to show any results. For example, the lower MSME BFM enterprises generally do not have access to and do not use electricity. Such strong evidence creates a compelling case to look at business infrastructure generally, and electricity specifically, as a potentially major boost to overall MSME competitiveness.

The 12% of MSMEs in the much smaller BFM 6, 7 and 8 segments are relatively more urbanised, better educated, and into value-adding businesses, thus making them excellent candidates for quick and relatively light and less expensive interventions that could leverage substantial outcomes, both for the enterprises themselves and for those providing new services to them.

The BFM tool also sets out highly differentiated issues that help to set a clear agenda for action among large enterprises. Coupled with the descriptions of each of these four upper BFMs, key stakeholders and support agencies may target specific audiences within the large business segment as a whole. Many of the most important large business challenges, like taxes, customs and trade regulations, and the macroeconomic environment, require government leadership and direct involvement. Yet others, such as a better educated workforce, the cost of finance, and even crime, theft and disorder, may open opportunities for private sector leadership, in a cooperative alliance with government.

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\(^1\) The market enablement zone includes those businesses that are within reach of the market, given the parameters of an existing product, but do not currently have the product. This zone can be further sub-segmented into those enterprises that actively choose not to have a product, and therefore lie beyond the natural limits of the market, and those that have not yet purchased the product but are candidates for doing so.
2. Introduction, methodology and application

Policymakers, service providers, donors and other market actors often need to segment businesses into groups that show differences among businesses, within a defined continuum. Dividing the business landscape into component parts facilitates the efficient and effective targeting of policy, assistance, products and services. To be useful, the segments must be well defined, and while related to each other within defined parameters, sufficiently differentiated to discern one segment from the next. The segments must also not be so small that they are too numerous to address, but also not so large that they are barely discernible from the overall market.

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The literature on Zambia shows application of all of these approaches to market segmentation, as well as others. A predominant segmentation approach in Zambia seems to be classification of businesses by the number of employees. Also, much debate about enterprises in Zambia focuses on whether or not businesses are formally registered.

Yet, it would seem that both of these measures may not meet the basic tests of useful segmentation to support efficient and effective targeting of policy, support, and product or service provision. The majority of MSMEs employ fewer than five people. The Zambia Business Survey (ZBS) shows that as many as 91% of MSMEs in Zambia have between one and five full-time employees. The ZBS also shows that almost 95% of MSMEs in Zambia are not registered. Both of these measures would create segmentations that comprised a huge, and mostly undifferentiated, chunk of either very tiny MSMEs or unregistered MSMEs. Attempts to divide the market by bands of turnover or assets may provide more differentiation, but as the ZBS and other surveys have shown, these numbers, as reported by MSMEs (especially with such a large proportion being unregistered and not keeping reliable financial records), are often questionable and incomplete, thereby undermining the integrity of any segmentation based on such figures.

2.1 What is the BFM?

These traditional methods of measuring the market often do not provide much insight into the MSME market (or the large business sector) because of the large numbers of businesses that fall into one or the other of the traditional categories. In turn, policy, support and commercial ventures may not work at all or only work sub-optimally, because they rely on insufficiently differentiated market segmentation. For example, a government or donor programme designed to target ‘microenterprises’, based on a definition deriving from the number of employees, may find it untenable to efficiently and effectively deliver services to 90% of all MSMEs. Similarly, a programme in Zambia meant to target ‘rural enterprises’ would find itself in the unwieldy position of trying to reach 70% or more of the MSME market. Government dialogue with ‘large business’ about tax or import/export regulations may prove more fruitful if entered into with the segment of the large business population which consider this issue a relatively greater priority.

To assist in providing greater insight into the MSME and large business markets, FinMark Trust has developed a model, called the Business Facilities Measure (BFM), which attempts to segment the market into a greater number of clusters by using more than one or two variables from the dataset (see box Technical aspects of constructing the Business Facilities Measure on page 11).
The development of the Zambian BFM took as its starting point the Gauteng, South Africa, Business Sophistication Measure (BSM). The BSM used a methodology called Principal Component Analysis (PCA). Specifically, it was derived from the first principal component of a dataset reflecting 54 variables portraying the level of sophistication in Gauteng businesses.

Although the survey methodologies for the ZBS MSME and Large Business samples were different, an attempt was made to derive a seamless integration of the two datasets so as to link them and allow analysis across them both. The first step in developing the Zambian BFM was identifying those variables contained in the two surveys which would best reflect the diversity of business practices in the country.

As the BFM was intended to cover the full scope of businesses in Zambia, it was necessary to combine the two surveys into a single dataset. Furthermore, given that segmentation methods (including PCA) are intolerant of missing values, the variables included in the segmentation had to be confined to those common to both ZBS surveys.

The Large Business Survey did not contain any psychographic information, because the respondent could have come from any of a number of different departments within the surveyed business, and was not always necessarily the “boss” of the business. On the other hand, the psychographic variables were included in the MSME survey only, as this survey focused on the individual as a business owner. However, as a consequence of not having psychographic information in both surveys, all of these questions had to be excluded from the development of the BFM.

Conversely, the use of the Gauteng BSM as a reference point highlighted the need to supplement the variables used in the Zambia BFM with those that better reflect its focus on the schisms between agricultural and non-agricultural businesses, as well as urban versus rural enterprises.

Virtually every variable was “categorical” and had to be decomposed into a larger number of “dummy” variables. Dummy variables are dichotomous indicators, which help to clearly tell whether a given response fell into one category or another.

The final step of preparing the dataset was combining both surveys into a single dataset. Once the data set was prepared, the process of segmenting the data could start. The initial process was identifying the principal components – in other words, the variables that most definitively differentiate one segment from another.

The results of the PCA for the ZBS were highly successful in that almost all of the variability in the dataset was captured by the first principal component. Thus, in this instance a method called “partitioning about medoids” (PAM) was used. As with Principal Component Analysis, PAM allows for the classification of responses into clusters. However, the resulting classification is presented as a respondent’s membership of a group/cluster, rather than their score on a continuum. In the ZBS, the ability to apply the PAM methodology allowed for more natural or random delineation of different segments.

The respondents from the ZBS MSME survey were extremely varied, for example, in terms of types of businesses, the level of formalisation, and the sector. Consequently the respondents were grouped into eight segments, which yielded a high degree of differentiation, while retaining sufficient breadth and depth of data points to justify that differentiation. Each of the resulting clusters is indicated by an archetypal respondent. This respondent is the most “typical” of its cluster. By analysing the eight archetypes (rather than the entire survey) it is possible to see how the clusters differ.

The BFM makes it possible to present the data in a way that segments the landscape of MSMEs in Zambia along a continuum. This allows for greater insight into the business landscape through more detailed analysis. To further refine the results gleaned through initial application of the PAM, numerous demographic variables (e.g. the province lived in, whether the respondent is urban or rural, the gender of the respondent) contained in the dataset were applied to the initial model and a chi-squared* analysis was conducted – yielding the final BFM continuum.

*This tests a null hypothesis stating that the frequency distribution of certain events observed in a sample is consistent with a particular theoretical distribution. The events considered must be mutually exclusive and have total probability. A common case for this is where the events each cover an outcome of a categorical variable. A simple example is the hypothesis that an ordinary six-sided dice is “fair”, i.e. all six outcomes are equally likely to occur.
This segmentation model complements, supplements, and enriches the analyses found in the other ZBS technical reports. For example, the access to finance report shows dramatic differences in access, based on whether or not an enterprise is rural or urban. The productivity paper clearly shows the increases in productivity related to higher levels of education. The landscape paper offers many perspectives on the percentages of firms that are, for example, male or female headed, rural or urban, in one province or another.

Yet, firms are multi-dimensional. The BFM segmentation model provides composite sketches of MSMEs and large businesses. For example, instead of proceeding with policy or other interventions to broadly promote more finance in rural areas, application of the BFM may allow policymakers and others to discern and implement interventions that focus on a finer, more appropriate level of detail. The BFM segments include further delineation of which rural areas, the kinds of enterprises in those particular areas, the typical educational profile of the business owners in those areas, and other factors that would nuance the approach. This enables the allocation of resources to more manageable segments of the MSME population, rather than just “rural enterprises”.

2.2 What the BFM can tell us

The BFM makes it possible to present the data in a way that segments the landscape of MSMEs in Zambia along a continuum. BFMs 1 through 8 describe MSMEs, while BFMs 9 through 12 describe large enterprises. Figure 1 details the percentage of MSMEs that fall in each segment from 1 to 8.

**Figure 1: BFM 1-8 by percentage**

<table>
<thead>
<tr>
<th>Total percentage of MSMEs</th>
<th>BFM 1</th>
<th>BFM 2</th>
<th>BFM 3</th>
<th>BFM 4</th>
<th>BFM 5</th>
<th>BFM 6</th>
<th>BFM 7</th>
<th>BFM 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>100%</td>
<td>32%</td>
<td>8%</td>
<td>21%</td>
<td>11%</td>
<td>13%</td>
<td>8%</td>
<td>7%</td>
<td>1%</td>
</tr>
</tbody>
</table>

Table 3 captures the key categories of difference between the 8 MSME segments. Note that in interpreting the table, it depicts the most differentiating features, not all of the features, and not the exclusive features. For example, indicating that males differentiate a particular BFM in no way means that there are no women who fit the same profile; however, it does mean that men are more likely to be found in that segment relative to their overall proportions in the total market. In addition, the table also highlights those things that most differentiate one segment to the next. For example, BFM 4s tend to have driver licences, which is not to say that some BFM 3s do not have driver licences, or that all BFM 4s do, but that in distinguishing along the continuum, this is a trait
that definitively sets one group apart from the other. Annex 2 provides detailed descriptions of BFM 1 to 8.

**Table 3: Main differences in BFM 1-8**

<table>
<thead>
<tr>
<th>BFM Cluster</th>
<th>Urban / Rural</th>
<th>Provinces</th>
<th>Sectors</th>
<th>Gender</th>
<th>Marital Status</th>
<th>Age</th>
<th>Form of ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>BFM 1 (32%)</td>
<td>R Western, Eastern</td>
<td>Agricultural Production, Wild Fishing, Manufacturing and Selling Household Cleaning Products, Making Table Cloths</td>
<td>M</td>
<td>Married</td>
<td>40+</td>
<td>None / Chief</td>
<td></td>
</tr>
<tr>
<td>BFM 2 (8%)</td>
<td>R Luapula, Northern, Eastern.</td>
<td>Agricultural Production, Construction, and Manufacturing and Selling Household Cleaning Products</td>
<td>M</td>
<td>Never Married, Widowed Or Separated</td>
<td>30-49</td>
<td>NRC</td>
<td></td>
</tr>
<tr>
<td>BFM 3 (21%)</td>
<td>R Northern, Western, North Western, Central</td>
<td>Agricultural Production, Mining And Excavation, Electricity, Manufacturing and Selling Household Cleaning Products, Retailing Vegetables at the Market, Brewing Local Beer</td>
<td>M</td>
<td>Married</td>
<td>18-39</td>
<td>NRC / Chief</td>
<td></td>
</tr>
<tr>
<td>BFM 4 (11%)</td>
<td>R Southern, Eastern, Luapula</td>
<td>Agricultural Production</td>
<td>M</td>
<td>Married</td>
<td>30+</td>
<td>Driver License</td>
<td></td>
</tr>
<tr>
<td>BFM 5 (13%)</td>
<td>U Copperbelt, Lusaka</td>
<td>Wholesaling, Real Estate, Leasing, Business Services, Manufacturing, Running Small Shops, Hotels and Catering, Finance, Information Communication Technology, Construction.</td>
<td>F</td>
<td>Never Married</td>
<td>18-44</td>
<td>Driver License, Passport</td>
<td></td>
</tr>
<tr>
<td>BFM 6 (8%)</td>
<td>U Lusaka, Southern, Copperbelt</td>
<td>Wholesale Trade predominantly, but lots of diversity</td>
<td>F</td>
<td>Never Married, Widowed, Separated, Divorced</td>
<td>18-44</td>
<td>Passport</td>
<td></td>
</tr>
<tr>
<td>BFM 7 (7%)</td>
<td>U Lusaka, Copperbelt, Southern, Northwest</td>
<td>Wholesale Trade, Salons, Raising Chicken, and the Hardware Trade.</td>
<td>F</td>
<td>Never Married, Divorced</td>
<td>25-29</td>
<td>Driver License</td>
<td></td>
</tr>
<tr>
<td>BFM 8 (1%)</td>
<td>U Lusaka, Central</td>
<td>Hotels, Catering, Food and Beverages, Manufacturing, Construction, Car Motorcycle and Household Goods Repair, Transportation and Storage, Information Communication Technology, Finance, Health, and ‘Other’</td>
<td>F</td>
<td>Divorced, Separated, Widowed, Living Together / Cohabiting</td>
<td>25-49</td>
<td>Driver License, Passport (Foreigners)</td>
<td></td>
</tr>
</tbody>
</table>

The spectrum from BFM 1 to 4 shows a trend from generally older to generally younger business owners. The prevalence and sophistication in the form of identification improves moving up the BFM scale, with lower BFM s tending to have no identification or only letters from chiefs, through to greater prevalence of national registration cards (NRC), and finally the appearance of drivers licences in BFM 4.

Geographically, Luapula Province is interesting, with a substantial prevalence of BFM s 1 and 2, and then again at BFM 6. Somehow the economic and social character of this province seems to support both the least developed MSMEs, as well as those with more robust businesses. Conversely, the
other provinces fall into a more predictable pattern, with predominantly rural provinces appearing mostly among the lower BFMs and urban provinces among the upper BFMs.

Some interesting business sector trends also emerge from the data. Between BFMs 1 and 2, a potentially skilled enterprise category, namely construction first appears. BFM 3s are the first segment to see any meaningful participation in the mining sector (along with electricity and brewing local beer). From BFM 5 to 6 there is a greater presence of wholesaling businesses, and generally a greater diversity of enterprises.

In terms of social and demographic profiles, three areas are particularly interesting. Firstly, the data shows that BFMs 1 to 4 tend to be married more often than BFMs 5 to 8. Also, BFM 1 and BFM 8 both show a greater incidence than others for foreigners. Finally, we see that women are disproportionately represented in BFMs 5 to 8, wherein they comprise no less than 41% of any single BFM segment, but only comprise 33% of the total MSME population. Conversely, men are disproportionately over-represented in the lower BFM 1 to 4 segments.

The majority of large enterprises fall within BFM 10 (34%), with the least (18%) appearing in BFM 12 (see Figure 2).

**Figure 2: BFM 9-12 by percentage**

It is important to bear in mind that the total sample for the survey was only 161 respondents, and when the analysis is performed across sub-categories, the percentage representation may be exaggerated. That means that one respondent could be represented in percentage terms as say 10%. Therefore caution needs to be exercised before reading too much into some of the more detailed breakdown of the data.

The most differentiating features among large businesses tend to fall into five categories: company details such as the sector of the business and its form of ownership; the type of equipment used; the type and level of financial information and registration; perceived obstacles to doing business; and the nature of suppliers to the business. There is a dramatic shift from the demographic nature of the differentiators for MSMEs, to attributes that align more to the business than the business owner.
BFM 9 (22% of the large business sample)

Company details
The dominant business sector tends to be agriculture production, including aqua culture, although many other business sectors are evident. Because of the skew towards agriculture, there is also a skew to farm locations, although formal business premises are also important. BFM 9 businesses tend to own the premises.

These firms tend to be in Central, Southern, Northern, Western and Luapula provinces. Shareholders are private foreign individuals, companies or organisations and government/state.

The legal status of the business is varied, including partnerships, single owner/sole proprietorship, co-operatives, and close corporations.

Equipment
The equipment that differentiates BFM 9 is ownership of items like farming equipment, such as a tractor, cash register/till, a fax machine, a security alarm system, factory machinery, credit card machine, treadle pump, motor vehicle for company use, photocopier, storage space for business, and hammer mills.

Computer use tends to be for online selling of products/services and for business correspondence. BFM 9 businesses tend to have access to a post box address and have a website for the business.

Financials and registration
One of the differentiating factors about this group is that their financial records are not always audited every year, even though they have up-to-date financial accounts.

Businesses in the BFM 9 group are not always registered with the Patents and Company Registrar (PACRO) or with any local government agency, and sometimes do not have a tax identification number (TPIN) from the Zambia Revenue Authority.

The majority have not operated without being registered; however, the group does include businesses that say they have operated without being registered. When these businesses do register, the reasons given include the need to obtain access to finance more easily and for moral/ethical considerations. They also claim that they grew too large to remain unregistered and they registered to gain access to aid programs.

The tax payments they claim to make are other government taxes/levies, unofficial levies by government, turnover tax and customs payments.

Reasons for not being registered include that they do not comply with all the registration requirements, it costs too much money, or that the process is complicated.

In terms of visits from tax officials, BFM 9 businesses tend to refuse to answer on the number of visits and whether unofficial payments are being asked for or paid. Among those that did respond to this question, most of those firms say that they had not been fined as a result of the visits.

Performance and obstacles
BFM 9 monitors their business performance using cost of inputs/overheads and asset value, profitability, turnover and cost of sales as measures.

Perceived major obstacles to doing business include tax administration, cost of finance, business licensing and permits, inadequately educated workforce, crime, theft, disorder, access to finance, and telecommunications challenges.
Perceived obstacles to accessing land for expansion include the small size of land ownership, government ownership of land and that land is expensive to acquire.

Business suppliers

The main source of information about suppliers comes from friends/family, business associates, the internet and the radio. Business suppliers tend to be individuals and other businesses mostly located within specific areas inside Zambia. Some do import.

BFM 9 businesses regularly suffer losses because of delivery delays, with the average percentage loss of sales reported between 10% and 20%. Reasons given for the delays are suppliers’ transportation problems and payment of gifts or bribes.

Those that import report delays in receipt of their goods of between two and 30 days. There is no actual delay in obtaining an import license, and they are not paying gifts on importation of goods, but they do report the need to pay a gift to obtain an import license.

**BFM 10 (34% of the large business sample)**

Company details

BFM 10 businesses tend to be located in the North Western, Eastern, Western and Copperbelt provinces. They operate to a lesser degree from farms than BFM 9, and from home. The differentiating factor in BFM 10 is that the business property is rented.

The legal status of these businesses tends to be co-operatives, close corporations and privately held limited companies. Shareholders tend to be private foreign individuals and companies or organisations.

The business sectors are varied. Unlike BFM 9, sectors such as electricity, gas and water, the construction sector, transportation and storage dominate over agricultural production. Manufacturing, including the processing of agricultural and fishing products, is also evident. Other sectors include hotels, catering, food and beverages, insurance and packaging materials.

Equipment

Businesses in BFM 10 have a wide range of facilities. Motor vehicle for company use is a big discriminator, followed by items such as credit card machine, safe place for keeping cash/vault, security alarm system, storage space for the business, fax machine, photocopier and a tractor.

They tend to have computers for the business and use these for keeping business records, providing computer services to customers and for accessing the internet. They also have a website for the business.

Financials and registration

BFM 10 businesses claim that they have been visited/inspected or met with a tax official during the past 12 months, and that they would expect up to four visits. They refuse to say if gifts or informal payments were expected or requested.

The majority of businesses in BFM 10 are registered with PACRO, although some have operated without being registered. The reasons for not being registered tend to be that they do not comply with all the requirements, it costs too much money, or it is too complicated.

The reasons given for being registered are that they grew too large to remain unregistered, to obtain access to financing more easily, because it is a legal requirement, and because their customers only deal with registered entities. These businesses tend to hold an operating license with local government agencies, as well as having a TPIN from the Zambia Revenue Authority.
Tax payments tend to be income tax, customs duties, land and building tax, state pensions (e.g. NAPSA) and PAYE (Pay As You Earn).

Financial records are audited every year, but the financials are not always up to date.

Performance and obstacles

Business performance is monitored or measured and the methods of measurement tend to be the number of customers, turnover and cost of inputs/overheads.

The main obstacles that are significantly different in BFM 10 tend to be an inadequately educated workforce, customs and trade regulations, business licensing and permits, electricity, telecommunications, transportation, the political environment and corruption.

Obstacles to accessing land for expansion tend to focus on the availability of infrastructure and disputed ownership, or they do not experience obstacles.

Business suppliers

Business suppliers tend to be other businesses in different countries. Gifts have been requested for imports. Delivery delays are experienced and the percentage loss in sales as a result of the delays is estimated at between 20% and 50% of sales. These delays are less than 10 days. Delays are reported in obtaining import licenses.

The main source of information about suppliers comes from newspapers and other publications, the internet, billboards and television.

The main cause of delivery delays tends to be suppliers’ transportation problems, insufficient suppliers, the financial constraints of suppliers, payment of gifts and bribes or border/customs delays. Gifts have been expected for import licenses.

BFM 11 (26% of the large business sample)

Company details

BFM 11 differs from BFM 10 in the locale and tenure type for the operation of the business. BFM 11s have a higher tendency to operate from formal business premises, which they own. The business sectors that are significantly different are education, finance, car, motorcycle and household goods repair, wholesale and retail trade, real estate, leasing and business services, health services, insurance and security services.

Shareholders are private domestic individuals, companies or organisations and government. Current legal status of business is a publicly listed company (PLC), close corporation or single owner/sole proprietorships.

Equipment

BFM 11s use a wide range of equipment. Items that differentiate are a hammer mill, storage space for the business, treddle pump, security alarm system, factory machinery, photocopier, motor vehicle for company use, tractor, cash register/till, fax machine, and a safe place for keeping cash/vault.

A significant differentiator is that there are businesses that do not own or have access to a computer in BFM 11. Those that have computers use them for business correspondence and keeping business

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2 Some caution needs to be exercised in extrapolating the findings of the LBS to the entire population of large enterprises, as data points such as this one may be represented by only a tiny number of enterprises, but in percentage terms, seem significant.
records. They have access to the internet at the business location and have access to e-mail, along with a post box address.

Financials and registration

The significant differentiator in this group is the claim that their financial records are audited every year. However, some businesses do say that their financials are not up to date.

BFM 11 businesses claim to be visited on multiple occasions by tax officials in the past twelve months and admit that they have been fined as a result of the meetings. They also admit that gifts or informal payments were expected or requested.

Another differentiator is that some of the businesses are not registered with PACRO. For those that are registered in some way, they do so because they have customers who deal only with registered entities, for moral/ethical considerations, or because they learned of the procedures required to register. Those that are not registered claim that the business does not comply with all the requirements and it costs too much money.

The majority of businesses in BFM 11 do have a TPIN from the Zambia Revenue Authority, but some do not. The tax payments that differentiate this group are unofficial levies by government, other government taxes/levies, turnover tax, PAYE and the state pension (e.g. NAPSA).

Businesses claim to be operating with licences from local government agencies.

Performance and obstacles

A significant differentiator in BFM 11 is businesses that claim not to be monitoring performance. Where business performance is monitored, they consider the number of employees, the number of customers, cost of sales and asset value.

The major obstacles to doing business are perceived to be crime, theft, disorder, corruption and cost of finance, access to finance, tax rates, transportation, labour regulations, the political environment and access to land for expansion/relocation.

In terms of access to land for expansion, the obstacles they see are not enough land, the small size of land ownership, the cost of land and government ownership of land.

Business suppliers

The location of most business suppliers tends to be from throughout Zambia; but a number of businesses also indicate frequent use of suppliers from specific areas, such as Lusaka. Business suppliers tend to be individuals, co-operatives and government.

They hear about the suppliers through word of mouth, friends and family, the radio, other business associates and television.

They do not generally experience delivery delays from suppliers, but when there are delays, these are due to financial constraints of suppliers, transportation problems of suppliers and payment of gifts or bribes. They claim that these losses could amount to as much as 30% of sales.

They do not report delays in obtaining import licenses, nor do they pay bribes for the licenses.

BFM 12 (18% of the large business sample)

Company details

These businesses are located mainly in the provinces of Lusaka, Copperbelt and Eastern. Some, although in lesser proportions, appear in Western Province, as well. They operate from formal business premises and own the premises they operate from.
Current legal status of the business is a close corporation or privately held limited company. Shareholders are private domestic individuals or companies or organisations.

The business sectors that differentiate this segment are car, motorcycle and household goods repairs, information and communication technology, wholesale and/or retail including agricultural, hotels, catering, food and beverages, real estate, leasing and business services, mining and excavation, insurance and packaging materials.

Equipment

BFM 12 has a wide range of equipment available with little significant differentiation over BFM 11.

A significant differentiator, however, is the ownership of computers and that they run a website for the business. They use a computer for accessing the internet, for online selling of their products and services, and for providing computer services to customers. A minority of businesses do not own but have access to computers.

Financials and registration

Not surprisingly the significant differentiators in BFM 12 are that their financial records are up to date, and that they are audited every year.

They have been frequently inspected or required to meet with tax officials in the past 12 months and the majority claim that no gift or informal payment was expected or requested. They do, however, refuse to admit if they had been fined as a result of the meetings.

The tax payments made include VAT (Value Added Tax), state pension (e.g. NAPSA), income tax, turnover tax and customs duties.

The majority are registered with PACRO. The reasons given for registration were to obtain access to financing more easily, for moral/ethical considerations, or because it is a legal requirement. Those not registered in any way claim that the business does not comply with all the requirements, it costs too much money, or that it is too complicated.

Performance and obstacles

Performance of the business is measured by the ruling prices of product/services, turnover, profitability, or the number of employees.

Obstacles in accessing land for expansion tend to be the procurement process and the cost of land.

Major obstacles include the macro-economic environment (inflation, exchange rate, and interest rates), tax rates, access to land for expansion or relocation, tax administration, the political environment and labour regulations.

Business suppliers

Most business suppliers to BFM 12 come from other countries. Sales lost as a result of delays from suppliers is not frequent but could result in up to 19% of sales being lost. The main causes of delivery delays are the payment of gifts or bribes, and there being insufficient suppliers.

The main source of information about suppliers is a bit vague, but is reported as billboards, word of mouth, the radio, the internet or television.

Businesses report the payment gifts for import licences.
3. Business profiles based on the BFM

3.1 Key elements of the MSME BFM profiles

In order to visualise how the BFM groups relate to the key data, a series of cross-tabs were performed to illustrate how the BFM could be used to better explain the data.

It is possible to group the 16 obstacles across the BFMs into four main groups (see Figure 3). A number of important points emerge. Firstly, the only substantial changes in perception occur within the legal and regulatory cluster, which makes intuitive sense, since the BFM is a measure of robustness, or, in other words akin to formality. In turn, legal and regulatory issues should be of greater concern to the higher BFMs.

Figure 3: Obstacles to doing business BFM 1-8

The lack of major inter-BFM differentiation across the other three categories probably speaks to the general low state of the conditions for MSMEs in all of these areas. With no more than 10% of MSMEs having bank accounts, it is little wonder that all BFMs see it as a problem. Next to none have electricity, computers or telephones, so again, it is not surprising that all BFMs see the problem in relatively similar ways. Further, the general societal environment, including crime, theft, corruption, and the macroeconomic environment, contains a few nuances but broadly affects (or is not perceived as affecting) all businesses.

Urban versus rural

The lower end BFM groups tend to be far more rural than the top end BFM groups. The major break between BFMs 4 and 5 mainly results from the drastic reduction in the number of agricultural businesses (see Figure 4).

*Legal and Regulatory Environment includes business registration, labour regulation, tax administration, tax rates, and trade regulation. General Societal Environment includes macroeconomic instability, corruption, crime and political environment. Business Infrastructure includes electricity, transportation, telecommunications, access to land and worker skills. Finance includes cost of finance and access to finance.*
Viewed through the BFM lens, there is clear evidence of higher female participation in the higher BFM groups (see Figure 5). In all four of the upper BFMs, women comprise no less than 41% of the sample, while comprising only 33% of the overall MSME population. Women are also a disproportionately higher percentage of wholesale/retail businesses, which, as shown in the productivity analysis, tend to generate higher income per unit of labour than the male-predominated agricultural businesses.
Main source of energy for the business

Figures 6 and 7 together drive home the point that less robust enterprises do not have access to, and do not use, electricity. Such strong evidence creates a compelling case to look at business infrastructure generally and electricity specifically as a potentially major boost to overall MSME competitiveness.

**Figure 6: Main sources of energy BFM 1-8**

[Graph showing main sources of energy for BFM 1-8]

**Figure 7: Electricity use BFM 1-8**

[Graph showing electricity use for BFM 1-8]

Access to finance

Issues around access to finance are discussed in depth in the access to finance paper, but it is still noteworthy to point out that even among the MSMEs at the top of the MSME BFM scale (i.e. 1% of the sample), one-third do not have a bank account (see Figure 8). This may say less about the
sophistication of the businesses and more about the limited state of the financial sector’s product and service offerings. It also buttresses other data, showing that well over 90% of MSMEs (and great proportions of large firms) transact in cash; and that the value proposition for many MSMEs, when considering the costs (direct and indirect) of a bank account, versus, keeping money ‘under the mattress’ (or in a safe place, at least), just do not come out in favour of having a bank account.

**Figure 8: Banking profile BFM 1-8**

**Claimed tax payments**

The data around ‘claimed tax payments’, including bribes (or ‘unofficial levies by the government’) reveal a peculiar phenomenon. Specifically, BFM 2 shows the greatest reported incidence of this, with nearly two-thirds making this claim (see Figure 9).

**Figure 9: Tax payments BFM 1-8**
Note that none of these businesses report having been visited by a ‘tax official’, so the question arises as to whether some other government official (e.g. an extension worker) is visiting these kinds of predominantly male, middle-aged, rural dwellers and farmers. Generally, they would seem to be too cash poor to warrant repeated approaches for bribes, and thus it may be possible that these unofficial levies are in-kind favours. The possibility that the levies may be legitimate must also be considered, but that this market segment is uninformed about them, and thus perceives them as bribes. This may also be a statistical anomaly, and thus may not reflect reality in this segment.

3.1 Perceived obstacles to doing business among MSMEs

It is evident from the “most serious” problems listed by MSME owners that varying degrees of importance would be ascribed to the problems by different business owners, depending on their circumstances.

For example, if someone has never had electricity, the supply of electricity might not be listed as a top-of-mind problem. To better understand and interpret the list of “most serious” problems perceived to be experienced by MSME businesses in Zambia, the BFM analysis was used in conjunction with a chi-squared analysis.

Figure 10 shows the relative importance of the various perceived problems of MSME business owners along the BFM continuum face.

The two axes represent divergence from the “norm”. Access to, and cost of finance, are common to most businesses along the BFM spectrum and hence lie on the horizontal axis. BFM 5 to 8 share common problems with variables such as tax rates, licensing and permits, labour regulations and electricity problems being perceived as the most serious at that end on the business spectrum. BFM 3 and 4 share concerns about access to land and telecommunications, more so than their other BFM counterparts. At the lowest end of the scale, BFM 1 and 2 share common problems of crime, theft and disorder and transportation problems.

In practical application, it becomes possible to identify a strategy aimed at improving transport for MSMEs that may focus in the areas and on the types of entrepreneurs found mostly in BFM 1 and 2. Discussions about taxes and licensing would most likely yield meagre results if engaging with a profile of firms found in BFM 1 and 2, but more likely to be perceived as important, and more likely to have demonstrable impact, if targeted at businesses fitting the BFM 5 to 8 profile.
Figure 10: Perceived problems BFM 1-8

Zambian BSM Landscape

- Telecommunications
- Electricity
- Transportation
- Tax Rates
- Tax Administration
- Customs and Trade Regulations
- Labour Regulations
- Business Licensing and Permits
- Macroeconomics Environment (Inflation, Exchange Rate, Interest Rates)
- Access to Finance (E.g., Interest Rates)
- Access to Finance (E.g., Collateral)
- Political Environment
- Corruption
- Inadequately Educated Workforce
- Crime, Theft, Disorder
- Cost Of Finance (E.g., Interest Rates)
- Business Environment
- Access To Land For Expansion / Relocation
- BSM 1
- BSM 2
- BSM 3
- BSM 4
- BSM 5
- BSM 6
- BSM 7
- BSM 8
3.3 Key elements of the large business BFM profiles

This subsection of the report presents a summary of all the major data categories stratified by BFM 9 through 12. Annex 3 offers a more detailed presentation of the differences, along with a series of graphs. As noted, large businesses, as a group, revealed a sufficiently different general BFM profile to warrant separation from the MSME BFM continuum. In addition, to compensate for ‘non-responses’ in the LBS, we have separated this BFM analysis from that of the MSME Survey.

BFM 9 enterprises are more likely to be trading in the agricultural sector, and along with that, own farming equipment more regularly than their upper BFM counterparts. They tend to share similar attributes to many of their MSME contemporaries, especially in that few keep up-to-date financial records, even fewer have annual audits, and some still operate without being registered with PACRO, the tax authorities, or any other body. Perhaps related to this higher incidence of non-compliance, they also tend to perceive the tax administration burden as a more serious obstacle to their doing business than the other upper BFM segments.

Moving into BFM 10 is accompanied by several points of differentiation. Electricity, gas and water, construction, and transport and storage emerge as much more important sectors. The businesses in this segment also have a tendency to own a motor vehicle (or multiple vehicles) for the business, and the first signs of using the internet are seen, in this instance to host a company website. BFM 10s show a higher degree of formality than their BFM 9 counterparts, as BFM 10s tend to have audited financial accounts, even if they are not always timely. Importantly, they, more than any upper BFM segment, identify the lack of an educated workforce as a critical obstacle to doing business.

BFM 11 enterprises are the first in the continuum to show substantial ownership of business premises (as opposed to rental or working from an agricultural plot). This segment also reveals the first substantial presence of ‘white-collar’ industries, such as education, finance, insurance, and health. In a continuing progression of formality, BFM 11 enterprises are audited annually. In potentially two related phenomena, BFM 11s most frequently report the payment of gifts or informal payment, while also seeing crime, theft, disorder and corruption as key obstacles to doing business – demonstrably more so than their peers in the other three upper BFM segments.

BFM 12s are found almost exclusively in Lusaka, Copperbelt and Eastern provinces. They tend to skew towards vehicle repair, ICT, and wholesale or retail trade. Not only do they use computers in the business and have websites, but the only meaningful incidence of using the web for sales of the company’s goods and services is seen. Again, in what may be two related trends, BFM 12s see the macro environment as the biggest obstacle to doing business, while also saying that they source a substantial proportion of their inputs from foreign suppliers.

3.4 Perceived obstacles to doing business among large enterprises

Figures 11 to 16 set out the top six obstacles to doing business, as claimed by the respondents in the four large business BFM segments (i.e. electricity (Figure 11), macroeconomic instability (Figure 12), cost of finance (Figure 13, tax rates (Figure 14), access to finance (Figure 15), and corruption (Figure 16). The responses vary and are somewhat difficult to interpret in isolation, although a very clear indication is given in each case.

The severity of the electricity obstacle seems to diminish as the BFM continuum moves from 9 to 12, although BFM 12 enterprises reported the highest incidence (18%) of this being a “very severe obstacle”.

26
In the realm of the macroeconomic environment, there may be some relationship between the slightly greater tendency toward international supplier relationships among the high BFM9s and their relatively higher sensitivity to the macroeconomic environment. They also tend to have higher awareness of cost and price shifts in the market than their smaller counterparts.

Figure 12: Obstacles BFM 9-12 – macroeconomic instability

The cost of finance is clearly most important to BFM9s. Interestingly, they may find themselves in a squeezed position. On one hand, they are sophisticated enough to be considered worthy of credit.
On the other hand, they may not have enough market power or financial muscle to demand more competitive rates.

**Figure 13: Obstacles BFM 9-12 – cost of finance**

![Bar chart showing obstacles to finance for BFM 9-12 with percentages for each level of obstacle.

With the highest levels of formal registration, including for tax purposes, BFM 12s demonstrate the greatest sensitivity to tax rates. On the other hand, BFM 9s have lower levels of formal registration, perhaps because they perceive tax rates as high.

**Figure 14: Obstacles BFM 9-12 – tax rates**

![Bar chart showing obstacles to tax rates for BFM 9-12 with percentages for each level of obstacle.

The access to finance graphic shows the most concern among BFM 9s and 12. These trends probably reflect two different sets of impetuses. For BFM 9s, their perceived high cost of finance may reflect...
their relatively weak bargaining positions with the banks. For BFM 12s, the seriousness of this obstacle may reflect less on the actual price of finance, but on its cost, relative to overall firm profitability.

**Figure 15: Obstacles BFM 9-12 – access to finance**

![Bar chart showing obstacles BFM 9-12 – access to finance]

Corruption is felt in the most pronounced ways among BFM 10 and 11 firms. None of the data provides sufficient clues about why their perceptions are, on balance, harsher than their BFM 9 and 12 colleagues.

**Figure 16: Obstacles BFM 9-12 – corruption**

![Bar chart showing obstacles BFM 9-12 – corruption]

Access to land did not make the top six obstacles (it ranked 11th out of 16 options), but given the importance of agriculture throughout the ZBS, even through BFMs 9 and 10, it is worth a look. Of
those who claimed that land was an obstacle, Figure 17 captures the reasons offered for it being an obstacle. Regardless of BFM, the procurement process and cost far outweigh other factors.

**Figure 17: Obstacles BFM 9-12 – access to land**

![Figure 17: Obstacles BFM 9-12 – access to land](image)

### 3.5 Significant differentiators by large business BFM

Taking the entire set of claimed obstacles into consideration, the most significant differentiating obstacles for the various BFM groups are shown in Table 4. This is a different type of analysis from saying what obstacles are perceived as most important. Rather, this analysis points out which of the 16 obstacles most differentiate one large business BFM group from another large business BFM group. For example, BFM 12 businesses are most differentiated from the views of their BFM 9 to 11 counterparts by their perception of the importance of the stability of the macroeconomic environment – even though, overall the macroeconomic environment was the second most important concern among all businesses. Conversely, BFM 12 businesses are less differentiated by their perceptions of the political environment, wherein they may have strong views, but they are not considerably stronger or weaker than their BFM 9 to 11 colleagues.

In considering what may influence government’s approaches to large businesses (or indeed how suppliers, customers, or other market players may perceive large firms in these various BFM segments), it is useful to examine the most differentiating factors. For BSM 9 firms, their views on tax administration most differentiate them from other BFM segments. For BFM 10 firms, worker skills and education emerge as the most salient differentiators. BSM 11 firms feel most strongly about crime, relative to the other three segments. And, as already noted, BSM 12 firms are distinguished by their focus on macroeconomic stability (or the lack thereof).
Table 4: Perceiving obstacles BFM 9-12

<table>
<thead>
<tr>
<th>Perceived obstacles (in overall ranking from most to least important)</th>
<th>BFM 9</th>
<th>BFM 10</th>
<th>BFM 11</th>
<th>BFM 12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electricity</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Macroeconomic instability</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cost of finance</td>
<td>2</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tax rates</td>
<td>6</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Access to finance</td>
<td>5</td>
<td>8</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Corruption</td>
<td>1</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crime</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tax administration</td>
<td>1</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trade regulation</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transportation</td>
<td>6</td>
<td>7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Access to land</td>
<td></td>
<td>3</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Worker skills</td>
<td>4</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Political environment</td>
<td>7</td>
<td>9</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Telecommunications</td>
<td>3</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Business registration</td>
<td>3</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Labour regulation</td>
<td></td>
<td>8</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

Figure 18 graphically presents these differentiated influences of the various obstacles. As with the similar analysis on the MSME data set (Figure 10), the two axes represent divergence from the “norm”. Access to and cost of finance, along with electricity, are common to most businesses along the large business BFM spectrum, and hence lie on the horizontal axis. However, unlike the MSME BFMs, the relative importance of all other problems tends to diverge substantially from one large BFM segment to the next. This is seen by the fact that each of the four BFMs occupies its own quadrant. For example, the macroeconomic environment is substantially more important to BFM 12s than to any other BFM group. Similarly, BFM 11s seem to feel the bite of crime, theft, disorder and corruption much more than any of their counterparts.
Figure 18: Perceived problems BFM 9-12

Zambian Large Business BFM

- Tax administration
- Business licensing and permits
- Inadequately educated workforce
- Customs and trade regulations
- Telecommunications
- Tax rates
- Access to finance (e.g., collateral)
- Political environment
- Access to land for expansion/ relocation
- Crime, theft, disorder
- Corruption
- Macroeconomic environment (inflation, exchange rate, interest rates)
- Labour regulations
- Cost of finance (e.g., interest rates)

Total Responses
4 Key dynamics within the MSME BFMs

A key objective of this project was to gain an in-depth understanding of the MSME market in Zambia. It was also vital to gauge the potential for growth and assess opportunities for innovation in product and service delivery by determining where the largest potential for growth lies along a continuum of businesses, ranging from the least sophisticated through to the larger, more sophisticated businesses.

It is not enough to create interventions to accommodate all MSMEs. An approach is required that targets various MSMEs, in terms of their specific needs and requirements.

This approach is called the zone of transition analysis. Plotting the many different variables along the business continuum makes it possible to determine at what point businesses are starting to show signs of growth and operating effectively. The ability to pinpoint these businesses assists organisations facing the challenge of providing support and financial access to MSMEs. Furthermore, segmentation of MSMEs enables long and short term intervention strategies to be identified.

This targeted approach makes it possible to assess opportunities for innovation in product and service delivery because it identifies the businesses that are showing signs of operating effectively and growth by defining the high impact points along the business continuum. The zone of transition analysis attempts to identify the points along the BFM wherein certain underlying factors change most dramatically, and, in turn, highlight when these contribute to a business moving from a lower to a higher segment. Understanding these underlying factors can give policymakers and other stakeholders clearer clues about the types of interventions and combinations thereof that are more likely to improve business performance and competitiveness.

The MSME BFM data for Zambia presented an analytical challenge, in that the data revealed a definitive schism between BFMs 4 and 5. In fact, it would be fair to say there was not a transition, but a definitive break between the profiles of those MSMEs in BFMs 1 to 4, and those in BFMs 5 to 8. The following sub-section looks at the most glaring differences between the two sets of segments. This is followed by a more in-depth look at MSMEs in BFMs 1 through 4, not least because they represent 77% of the total MSME population in Zambia, and thus may substantially influence where and how resources are allocated to improve the lot of MSMEs.

4.1 Gap between BFM 4 and BFM 5

In an attempt to explain the jump in BFM profiles between BFM 4 and 5, it is necessary to consider a number of issues that are significant in the Zambian MSME landscape. One of the most important is the urban/rural split in gender terms. In rural MSMEs there is a 70% to 30% skew towards male (see Figure 19).
This skew is also evident in the BFM categories where males make up 75% of BFM 4 (see Table 20). BFM 4 is also 95% rural.

Table 20: BFM 4-5 gender split

Completing a chi squared analysis of the two groups, shows significant difference. Table 5 captures the key data (the most striking differences have been highlighted).
**Table 5: BFM4-5 differences**

<table>
<thead>
<tr>
<th>Identification particulars</th>
<th>BFM 4</th>
<th>BFM 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age group: 50 years+</td>
<td>44%</td>
<td>22%</td>
</tr>
<tr>
<td>Business premises: farm</td>
<td>82%</td>
<td>3%</td>
</tr>
<tr>
<td>Current number of full-time Employees: 6 to 10</td>
<td>14%</td>
<td>3%</td>
</tr>
<tr>
<td>Gender: male</td>
<td>75%</td>
<td>56%</td>
</tr>
<tr>
<td>I don’t use energy for business</td>
<td>97%</td>
<td>76%</td>
</tr>
<tr>
<td>Member of any business association: yes</td>
<td>16%</td>
<td>5%</td>
</tr>
<tr>
<td>Neither own nor have access to a cellphone</td>
<td>60%</td>
<td>41%</td>
</tr>
<tr>
<td>No formal schooling</td>
<td>13%</td>
<td>5%</td>
</tr>
<tr>
<td>Part Time business</td>
<td>26%</td>
<td>19%</td>
</tr>
<tr>
<td>Province: Eastern</td>
<td>34%</td>
<td>18%</td>
</tr>
<tr>
<td>Province: Luapula</td>
<td>15%</td>
<td>10%</td>
</tr>
<tr>
<td>Province: Northern</td>
<td>11%</td>
<td>7%</td>
</tr>
<tr>
<td>Province: Southern</td>
<td>24%</td>
<td>9%</td>
</tr>
<tr>
<td>Setting: rural</td>
<td>95%</td>
<td>60%</td>
</tr>
<tr>
<td>The reason for becoming a business owner: I was fired/retrenched from a previous job</td>
<td>9%</td>
<td>3%</td>
</tr>
<tr>
<td>The reason for becoming a business owner: to supplement other income</td>
<td>64%</td>
<td>57%</td>
</tr>
<tr>
<td>Title deeds for premises: no</td>
<td>93%</td>
<td>66%</td>
</tr>
<tr>
<td>Type of business clustered: agricultural business</td>
<td>91%</td>
<td>4%</td>
</tr>
</tbody>
</table>

For each data point, the data tends to become more divergent moving down the BFM segments from 4, or up the BFM segments from 5. These schisms suggest less of a continuum from BFM 1 to 8, but rather a need to divide the segments into two respective sub-clusters. The BFMs from 1 to 4 are characterised by strongly agriculture, rural, older, and male. The direct comparison between the two groups shows clearly that BFM 4 is rural, while BFM 5 is urban. BFM 4 is male and older, whereas BFM 5 is younger and female. BFM 4 also is less educated than BFM 5.

### 4.2 The continuum from BFM 1 to BFM 4

The BFM model attempts to depict firms along a continuum from those with little or no access to facilities to those that have a great deal more access. The bi-polar structure of the Zambian socio-economic landscape manifests in the rural population and agricultural activities dominating over urban populations and more diversified small firm activities in BFM 1 to 4, whereas the opposite is seen in BFMs 5 to 8.

The BFM is a continuum, but one with a serious schism, which reflects the Zambian business landscape rather than a statistical aberration. In fact, the story the BFM tells is consistent with key themes coming out of the other papers that formed part of this project. The landscape paper tells us 70% of all MSMEs are agricultural, while large businesses are much more diversified; Access to finance tells us that urban MSMEs have much better access to financial services than their rural cousins; Productivity tells us that farmers with electricity are more productive than those without.

Firms in BFM 1 to 4 tend to be more rural than those in BFM 5 and above; but it cannot be assumed that all firms in the BFM 1 to 4 groups are homogeneous. Some important differences emerge when studying the continuum of businesses from BFM 1 to BFM 4.
The majority of businesses in BFM 1 to 4 describe their business activities as “growing something and selling it”; and there is a skew towards BFM 1 rather than 4, indicating that as firms move up the continuum from 1 to 4, activities they participate in change, and arguably become more sophisticated.

There is a distinct skew towards businesses in BFM 1 being in agricultural production and having the business premises as a farm. The land in BFM 1 tends to be owned by the businesses rather more so than in BFM 4.

- Other interesting observations about firms along the continuum from 1 to 4 are: Businesses in BFM 1 tend to have business partners more so than in BFM 4. Although not specifically probed in the questionnaire, this may reflect a tendency towards more involvement of the community and/or family members in the least robust of rural enterprises.
- Some businesses in BFM 4 have a bank account and tend to have more up-to-date financial statements, as compared to those in BFM 1 – giving some hope that rural and micro do not equal unbanked and unsophisticated.
- Businesses in BFM 4 also tend to obtain and pay for expert advice outside of their businesses, demonstrably more so than those in BFM 1.
- Males are more likely to own the businesses in BFM 4 than those in BFM 1 – a phenomenon worthy of more analysis, since we see in BFMs 5 to 8 a disproportionate representation of women. This may suggest some sort of gender segregation of slightly more viable agricultural and rural enterprises trending towards higher proportions of male ownership, while women seem to have gained disproportionate gains in more urban retail oriented enterprises.
- The availability of land for expanding the business is a more serious obstacle to doing business in BFM 4 than in BFM 1, which again suggests a shift from community-based survivalist activities towards the lower end of the scale, versus slightly more business-oriented agricultural enterprises at the higher end of the scale.
- Businesses in BFM 4 are far more likely to have access to a post box address than those in BFM 1.
- BFM 4 businesses tend to perceive the macroeconomic environment as more of an obstacle than those in BFM 1, due most likely to the greater exposure to the issues around the macro environment than in BFM 1. That is not to say that the macro environment does not impact BFM 1. It simply indicates more of an awareness of the issues in the higher BFMs.
- Similarly, business licensing and permits are perceived to be a greater obstacle in BFM 4 than in BFM 1. Again this is what is perceived.
- The same goes for telecommunications. BFM 4 firms perceive it to be an obstacle more so than BFM 1. This is probably because BFM 1 firms have more limited access to telecommunications, whereas BFM 4 firms, perceiving greater opportunities that could be exploited through better telecommunications, are frustrated by lack of access to or inconsistency of the service.

Financial literacy is another important differentiator along the continuum. This demonstrates how improving the understanding of financial terms could assist in moving firms up the continuum, along with providing them with a greater degree of sophistication in doing business.

Words heard but not understood by BFM 1 compared to BFM 4 are:

4 Nearly 30% of MSMEs reported having ‘part-time unpaid employees’ – the largest single category of the four possible choices and the labour category that would most befit these kinds of tiny, intermittent, farm-based enterprises.
What is interesting is that informal financial terms such as chilimba and kaloba are included in the words not understood. This aberration warrants further study, but it is safe to speculate that there may be regional differences in dialects and languages that the survey did not capture, therefore leading to some not understanding the terms given to them. It would also be worth investigating whether these informal financial mechanisms are not used among the poorest households and businesses, which would be consistent with research in other markets, where indigenous informal financial mechanisms may only gain prevalence among the poor or near-poor, but not the poorest in societies.

The incidence of being banked is lower in BFM 1 than in BFM 4. Again, this implies that the ability to improve the access to finance will tend to assist in moving firms up the continuum (see Table 6).

**Table 6: Banking status BFM 1 and 4**

<table>
<thead>
<tr>
<th></th>
<th>BFM 1</th>
<th>BFM 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Currently banked for business</td>
<td>2%</td>
<td>9%</td>
</tr>
<tr>
<td>Previously banked for business</td>
<td>4%</td>
<td>8%</td>
</tr>
<tr>
<td>Never banked for business</td>
<td>94%</td>
<td>82%</td>
</tr>
</tbody>
</table>

The agricultural activities that firms are involved in also differentiate BFM 1 from BFM 4. Although agriculture is dominant throughout, it is clear that BFM 1 is mostly involved with crop growing, whereas BFM 4 is also involved in livestock rearing – a sub-segment that generally requires higher levels of investment and more complex farming methods, but which also generates higher returns (see Table 7).
Table 7: Agricultural activities BFM 1 and 4

<table>
<thead>
<tr>
<th>Activity</th>
<th>Total</th>
<th>BFM 1</th>
<th>BFM 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crop growing/production</td>
<td>65%</td>
<td>92%</td>
<td>88%</td>
</tr>
<tr>
<td>Animal/livestock rearing/production</td>
<td>13%</td>
<td>9%</td>
<td>28%</td>
</tr>
<tr>
<td>Fish production, fish farming</td>
<td>1%</td>
<td>1%</td>
<td>0%</td>
</tr>
<tr>
<td>Forestry production</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>

The ways owners describe their businesses is also a clear indication that not all businesses in the BFM 1 to 4 categories are the same (see Table 8).

Table 8: Types of business BFM 1 and 4

<table>
<thead>
<tr>
<th>Activity</th>
<th>Total</th>
<th>BFM 1</th>
<th>BFM 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breed/rear something and sell it</td>
<td>12%</td>
<td>9%</td>
<td>36%</td>
</tr>
<tr>
<td>Grow something and sell it</td>
<td>68%</td>
<td>97%</td>
<td>91%</td>
</tr>
<tr>
<td>Gather something and sell it (e.g. fish, wood)</td>
<td>1%</td>
<td>0%</td>
<td>2%</td>
</tr>
</tbody>
</table>

Although the percentages are small, there is an indication that BFM 1 firms tend to have their customers in the specific areas around where they operate, whereas what differentiates BFM 4 is that some have customers throughout Zambia and there is a little bit of exporting (see Table 9).

Table 9: Location of customers BFM 1 and 4

<table>
<thead>
<tr>
<th>Location</th>
<th>Total</th>
<th>BFM 1</th>
<th>BFM 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Throughout Zambia (Nationwide)</td>
<td>3%</td>
<td>2%</td>
<td>5%</td>
</tr>
<tr>
<td>Different country/countries</td>
<td>0%</td>
<td>0%</td>
<td>1%</td>
</tr>
</tbody>
</table>

Another area that significantly differentiates BFM 1 from BFM 4 is the ownership of equipment. The single most differentiating factor is the access to storage facilities for the business. BFM 4 firms also tend to own a lot more of even the most basic equipment such as a hoe, oxen, a plough, an ox-cart, a calculator, a treddle pump, or some factory machinery. Neither BFM 1 nor 4 firms would typically have a motor vehicle, a safe place to keep money, or a cash register.

This data suggests that the smallest, most rural, and most agriculturally-oriented firms in Zambia may become more sophisticated and more productive – not by moving them from agricultural businesses to retail and manufacturing, or by encouraging rural to urban migration – but for them to be provided with better access to equipment, infrastructure, finance, business skills and systems as well as improving their financial literacy.

Policymakers, donors and development agencies should delve deeper into the BFM to better understand the needs and shortcomings of businesses along the continuum of development in
Zambia and should focus on providing business support activities as well basic business tools and skills.

**4.3 Other differentiating factors along the BFM continuum**

Examination of the remainder of the BFM data reveals some other points along the continuum where the presence of one element or another may contribute to MSMEs moving up the scale.

For example, the data was examined to see where the most pronounced difference occurs between the answers “could not find a job elsewhere” and “try out a business idea”. This response suggests that BFM 8 business owners were more likely to actively choose to be in business, rather than doing it primarily as a survival mechanism (see Figure 21).

**Figure 21: Reason for becoming a business owner**

![Figure 21: Reason for becoming a business owner](image)

There is also a clear distinction in providing a service between BSM 7 and BSM 8. In most cases, these types of businesses are more productive per unit of labour and tend to require a greater diversity and depth of technical and business skill (see Figure 22).
Examining the level of education by BSM group also enhances understanding of the various transition zones within the BSM continuum. The relative incidence of no formal education is low in all groups, with a skew towards the lower BSM groups. Primary grades are dominant in BSM 1 and 2, while the transition to secondary grade education emerges in BSM 3 (see Table 23).

Table 23: Educations levels
The transition between vocational training and university education happens in BSM 7. This finding is consistent with the notion that higher value-adding enterprises require higher levels of specific skills, for which vocational training can be useful, but most effective when combined with an adequate base of basic education (see Table 24).

**Figure 24: Education groups – vocation training and university education**

<table>
<thead>
<tr>
<th>BFM 1</th>
<th>BFM 2</th>
<th>BFM 3</th>
<th>BFM 4</th>
<th>BFM 5</th>
<th>BFM 6</th>
<th>BFM 7</th>
<th>BFM 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vocational training</td>
<td>2%</td>
<td>3%</td>
<td>4%</td>
<td>3%</td>
<td>5%</td>
<td>3%</td>
<td>26%</td>
</tr>
<tr>
<td>University certificate or higher</td>
<td>2%</td>
<td>2%</td>
<td>3%</td>
<td>3%</td>
<td>6%</td>
<td>4%</td>
<td>22%</td>
</tr>
</tbody>
</table>

**4.4 Specific zones of transition**

These analyses seem to suggest two major zones of transition – one within the BFM 1 to 4 group, and another in the BFM 5 to 8 group. In the lower group, completion of secondary education and movement into relatively more productive types of agricultural production (e.g. livestock rearing, versus growing and selling crops) seem to be substantially correlated with higher BFM attainment. It is also interesting to see that while men are generally over-represented in the lower BFMs (relative to their overall representation in the MSME population), they have a substantially greater presence in the BFM 4 segment. Further analysis may make a connection with the lack of access for rural women to education and cultural norms around their involvement in livestock, versus crop-based agriculture, which in turn seem to limit their opportunities to advance through the lower BFMs.

In the BFM 5 to 8 sub-set, it would appear that vocational education may be one of the strongest boosts to upward mobility, especially in the trades and where more sophisticated methods of business management may be required. Finally, although BFMs 7 and 8 represent only about 2% of the total MSME population, this segment includes a much greater proportion of business owners, who would have a higher propensity to take conscious risks to start and grow a business. In turn, this may imply, for example, that there is ample space to extend credit and other financing facilities to a market segment wherein no more than 30% even have a bank account.

These insights potentially imply a number of issues. Interventions targeted at the upper MSME BFMs may be cheaper, require less direct intervention from government or subsidy, and yield faster results. At the same time, they will reach only a tiny fraction of the MSME population, and the
potential employment generation benefits are somewhat unknown. At the other end of the spectrum, the data implies the potential to reach great numbers of MSMEs among BFMs 1 through 4; but their very low levels of development and mainly rural setting will make reaching them much more costly. At the same time, systemic approaches, such as general improvement in basic education and ensuring that girls, in particular, benefit from basic educational efforts, combined with improvements to basic infrastructure, especially roads and electricity, could yield meaningful benefits for many MSMEs. However, in many cases it would probably be difficult to directly attribute improvements in such systemic elements to changes in MSME performance.

5 Conclusions

The BFM offers public, private and donor stakeholders a targeted and nuanced approach to delivering policy, support and services to the full range of MSMEs and large enterprises in Zambia. In particular, the methodology should allow easier and more vigorous identification of those MSMEs that show the greatest promise of growth and competitiveness in the short to medium term. Similarly, the BFM has revealed differentiated areas where large enterprises themselves perceive the greatest obstacles to their own improved prosperity.

The zone of transition analysis is a tale of two sub-sets. In the lower BFMs 1 to 4, comprising 77% of all MSMEs in Zambia, the data shows that getting into secondary education and trading in higher value adding agricultural enterprises can improve the lot of an MSME. It is also important to note that some MSMEs in BFM 4, while tiny in number, have had or do have bank accounts, which suggests that nuanced views of rural and agricultural markets can lead to improved service extension.

BFM 5 enterprises, estimated at about 13% of businesses nationwide, represent the ‘sweet spot’ of high potential in terms of the volume and quality of output, at reasonably low cost. This segment suffers from generally low service penetration rates (e.g. for banking), but operates mostly in urban areas, has a good basic educational background, and trades in a diversity of sectors. BFM 5 is the first of the groups where an urban setting differentiates. The provincial skews are to Copperbelt and Lusaka. In BFM 5 there is a much greater proportion of wholesaling, real estate, leasing and business services, as well as manufacturing, running small shops, hotels and catering, finance, information communication technology, and construction.

The dominant gender group is female in BFM 5. The majority in this segment claims to have ‘never married’. The dominant ages are from 18 to 44 years, indicating an opportunity to focus on the critical youth segment. And, the majority are Zambian citizens who hold a passport and a driver’s license, which may offer inroads towards increased formal business registration and compliance.

In terms of perceived business obstacles, this group rates the general societal environment, business infrastructure, and finance matters equally high, while putting markedly less emphasis on the legal and regulatory environment. Although markedly more urban than their lower BFM counterparts, 60% of BFM 5 businesses are still in rural areas, confirming that this segmentation methodology does not exclude rural enterprises, but instead encourages a national spread, albeit with the probable rural component focussing on the fringe towns of Lusaka and Copperbelt provinces and their neighbouring locales, as well as potentially along the line of rail.

About 80% of BFM 5s do not have or do not use electricity in their businesses. Further mapping between access to and usage of energy and the predominant sectors in this segment may identify targeted areas where electrification may yield above average returns to business productivity.
Eighty-eight percent of the BFM 5 segment does not have a bank account. Among their peers along the MSME BFM continuum, they are ranked third, behind BFMs 6 and 7, in terms of the perceived severity of this constraint. Several characteristics of this segment would indicate that many would fall in the more easily achieved market enablement zone\(^5\), in respect of financial service access, and therefore could be reached more easily and quickly than lower segments. For example, education levels are generally good, with more than 50% having a secondary or more education, which, in turn, would minimise the need to offer multi-lingual services. Many more of them are located in urban or peri-urban areas, which should lower the physical access barriers that so many rural enterprises face. Only about a third of BFM 5s have a cellphone, but slightly better positioning and pricing may tip the value proposition for these businesses, which tend to predominate in the wholesale and retail sectors, where not only quick, cheap, and effective communication can provide a competitive edge, but also where fast and safe money transfer may be a priority.

Of course, the 13% of all MSMEs found in BFM 5 cannot comprise the entirety of outreach to the MSME sector. Seventy-seven percent of the MSME market lies in the lower BFMs, and they need a wide range of policy, product, and service improvements to enhance their prospects for survival, not to mention growth and competitiveness. Nonetheless, interventions in these lower segments will likely cost more and take longer to show any results. Many of the problems plaguing business performance in the lower echelons extend beyond the commercial realm – including low levels of education, or poor access to basic infrastructure. Such obstacles will require systemic, cross-sectoral, and cross-ministerial cooperation and solutions, and thus will command greater depth and breadth of resource commitments.

Enterprises in the much smaller BFM 6, 7, and 8 segments comprise a robust, but still largely untapped market. For example, about 79% of enterprises in these segments have no bank account. Their general profile – relatively more urbanised, better educated, into value-adding businesses – should make them excellent candidates for quick and relatively light and less expensive interventions that could leverage substantial outcomes, both for the enterprises themselves, as well as for those providing new services to them.

The BFM tool may prove useful among larger businesses, too, in helping to optimise their performance. The stratification of their perceived obstacles to doing business uncovered the most useful insights. BFM 9s saw tax administration and cost of finance as the most serious barriers. BFM 10 enterprises most highly ranked an inadequately educated workforce and customs and trade regulations. BFM 11 businesses saw crime, theft, disorder and corruption as the most severe problems. And BFM 12 entities ranked the macroeconomic environment and tax rates as their two most important challenges.

These highly differentiated issues help to set a clear agenda for action. Coupled with the descriptions of each of these four upper BFMs, key stakeholders and support agencies may target specific audiences, perhaps through widely used business associations and public forums that large enterprises claim to use and value. Such dialogue should focus on these priority issues, which, in turn should lead to the most efficient and effective delivery of policy or commercial change in the short to medium term.

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\(^5\) The market enablement zone includes those businesses that are within reach of the market, given the parameters of an existing product, but do not currently have the product. This zone can be further sub-segmented into those enterprises that actively choose not to have a product, and therefore lie beyond the natural limits of the market, and those that have not yet purchased the product but are candidates for doing so.
Many of the most important large business challenges, like taxes, customs and trade regulations, and the macroeconomic environment, would require government leadership and direct involvement. Yet others, such as a better educated workforce, the cost of finance, and even crime, theft and disorder, may open opportunities for private sector leadership, in a cooperative stance with government. For example, the data seems to show substantial improvements in business performance, between those having a vocational qualification and those without one. Such insights may open the market for private training institutions, operating under clearly defined and transparently enforced national standards.
### Annex 1: Variables used in developing the small business BFM

<table>
<thead>
<tr>
<th>Variable</th>
<th>Sector Question</th>
<th>Possible responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variable</td>
<td>Sector</td>
<td>What sector does the business mainly operate in?</td>
</tr>
<tr>
<td>Question</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Add value</td>
<td>Question</td>
<td>What does the business do?</td>
</tr>
<tr>
<td>Possible responses</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Buy something and re-sell it</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Buy something and add value and re-sell it (e.g. cooking, drying, sewing, packaging, repairing)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Grow something and sell it</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Breed/rear something and sell it</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Make something and sell it</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Gather something and sell it (e.g. fish, wood)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Provide a service</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Other</td>
</tr>
<tr>
<td>Premises type</td>
<td>Question</td>
<td>On what basis does the business occupy the premises/land?</td>
</tr>
<tr>
<td>Possible responses</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• I/my partner/the business owns the premises/land</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• A family member/s owns the premises/land</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Premises/land are rented</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Premises/land are just used or occupied</td>
</tr>
<tr>
<td>Tenure</td>
<td>Question</td>
<td>Where does the business mainly operate from?</td>
</tr>
</tbody>
</table>
Possible responses

- Home (e.g. room, garage, kantemba within household premises)
- Farm
- Formal business premises (e.g. office, business complex, factory/plant, shop, industrial estate, formal market)
- Informal premises (e.g. informal market-place, street/footpath/open space, vehicle, container, no fixed location)
- Other

Variable Equipment
Question Thinking about the business, which of the following items and assets (in working order)

Possible responses

- Motor vehicle for company use
- Fax machine
- Photocopier
- Cash register/till
- Calculator
- Storage space for business
- Safe place for keeping cash/vault
- Credit card machine
- Factory machinery
- Tractor
- Hammer mill
- Treddle pump
- Oxen
- Ox-cart
- Plough
- Hoe
- None of these

Variable Shareholders
Question Can you tell me which of the following people or organisations are shareholders of the business?

Possible responses

- You
- Your family
- Private domestic (local) individuals, companies or organisations
- Private foreign individuals, companies or organisations
- Government/state
- Other

Variable Financials
Question Do you keep up to date financial accounts for the business?

Possible responses

- Yes
- No
- No response
Question Are these financial records audited every year?
Possible responses
- Yes
- No
- No response

Variable Export Question Does the business export its products/services?
Possible responses
- Yes
- No
- No response

Variable Credit Question Does the business currently provide its customers with goods or services on credit?
Possible responses
- Yes
- No
- No response

Variable Taxes Question Which of these, if any, does the business pay?
Possible responses
- Income tax
- Land and building tax
- Turnover tax
- VAT (Value Added Tax)
- PAYE (Pay As You Earn)
- Pension (e.g. NAPSA)
- Customs.
- Other government taxes/levies
- Unofficial levies by government officials

Variable Banked Question Interviewer classification of respondent as “banked” or “not banked”.
Possible responses
- Yes
- No
- No response

Variable Loans Question Where did you get the money to set up or take over the business?
Possible responses
- Loan from bank
- Loan from microfinance institution (MFI)
- Loan from a building society
- Loan from other financial institution
- Loan from government
- Loan from donor / NGO
Variable Insured
Question Does the business currently have any insurance product / policy?
Possible responses
- Yes
- No
- No response

Variable PACRO
Question Is the business registered with the Patents and Company Registrar (PACRO), or other government institution responsible for commercial registration?
Possible responses
- Yes
- No
- No response

Variable Agriculture sector
Question What agricultural processing activities is the business involved in?
Possible responses
- Crop growing/production
- Animal/livestock rearing/production
- Fish production, fish farming
- Forestry production
- Other

Variable Tax identification number
Question Does the business have a tax identification number (TPIN) from the Zambia Revenue Authority?
Possible responses
- Yes
- No
- No response

Variable Agricultural processing
Question What agricultural processing activities is the business involved in?

- Milling
- Drying
- Burning (e.g. charcoal)
- Skinning
- Butchering
- Cooking/food processing
- Bottling/packaging
- Logging
- Oil extracting/distilling
- Refining
- Other

Variable Business measurement
Question: Is the performance of the business monitored/measured in any way?
Possible responses:
- Yes
- No
- No response

Variable: Computers
Question: Does the business own or have access to a computer/s for the business?
Possible responses:
- Yes
- No
- No response

Variable: Illness
Question: Is absenteeism due to illness a significant obstacle to the current operations of the business?
Possible responses:
- Yes
- No
- No response

Variable: Family
Question: Of the total workforce, how many family members of the owner are currently employed in the business?
Possible responses:
This variable was split to indicate if any (or no) other family was employed by the business.
7 Annex 2 – Detailed descriptions of BFMs 1 to 8

BFM 1 (32% of all MSMEs)
The BFM 1 group, the largest of all eight MSME BFM segments and comprising 32% of all MSMEs, tends to be rural in the Western, Eastern and to a lesser extent Central and Luapula provinces, and located on a plot.

They are typically involved in agricultural production, wild fishing, manufacturing and selling household cleaning products, making table cloths and other items.

They tend to be male in the 40 year and above age groups. Their means of identification tends to be some written documentation from the Chief or they have no form of identification. To a lesser extent they have National Registration Cards (NRC). Some of this group are not Zambian citizens.

In terms of marital status, this group has married people as well as widowed and separated individuals.

BFM 2 (8% of all MSMEs)
BFM 2, making up 8% of the MSME population, also tends to be rural and living in the Luapula, Northern and Eastern provinces. They are involved in agricultural production, construction and manufacturing and selling household cleaning products. They tend to be male, who are never married, widowed or separated. The majority are in the 30 to 49 year old categories.

They tend to be Zambian citizens who have a NRC.

BFM 3 (21% of all MSMEs)
BFM 3, the second largest single MSME BFM segment at 21% of the sample, is also a predominantly rural group in the Northern, Western and North Western, Central and to lesser extent Southern provinces. This group tends to be male and is predominantly married. They tend to be in the younger age group of 18 to 39 years old. They are Zambian citizens who have a NRC or can produce written documentation from the Chief.

The business sectors they are involved in tend to be agricultural production, mining and excavation, electricity, manufacturing and selling household cleaning products, retailing vegetables at the market, brewing local beer.

BFM 4 (11% of all MSMEs)
This is the final BFM group where rural settings dominate. However, the individuals are still predominantly involved in agricultural production. The dominant provinces are Southern, Eastern and Luapula. Married males aged 30 years and older dominate. A driver licence is a differentiating factor as well as being a Zambian citizen.

BFM 5 (13% of all MSMEs)
BFM 5 is the first of the groups where urban setting differentiates. The provincial skews are to Copperbelt and Lusaka. A range of businesses differentiate this group from previous BFM groups, namely wholesaling, real estate, leasing and business services, as well as manufacturing, running small shops, hotels and catering, finance, information communication technology and construction.
The dominant gender group is female. There is no particular marital status that differentiates this
group, although the majority is ‘never married’. The dominant ages are from 18 to 44 years.

The majority are Zambian citizens who hold a passport and a driver’s license.

BFM 6 (8% of all MSMEs)
This BFM group is also dominated by females, the majority of whom claim to be ‘never married’,
widowed, separated or divorced. They are living in urban areas and in the provinces of Lusaka, Southern, Copperbelt and to a lesser extent Luapula. Age groups are similar to those in BFM 5; in fact there are quite a few similarities in the predominately urban BFM groups.

In terms of the business sectors, wholesale trade is the biggest discriminator followed by hotels, catering, food and beverages. Transport and storage businesses and construction and manufacturing are also important. After these, a long list of other business sectors follows, indicating the diversity of the group. Most claim to be Zambian citizens who have a passport.

BFM 7 (7% of all MSMEs)
BFM 7 are another urban group in the provinces of Lusaka, Copperbelt, Southern and Northwest. They are predominantly urban and female. Although they come from all age groups under 50, the dominant group is found in the 25 to 29 year age group. They are ‘never married’ or divorced. Wholesale trade is dominant in this group along with salons, raising chickens and the hardware trade. Other businesses include sewing, buying and selling kerosene, retailing vegetables at the market, selling water, running a studio plaiting hair, selling wigs and cosmetics, and selling new clothes.

BFM 8 (1% of all MSMEs)
BFM 8 is typically urban in the Lusaka and Central provinces. The business sectors tend to be hotels, catering, food and beverages, manufacturing, construction, car motorcycle and household goods repair, transportation and storage, information communication technology, finance, health services and a host of ‘other’ fields.

There is a skew towards female rather than male in this group. In terms of marital status, they tend to be divorced, separated, widowed or living together/cohabiting. They are more likely to be 25 to 49 years of age.

They are more likely than other groups to have a driver’s license and a passport. There are more non-Zambians in this group.
8 Annex 3 – Detailed descriptions of BFMs 9 to 12

Provincial profile

The further analysis of the top-end BFM profile shows that the upper end firms in BFM 12 are predominantly located in the Lusaka and Copperbelt provinces, with a clear disproportion to Copperbelt, as compared to the other three BFM strands.

Gender of respondent

Unlike the MSME Survey where the owner of the business was the respondent, in the LBS the respondents were senior people within the organisation, such as the chief executive officer, finance director or sales manager. This difference must be remembered when analysing the data. The gender pattern of the senior executives interviewed shows a distinct skew to male dominance, but does indicate that this dominance is not necessarily in all businesses. Males tend to dominate in BFMs 9 and 12, more so than in 10 and 11.
Business sector

There is a skew towards agriculture in the BFM 9 and 10 groups, with only BFM 12 showing any significant diversification into other sectors. There were an insufficient number of data points to break down the analysis into sub-sectors. However, anecdotal information and other studies would confirm the existence of several larger firms in the higher value-adding crops and export-oriented agricultural businesses.

Legal status

While there tends to be numerous forms of ownership in BFM 9 to 11, in BFM 12 the dominant legal status is the privately held, limited liability company. The less formal types of businesses, such as
close corporations, are not in evidence. Very few publically listed companies were in the survey, most likely due to the composition of the sample.

Business Premises

Business is conducted mostly from formal business premises, with firms in BFMs 9 to 11 showing a small incidence of farms.
Ownership of premises

Most of the premises are owned with a slight skew in rental properties in BFM 10.
Main source of energy

The main source of energy is the national grid for the majority of large businesses, with a skew towards generators in BFM 9.

Internet usage

Based on those who claim to have access to the internet, the usage patterns do not vary widely within the BFM groups.
Use of a computer

Based on those who own or who have access to computers, BFM 12 is more likely to be using the computers for accessing the internet and for providing computer services to clients.
Membership of business associations and access to information

There is wide membership of associations across all BFM groups with the exception of BFM 9, which reflects a profile much more akin to that seen among MSMEs.

Generally, all BFM groups seem to get some value out of their business association memberships; but interestingly, those in BFM 12 lay the highest claim that the membership has no benefit to the business – possibly because they get information from other sources.
In terms of obtaining information, all BFMs report a great variety of sources, with all groups showing a slight skew towards customers and the media.

Businesses in BFM 12 are also the most likely to employ outside assistance and advice to the business, although BFM 9s show a similar prevalence, as well.
Buyers and suppliers

There are no distinct patterns in the type of customers across BFMs 9 to 12, with all segments obtaining customers in much the same areas. All of the large business BFMs report having about 40% of their customers coming from among MSMEs, including individuals.

There is differentiation in the location of the customers. In BFM 12 there is a skew towards a nationwide customer base over the other BFM groups. The slightly greater prevalence of customers
from different countries in BFM 9 and 10 raises some interesting questions about what kinds of products and services seem to be competing in international markets, and what tactics these business employ to take advantage of such opportunities.

This greater level of cross-border activity is likely to come from agricultural exports. BFM 9 and 10 are more likely to export their products, largely due to the agricultural bias in these groups over BFM 11 and 12.
There is not a strong trend towards any type of suppliers across the upper BFM groups. It is interesting to see nearly a third of all suppliers across all four BFMs coming from among individuals.

The location of suppliers is interesting, in that BFM 9 is more likely to draw its suppliers from specific areas within Zambia – again a factor of the bias towards agriculture in this BFM, whereas in BFM 12 there is a trend towards suppliers from outside of the country.
The number of competing suppliers increases as businesses move up the BFM continuum, indicating a tendency towards greater competitive supplier set in the upper BFM groups.

Customer credit and payments

Nearly 80% or more of all large businesses in BFMs 9 through 12 provide goods and services on credit. The real differentiation comes in the way customers pay, with direct debits and internet payment systems slightly skewed towards the higher BFM groups.
Credit control appears to be marginally better in BFM 9, with fewer firms reporting bad debt experiences. Nonetheless, all upper BFM groups show high levels of bad debt experience.

In the higher BFM groups, the businesses are less likely to need (or be granted) loan finance to cope with bad debt and handle bad debt in different ways. Nonetheless, BFM 11 in particular, shows some troubling tendencies toward not paying staff or being cut off from supplies.
Supplier credit and payments

Access to credit from suppliers is almost universal across the large business BFM groups. It is not clear whether this high prevalence of supplier credit has any correlation to a relatively low percentage of large enterprises reporting any currently outstanding credit agreements with banks or others (30%). It would be worth additional study to determine if supplier credit is replacing bank credit, or is preferred to bank credit, and if so, why (e.g. because supplier credit is cheaper, or comes on better terms and conditions).
Banking and finance

The incidence of a bank account is universal in the BFM 9 to 12 groups. However, BFM 12 businesses show much greater use of current account and US dollar accounts, but much less use of savings accounts, which have more prevalence in the lower four BFM categories.

Competition among the banks for market share within the upper BFM groups is healthy, without any one particular bank dominating in any specific BFM group.
In terms of loan products, a loan from a bank is greatest in BFM 12 group, with microfinance and other loan finance used in BFM 9 businesses. Although, as noted in the access to finance paper, nearly 50% or more of respondents in each category indicated that they do not have a loan from any institution.

In terms of savings and investment, BFM 12 tends to invest the most in new technology, although it is in evidence across all groups. Most groups also claim to invest most heavily in the expansion of their businesses.
Record-keeping and compliance

Although all BFMs have a high incidence of financial record-keeping, there is a slight skew towards BFM 9 and 10 not having the results audited every year.

Tax officials appear to be active in the large business BFM groups, with the majority claiming to have been visited or inspected by a tax official in the past 12 months with a slight skew towards the BFM 10 and 12 groups.

Interestingly the greatest claimed incidence of having to pay a fine is in the BFM 11 group, although no correlations to other data exist to explain this phenomenon.
The incidence of informal payments being requested appears to be low across all groups, with a mild exception of BFM 10, which also appear to be relatively more reluctant to disclose.