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The Informal Sector in Zambia

Can it Disappear? Should it Disappear?

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THE INFORMAL SECTOR IN ZAMBIA:
CAN IT DISAPPEAR? SHOULD IT DISAPPEAR?

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EXECUTIVE SUMMARY

Zambia's private sector development dialogue is inextricably linked to debates about its Informal Sector, which, according to most estimates, employs about 90% of its labor force. While some data on informal sector workers is available and has been used to understand the nature of the informal labor force, little is known about ***enterprises*** that constitute the informal sector.

This study attempts to bridge the gap in knowledge about the size of the informal sector, and the characteristics of firms within it. It combines data from two complementary surveys-the Zambia Business Survey (ZBS,2008), whose sampling methodology encompasses all businesses in Zambia, including informal enterprises in agriculture and services, and the World Bank Enterprise Survey (WBES,2008) database, which includes a module covering urban microenterprises in major cities of Zambia. Used together, an interesting and insightful picture emerges.

Defining informality to include businesses that are not registered with the Zambian Revenue Authority (ZRA) for tax purposes, this study finds that there are about 1.02 million informal micro and small enterprises (MSMEs) in Zambia, along with about 30,000 formal MSMEs. While this number seems strikingly high at first glance, and could imply enormous taxation potential, further examination shows that a vast majority of these "businesses" are very small: only 15% of firms have revenues greater than 1m kwacha per month; less than 8% have revenues more than 2 million kwacha. If one uses the 2m kwacha threshold for taxation eligibility; only about 80,000 businesses would qualify for taxation. Majority of these businesses (70%) are farming operations; others are mostly in the retail sector.

Data from the World Bank Enterprise Survey show that informal businesses in the urban areas of Lusaka and Copperbelt provinces are atypical of informal sector businesses as a whole, comprising only about 3% of the informal sector. However, they form the top tier of informal sector firms. Compared to an average, typically rural informal enterprise, informal businesses in the city centers resemble a typical formal MSME: they have more educated owners, greater access to public services and earn significantly higher revenues. Revenues of many firms in this urban segment overlap with those of firms in the formal sector.

Differences between formal MSMEs and informal sector operators lie along many dimensions. Registered firms have significantly higher labor costs and bureaucratic burden compared to firms in the informal sector. However, these costs are offset by higher revenues and greater productivity. Managers with higher human and financial capital self-select themselves into the formal sector; firms in this sector are also much more likely to have access to basic infrastructure and financial services. There is a clear dichotomy in financial sector borrowing-almost without exception, only registered firms have access to overdrafts and loans.

Our results indicate that taxation potential is likely to be highest for urban, informal sector firms. These firms often have access to infrastructure services (mainly electricity and water) through their "society", and enjoy the benefits of formalization, while circumventing registration costs, bureaucratic burden of tax compliance, and higher labor costs. Others-notably those in agriculture and service sector outside urban areas are unregistered because of low skills and productivity. These firms would benefit from interventions designed to augment productivity, including skills

training, availability of infrastructure and microenterprise lending facilities. However, many of these firms are survivalist in nature, and should "disappear", with policies geared towards structural transformation in agriculture, and growth of the formal large-firm private sector, which can shift informal workers and small-business employers as employees in its formal sector.

INTRODUCTION

The current Zambian President, Mr. Sata's views towards the Informal Sector in Zambia are noted in a recent news report,

> "*Mr Dodia said in a statement at the weekend that the president was cognizant that Zambians must work, grow and be supported to build their businesses from micro enterprises into the large businesses of tomorrow through Government support and guided facilitation. In his recent letter to town clerks and council secretaries, President Sata urged councillors to immediately stop harassing street vendors and car wash operators and concentrate on garbage collection and unblocking of the drainage systems."*[2]

Other government officials have provided a different view, arguing that the informal sector nothing but a "cost center" for the Government, with no ability to pay taxes, and needs to be replaced by "modern industries and farms" (Zambian Minister of Finance, 2009 budget speech)[3].

Is there ***one homogeneous*** informal sector in Zambia, with low capacity to pay taxes, which needs to be replaced? Or, as President Sata notes-is this a sector containing potentially productive firms, which need government "support and guided facilitation" to move from microenterprises to the large businesses of tomorrow? Or, does this sector contain a mix of firms, some of whom need to "disappear", with others being supported and brought into the Government's tax net? These issues are examined in this paper.

The Informal sector, broadly defined, comprises of enterprises which do not comply with the full extent of Government laws and regulations. This sector is typically characterized by its ease of entry, low levels of skills, labor intensive technology, and small firm size. It has grown to assume a prominent role in most African economies, including Zambia. Recent studies have shown that the informal sector in Zambia employs a large share of the adult working population, and has grown rapidly in recent years. However, very little is known about the actual size and nature of businesses in the informal sector in Zambia today, in particular, of firms that are rural and based in households.

Three distinct views exist on the nature of this sector[4]. The first view (De Soto, 2000) argues that unofficial firms are actually or potentially very productive, and are held back by government regulations, lack of finance and lack of access to land. If this were true in Zambia, policy should focus on removing the obstacles to formalization, and increased access to finance and land for these firms. The alternate views argue that the informal sector consists of firms that are fundamentally different from those of firms in the formal sector. It consists of less educated, lower productivity entrepreneurs who choose to remain informal because the costs of formalization outweigh the benefits. In the former case, the studies argue that these firms provide no real competition to firms in the formal sector; these entrepreneurs will be better off as wage laborers for larger firms. Policy should focus on the growth of the formal sector, and interventions should be limited to poverty

[2] TradeMark Southern Africa, December 20th, 2011

[3] Chrispin Ntungo, 2009

[4] A detailed discussion of this literature is provided in La Porta and Shleifer, "The Unofficial Economy and Economic Development", Brookings Papers on Economic Activity, 2008.

alleviation efforts for firms in the informal sector. In the latter case, researchers have noted that the informal sector, while consisting of inefficient firms, is able to compete with firms in the formal sector due to tax avoidance and non-compliance, which lowers its costs. These firms hurt growth because they take market share unfairly away from bigger, more productive formal firms. In this case, the Government needs to reduce informality by reducing tax evasion and enforcing government regulations.

In reality, firms lie along a spectrum of informality, based on local conditions which are governed by existing laws and regulations, their implementation, the overall business environment and the size and efficiency of the formal sector. Understanding the characteristics of this sector within Zambia is important in providing appropriate policy prescriptions.

This report is based on two complementary surveys. The first is a detailed, population based, survey of 4800 enterprises across all provinces in Zambia, which includes household enterprises and firms in agriculture. The second is the World Bank Enterprise Survey database, conducted in 2007, which included 601 firms in the formal manufacturing and service sectors, plus a survey of microenterprises under five employees, located in urban market areas of Lusaka. Livingstone, Ndola and Kitwe. The latter survey provides a detailed picture of urban microenterprises, allowing comparisons between these firms relative to MSMEs across Zambia as a whole. We use these datasets, along with other complementary evidence, to examine the characteristics of the informal sector within Zambia[5].

Section I begins by presenting the landscape of MSMEs in Zambia. It provides a detailed snapshot of the private sector, including firm size and firm characteristics of MSMEs. Section II examines the differences between formal and informal MSMEs, and factors driving formalization. Section III presents the econometric estimates. Section IV concludes with a discussion on policy implications.

[5] Details of the survey sample, and descriptive statistics are presented in FINSCOPE..(Add)

I: THE PRIVATE SECTOR LANDSCAPE IN ZAMBIA

The Labor Force Survey (LFS), conducted in 2008, reports that a vast majority of Zambians -over 90%-are employed in its informal sector. The distribution of the workforce is presented in Table 1 below.

TABLE 1: DISTRIBUTION OF LABOR FORCE IN ZAMBIA

By Type of Employer			
	Formal	Informal	Total
Central Government	209546	0	209546
Local Government	26891	0	26891
Parastatal	40000	0	40000
Private	225012	659213	884225
NGO/Church	13485	17479	30964
International Organization	4675	2059	6734
Household	0	3969991	3969991
Others	2566	50842	53408
By Sector			
Agriculture	84921	3727001	3811922
Mining and Quarrying	15641	80098	95739
Manufacturing	38757	129603	168360
Electricity, Gas and Water	2119	12152	14271
Construction	5166	81800	86966
Wholesale and Retail Trade	133643	327815	461458
Hotels and Restaurants	11591	33006	44597
Transport and Storage	48056	49996	98052
Finance and Insurance	20975	35669	56644
Community, Social and Personal	161307	222445	383752
	522176	4699585	5221761

Source: LFS, 2008

The data above shows that the largest share of workers are employed by households in the informal sector[6], followed by other non-household employment of approximately 659,000 workers. The formal private sector employs only 225,000 workers. As a whole, we see that the formal sector employs only about half a million workers, while the vast majority: 4.69 million, are employed in the informal sector. Our goal in this report is to understand the nature of employment in this sector,

[6]The Informal Sector is defined by the Labor Force Survey to include workers who are self-employed, work in households and are not covered by social security benefits (check for accuracy)

how it differs from that of work in the formal sector, and what it would take to move workers from informal to formal employment.

Our unit of analysis is an enterprise-a production or service entity which employs workers to produce or sell a good or service.(or where workers are self-employed); an enterprise is loosely defined to include entities where production or a service is delivered outside the household, and also households where some commercial activities occur, whether it is through agricultural production and sale, or retail/small scale manufacturing operations. Business taxation policies are determined at the enterprise level, hence formalization of enterprises, rather than workers, is our main focus.

1.1 How many MSMEs does Zambia have?

Zambia's labor force comprises of about 5 million workers. Where are these people employed? How many businesses does Zambia have? What are the characteristics of these businesses? These questions can be addressed using data from the Zambia Business Survey (ZBS). This survey, conducted in 2008, was the first nationally representative survey of MSMEs in Zambia. It included all provinces within Zambia, and defined businesses to include household enterprises and those in agriculture. By sample design, this survey is representative of the MSME sector in Zambia, including informal enterprises. MSMEs in the survey are defined as firms with less than 50 employees, including the owner. Employees include unpaid workers and those paid in kind.

The estimated population means of total workers[7] (including unpaid and paid-in-kind workers) and the 95% confidence intervals are presented in the table below.

TABLE 2: AVERAGE MSME SIZE-NUMBER OF WORKERS PER FIRM

	Number of Firms	Mean Number of Workers	Standard Error	95% CL for Mean	
Agriculture	2084	3.39	0.23	2.94	3.84
Non-Agriculture	2558	5.01	0.18	4.66	5.35

Source: Zambia Business Survey, 2008

Based on these estimates of workers per firm, obtained from the ZBS, and the informal employment numbers provided by the LFS (4.69 million), **we estimate that there are, on average, about 1.02 million informal MSMEs in Zambia[8]. Adding to that a total of 29,350 formal MSMEs[9], we estimate that there are about 1.05 million MSMEs in Zambia.**

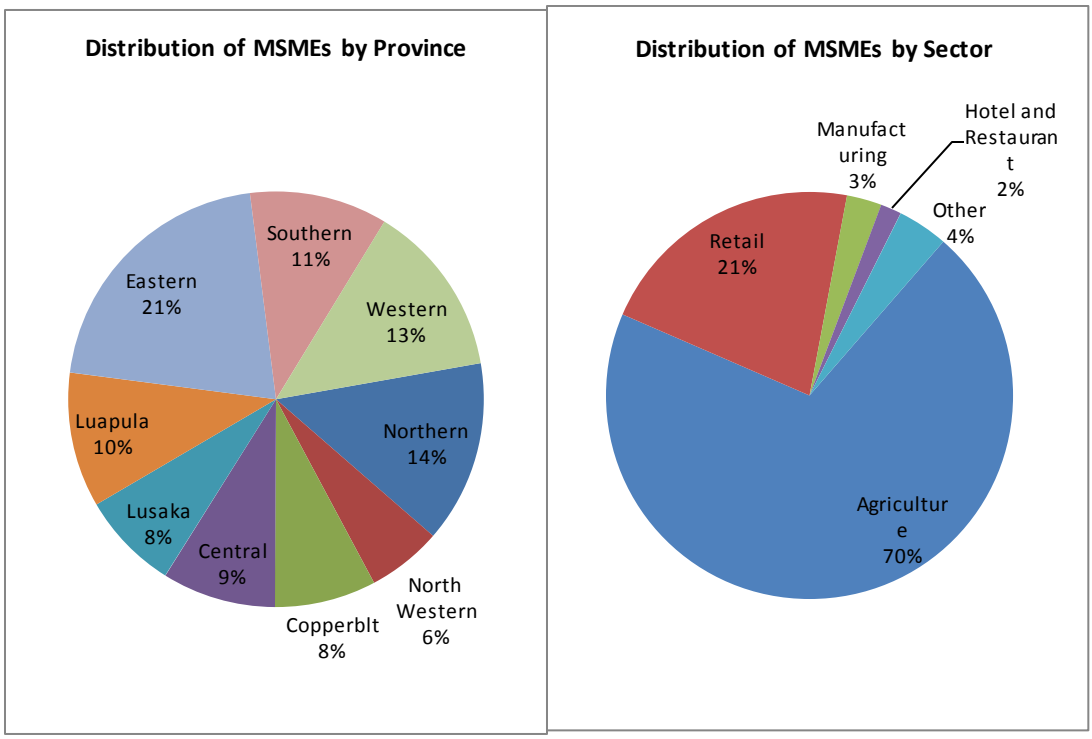
[7] Population weights are used for all data presented in this report.

[8] Using the 95% confidence intervals on workers, actual number of informal MSMEs could range between 943,000 to 1.12 million.

[9] This figure is obtained from the Zambia Revenue Authority.

The distribution of MSMEs by Sector and Provinces are provided in the charts below. More MSMEs are in Eastern Province (21 %, or about 216,300 businesses) than any other province, while Northwestern Province has the fewest (6%, or 61,800 businesses). By sector, we see that the largest share of MSMEs are in Agriculture (70%, or about 721,000 businesses), followed by retail (21%, or about 216,300 businesses).

FIGURE 1: DISTRIBUTION OF MSMES IN ZAMBIA BY PROVINCE AND SECTOR



Source: Zambia Business Survey, 2008

1.2 How many businesses are there along the Line of Rail Provinces?

Historically, Zambia's growth has occurred along its "line of rail", i.e. along four provinces- Southern, Central, Lusaka and Copperbelt-which are more densely populated, and have better infrastructure and financial access compared to other provinces. Until recently, the Central Statistical Office's (CSO) data on the Index of Industrial Production covered enterprises located only in these provinces, and, information provided by the Zambia Revenue Authority (ZRA) shows that almost all firms that are registered and pay taxes lie along this corridor[10]. The World Bank Enterprise Survey, which is based on population derived from the Zambia Bureau of Statistics, also covers firms only in the urban areas of Lusaka, Copperbelt and Southern Province (Livingstone). It

[10] http://www.unstats.un.org/unsd/**industry**/meetings/eca2009/ac175-38.PPS

is therefore instructive to examine the distribution of firms by classifying provinces into two groups-Line of Rail (LOR) provinces versus others (NLOR). This will provide us with a better sense of how many firms are off the Government radar, and how many businesses can potentially be brought under the tax umbrella in the short term, if emphasis is placed on firms along the line of rail.

In examining the distribution of businesses in Zambia, we also classify firms into two groups: those engaged in Agriculture[11] versus other sectors (services and manufacturing, labeled non-agriculture). We do so for several reasons:

(a) The production characteristics of farmers are different from those of other firms
(b) Policies towards the agricultural sector differ from those of other sectors; taxation policies in particular differ significantly for farmers.
(c) Most policy designs for MSMES and business regulations are designed for firms outside agriculture.
(d) Historically, it has been seen that economic growth occurs through structural transformation, and moving workers out of agriculture and into other sectors, as farming becomes more efficient.
(e) Debate about the informal sector amongst policy makers often focuses on a segment of businesses operating in the urban, non-agricultural sector; mostly retail and small manufacturing.

The number of MSMES along the Line of Rail versus those in other provinces is presented in Table 3 below.

TABLE 3: NUMBER OF BUSINESSES BY SECTOR AND LINE OF RAIL

	MSMES	Line of Rail Provinces	Other Provinces	Rural LOR	Urban LOR	Rural NO LOR	Urban NO LOR
Agriculture	735000	191100	543900	152880	38220	527583	16317
Non-Agriculture	315000	179550	135450	62843	116708	107006	28445
Total		370650	679350	215723	154928	634589	44762

WE SEE THAT THERE ARE ABOUT 116,708 MSMES IN THE URBAN OR PERI-URBAN AREAS ALONG THE LINE OF RAIL. ONLY SOME OF THESE OPERATE OUTSIDE THE HOUSEHOLD, AND IN THE DENSELY POPULATED MARKET AREAS OF LUSAKA, KITWE, NDOLA AND LIVINGSTONE, WHICH FORM THE BASIS OF THE URBAN MICROENTERPRISE SURVEY.

1.3 Urban Microenterprises along the Line of Rail: A small subset of MSMEs

As noted earlier, the World Bank Enterprise Survey, conducted in 2007, included a separate module for microenterprises with less than five employees. For various reasons, including the small size of establishments, their expected high rate of turnovers, the high level of "informality" of establishments in many activities and consequently the difficulty to obtain trustworthy information

[11] Note: farmers with other household members who sell the agricultural produce are classified under agriculture; non-agricultural firms or households are those where no agricultural production occurs.

from official sources, an aerial sampling approach was used to estimate the population of establishments and select the sample in this stratum. Non-agricultural firms, located outside the household were included in the sample frame; the sample frame also only covered the urban areas of Lusaka city, Ndola, Kitwe and Livingstone. Population Estimates of microenterprises in these urban areas (derived from the open marketplaces in these cities) are presented below:

TABLE 4: POPULATION ESTIMATES OF MICROENTERPRISES IN URBAN AREAS

City	Estimated number of micro establishments
Lusaka	6058
Kitwe	6432
Ndola	5970
Livingstone	3359
Total	21819

The final sample included 119 enterprises under 5 workers.

We can see from the above data that the estimated 22,000 enterprises in urban marketplaces of the big cities comprise only 2% of the MSME population of 1.05 million MSMEs, and amount to less than 3% of the informal sector in Zambia. Yet, these firms are the most visible part of the informal sector, and often form the only basis of policy discussions, particularly in regard to the issues of tax evasion and the potential for taxation.

Through the remainder of this report, we will use the World Bank Microenterprise Survey (WBMS) to complement findings from the ZBS, and to highlight differences between the MSME universe versus the "Urban Microenterprises" covered by the WBMS. The urban microenterprise survey includes small manufacturing operations (including businesses in the timber and metal industries), as well as street traders and "marketeers", and provides a detailed snapshot of microenterprise activity in these urban areas. Using both sources of information enables us to discuss policy options which could alleviate the problem of urban informality, versus other broad based policy measures which can reduce the overall size of the informal sector.

1.4 Size of Businesses: Employment

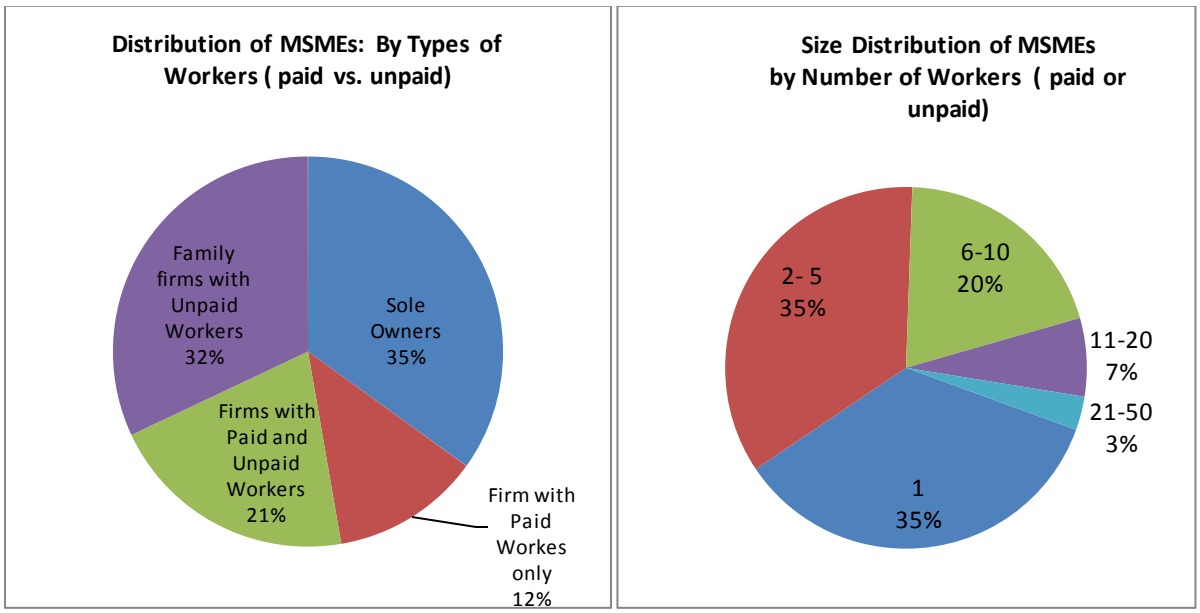
The MSME universe comprises of 4.68 million workers. However, as noted in the LFS, a vast majority of these employed workers are either self-employed individuals or unpaid workers. How are these workers distributed across businesses? How many unpaid, paid-in-kind, or paid workers typically form a production or retail entity? The ZBS provides detailed information on workforce within a business, including the number of workers, how many are paid, unpaid, or paid in kind, and also whether they work full-time or part-time. We use this to examine the structure of business employment in Zambia.

Firms were asked whether they were the sole owners. If not, firms were asked details on the number of workers who were paid, unpaid or paid in kind. Within each of these categories, firms were asked how many were part-time vs. full-time, and female vs. male. Using this information, we

classify firms into four groups: (1) sole owners-firms with an owner manager and no employees, paid or unpaid (2) Family firms, consisting of businesses which have an owner plus unpaid workers-mostly extended family (3) Mixed Firms-firms which have at least one worker paid in cash or kind, along with unpaid workers (4) Entrepreneur firms-firms which have at least one worker; all workers are paid in cash employees. These classifications are important in analyzing firm productivity and growth.

The chart below presents the distribution of firms by their employment characteristics. We see that more than one third of firms are run by an owner alone; family firms comprise another one third of the total. 21% of firms use a mix of paid and unpaid workers, while only 12% of firms in the MSME sector operate with at least one paid employee, and no unpaid workers.

FIGURE 2: DISTRIBUTION OF MSMES: BY TYPE OF EMPLOYMENT



Source: Zambia Business Survey, 2008

An average family firm has 5 workers, while an entrepreneurial firm as 4 workers. Mixed firms are larger, with an average of 10 workers.

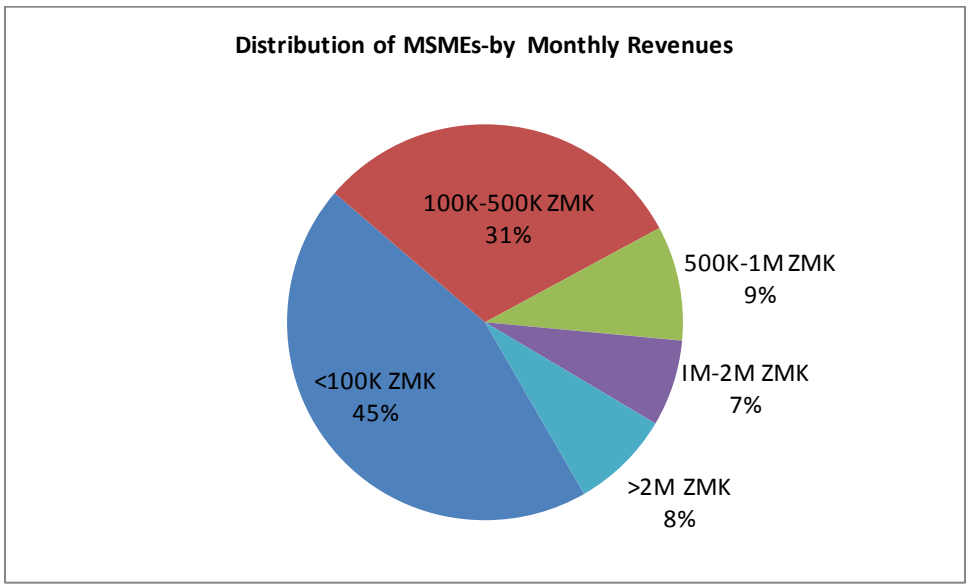
How many micro (5 employees or less) and small businesses are there in Zambia? We see that 70% of all MSMEs are very small, with 5 employees or less. Only 10% of MSMEs have more than 10 workers-and many of these have unpaid or paid-in-kind workers along with regular employees.

Examining the data on enterprises classified by ***paid workers*** only, we see that more than 90% of firms are self-employed and not paying market wages to anyone. 9% have 1-5 workers, while less than 1% have more than 5 paid employees. The overwhelming majority of Zambian MSMEs are very small businesses.

1.5 Size of Businesses: Business Revenues

For taxation purposes, total turnover is of particular relevance to policymakers. Both the ZBS and the WBMS asked firms detailed questions about their monthly sales. For firms in agriculture, owners were also asked about the percentage of output consumed[12].

FIGURE 3: DISTRIBUTION OF MSMES IN ZAMBIA: BY MONTHLY REVENUES



Source: Zambia Business Survey, 2008

We see that more than 70% of MSMEs in Zambia are very small, with reported sales of less than 500,000 kwachas per month, equivalent to 6M kwachas a year, well below the 24M[13] threshold for income taxes. ***Only 8% of MSMEs have sales greater than 2M kwachas a month; these constitute about 80,000 MSMEs.***

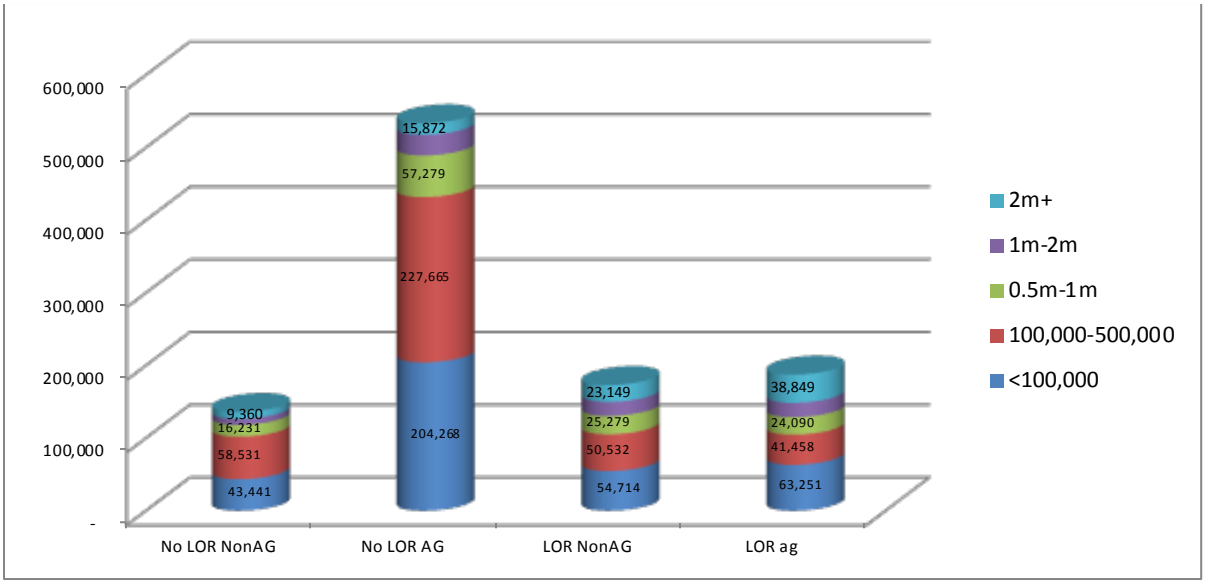
Differences in revenues across sector and location are presented in Figure 4 below. We see that the largest share of MSMEs are in Agriculture off the line of rail. A vast majority of businesses have very low monthly revenues; *if we were to consider a potential tax base to include firms with revenues of more than 2m kwacha per month, and those located along the line of rail, there are only about 23,000 businesses outside agriculture that meet this criteria .*

It is important to note here that the minimum threshold was only recently raised (doubled) in the last budget. Previously, the cutoff was 12 m kwachas per year, which would almost double the tax base along the line of rail, and outside agriculture.

[12] Pure Subsistence farmers consuming 100% of their output were not included in the survey. On average, firms reported consuming 30 % of monthly crop production. We use monthly output, rather than sales, to classify firms in agriculture.

[13] The most recent budget raised the income tax threshold from 12m to 24m kwachas.

FIGURE 4: DISTRIBUTION OF MSMES BY REVENUES: BY SECTOR AND LOCATION



Source: Zambia Business Survey, 2008

Urban Microenterprises: Examining the distribution of enterprise sales for this subset, we see that the median sales are considerably higher, at 4m kwachas per month, and the top quartile of firms have sales of more than 12m kwachas per month. Only 24% of urban micros have sales less than 2m kwachas per month, indicating a higher taxation potential for firms in this group. Further details are examined below[14].

II. INFORMALITY IN ZAMBIA

2.1 Defining Informality

In the ZBS, enterprises were asked about their registration characteristics in three separate questions. Firms were asked:

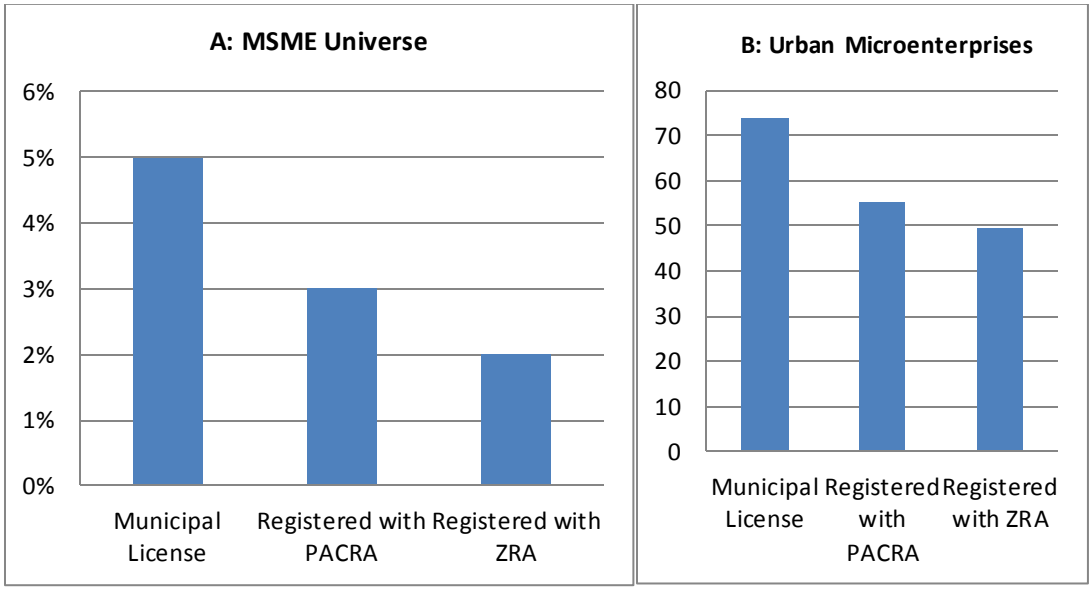
(a) Is the Business Registered with the Patents and Company Registrar (PACRA) or any other government institution responsible for commercial registration?
(b) Does the business have an operating license or trade license or any other business license from any local government agency?
(c) Does the business have a tax identification number (TPIN) from the Zambia Revenue Authority?

The percentage of firms reporting the above licenses are presented in the chart below. As seen in Part A, only 5% of firms in the MSME universe report having municipal licenses, only 3% of firms

[14] The assumption, throughout this analysis, is that firms would prefer to pay the turnover tax on sales, rather than tax on profits. While the turnover tax is applicable to firms below the 2m threshold, it is assumed that tax compliance would be limited for firms under the 2m income tax threshold.

reported being commercially registered, while 2% report having a TPIN from ZRA. Commercially registered firms were also asked whether they had previously been registered. 36% of firms reported that they had started out as unregistered operations, indicating some graduation towards formality.

FIGURE 5: FIRM'S REGISTRATION CHARACTERISTICS



Source: Zambia Business Survey, 2008 and World Bank Enterprise Survey, 2007

Part B presents registration characteristics of urban microenterprises. Of a total of 119 firms surveyed in Lusaka, Ndola, Kitwe and Livingstone, we see that about half the firms reported that they were registered for tax purposes. About 75% of firms have a municipal license, while slightly more than 50% of firms have a commercial license and have their name registered. We see that urban microenterprises are much more likely to be registered for tax purposes, compared to the universe of MSMEs.

Why is that the case? Is it related to higher revenues, the higher visibility of these enterprises and cost of tax evasion, or is it due to the benefits of formalization? These questions are examined below.

For the remaining analysis, we call firms who have registered for tax purposes to be the "formal" MSMEs, while the remainder are classified as informal firms.

2.2: Differences Between Formal and Informal Firms

The key question asked here is the choice of informality and why some firms choose to formalize operations, while others choose to remain in the "shadow" economy. Fafchamps[15] discusses six factors that may govern this choice:

[15] Fafchamps,M. 1994, "Industrial Structure and Microenterprises in Africa", Journal of Developing Areas. 20(1) 1-30.

- The observed informality is only a short-run disequilibrium phenomenon; however, given that the number of firms in Zambia in this sector has grown rapidly, this is unlikely to be the case.

- High transport costs limit a firm's market, it produces on a small scale. However, this alone, cannot determine informality.

- Market failures, information asymmetries and management requirements: in each case, the demands are fewer on informal enterprises.

- Government policies and regulations: registration procedures, costs, tax laws, labor regulations, worker safety laws can be avoided by informal firms

- Informal firms, with flexible technologies, can adjust more easily to market demand

- Managerial skills-large scale production requires skills that these entrepreneurs may not have.

We examine these factors next.

Scale of Operations, Firm Age and Informality

The Zambia Business Survey included a separate survey of large firms, with more than 50 employees. 99% of these firms reported being registered for tax purposes. Within the MSME universe, and in the urban microenterprise sector, we see that the average firm size of informal firms is almost half that of formal firms, even within the MSME sector. Firm size, measured by sales, shows that formal firms are almost four times larger than informal firms, indicating size is clearly a driving factor for formalization. Despite some claims to the contrary, and the high visibility of a few large informals in Zambia's urban marketplaces, our data indicate that informality is by and large a small firm problem. For firms to survive and grow out of the micro size class, formalization is a step in the process.

Interestingly, firm age does not differ much across the groups, indicating that this is not a short-run disequilibrium phenomenon, where new young firms are more likely to start out as unregistered operations.

TABLE 5: SIZE AND AGE CHARACTERISTICS OF FORMAL AND INFORMAL FIRMS

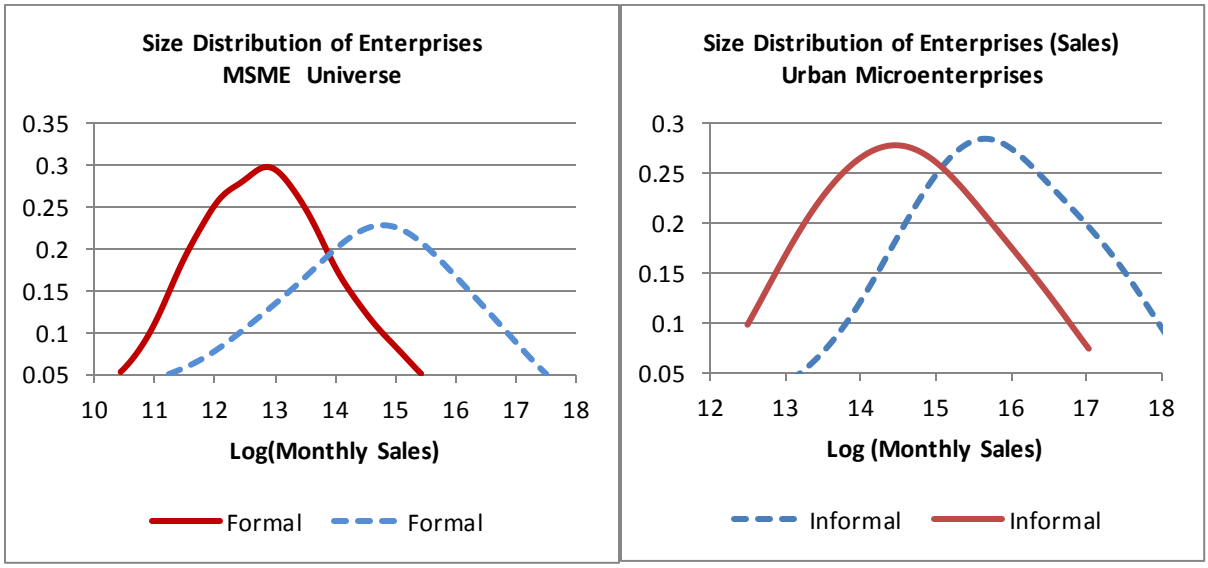
	MSME Universe				Urban Microenterprises	
	Agriculture		Non-Agriculture		Non-Agriculture	
	Informal	Formal	Informal	Formal	Informal	Formal
Total Workers	4.4	6.9	2.9	4.7	2.5	4.3
Median Monthly Sales (kwachas)	325,000	1,400,000	350,000	2,000,000	2,400,000	7,500,000
Firm Age	10.8	10.3	6.5	6.9	7.6	7.5

Source: Zambia Business Survey, 2008 and World Bank Enterprise Survey, 2007

While the median firm size differs significantly between formal and informal sector firms, another question to ask is whether there are firms in the informal sector that operate at similar scale

compared to firms in the formal sector. We examine this issue by looking at the entire distribution of sales (presented as log of total monthly sales) for firms outside agriculture. This allows us to compare the universe of non-agricultural MSMEs with urban informal and formal sector operators. These distributions are presented in Figure 6 below. –We see that formal microenterprises in the urban marketplaces of Lusaka and Kitwe have much higher sales than the universe of informal sector firms. The informal sector in these urban areas, which we also know is a small fraction of the informal sector universe, also has much higher sales than a typical informal sector firm in Zambia. In examining taxation policies towards the informal sector, it seems clear that the informal sector firms in urban areas should be the first targets for formalization, and increasing productivity in the mostly rural universe would lead to higher sales and greater potential for formalization for these firms.

FIGURE 6: KERNEL DENSITY OF ENTERPRISE SALES (MONTHLY REVENUES IN KWACHA)



SOURCE: ZAMBIA BUSINESS SURVEY, 2008 AND WORLD BANK ENTERPRISE SURVEY, 2007

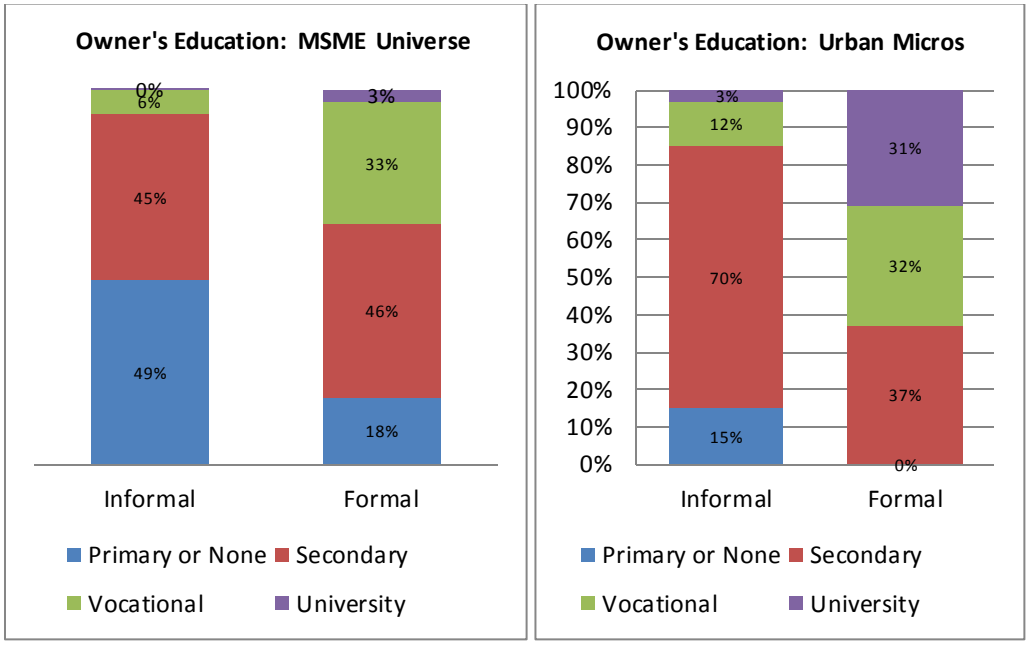
Managerial Talent

Do managers with higher skills self-select themselves into formal enterprises? Managerial talent is proxied by educational attainment. The figure below compares the educational attainments of entrepreneurs across formality status for the MSME universe. We see sharp differences in educational attainment-almost 50% of firms in the informal sector have primary education or none-while than 20% of firms in the formal sector have only a primary education. However, there is an overlap in levels of secondary school education: almost half of firms in both the informal and formal sector have secondary school education. But, entrepreneurs with post-secondary education-vocational training or university degrees, are much more likely to run formal businesses (36%) compared to those in the informal sector (6%). One possible reason is that the opportunity cost of

being an entrepreneur in the informal sector, in the form of a high formal sector wage, is particularly high in Zambia where skill-based wage gradients are relatively steep.

The pattern is similar for Urban Microenterprises. We see that a vast majority of owners in the urban informal sector have up to a secondary school education, while more than 60% of micro-entrepreneurs that are formal have a vocational or university degree. The correlations between formalization and education are apparent.

FIGURE 7: EDUCATION CHARACTERISTICS OF MSME OWNERS



SOURCE: ZAMBIA BUSINESS SURVEY, 2008 AND WORLD BANK ENTERPRISE SURVEY, 2007

2.3: Benefits of Formalization: Access to Infrastructure and Financial Services

Which factors drive formalization? The benefits of formality lie in the access to public services and business support services, access to formal banking sector or micro finance, and availability of basic infrastructure facilities such as electricity, telephone and transport networks. Do formal firms in Zambia have better access than informal firms?

Reported infrastructure access and financial sector access is presented in Table 6 below.

TABLE 6: INFRASTRUCTURE AND FINANCIAL SERVICES: FORMAL VERSUS INFORMAL FIRMS

	MSME UNIVERSE		URBAN MICROENTERPRISES	
	Informal	Formal	Informal	Formal
Electricity	8%	62%	76%	95%
Water	27%	53%	36%	57%
Public Sewage			45%	50%
Cellphone	51%	89%	91%	96%
Bank Account	11%	77%	41%	88%
Overdrafts			3%	23%
Current Loan			5%	13%

Source: Zambia Business Survey, 2008 and World Bank Enterprise Survey, 2007

We see much greater access for urban microenterprises compared to the mostly rural universe. Interestingly, we notice that while access is lower for urban informal micros, majority have electricity service; and almost the same percentage have access to public sewage. This is perhaps due to access to these services through the "council" *(terminology*?) where the trader/manufacturer is located, and to which the enterprise pays dues. However, such access may create a disincentive to formalize operations.

Here, it is also instructive to examine data from other World Bank Microenterprise Surveys. In previous research (Gelb et al, 2010), we found that access to public infrastructure services were sharply delineated between formal and informal sector firms in countries which have a stronger regulatory environment. A similar survey in neighboring South Africa showed that only 30% of informal microenterprises have access to electricity, compared to 94% of formal microenterprises. Similar differences are seen in Namibia and Swaziland. Policies in Zambia seem to allow informal sector firms, particularly in urban areas, to circumvent tax registration requirements and yet obtain the benefits of public utilities.

Urban Microenterprises have much greater access to financial services compared to the MSME universe. But, financial access is limited to formal firms.-Only a negligible number of informals have access to overdrafts or loans. Those that report having a checking account are typically using personal accounts for business purposes. Clearly the sharpest difference between urban formal and informal firms is in banking sector access[16].

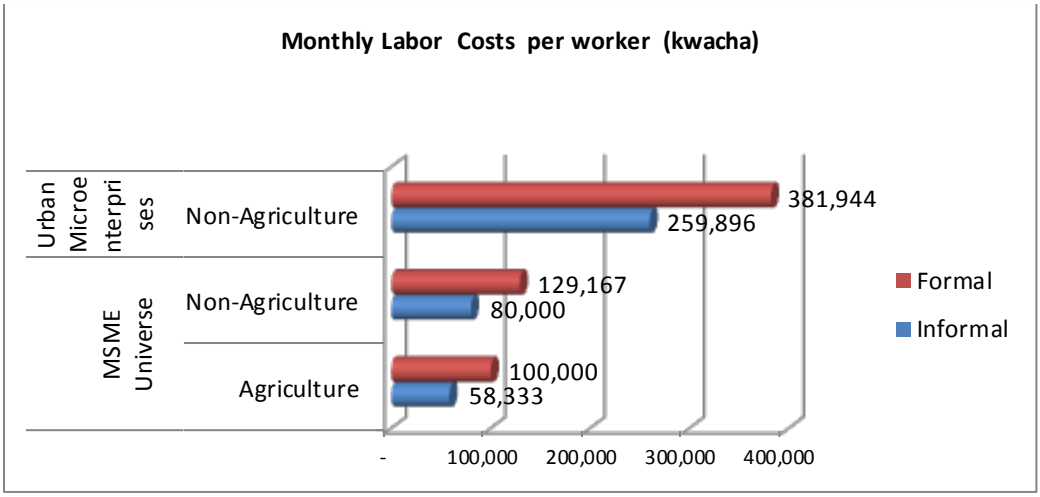
2.4 Costs of Formalization

Labor Costs

Businesses in the formal sector in Zambia are required to pay taxes for worker benefits, which are redistributed to workers by the government (updated information needed here) Prior research (Levy, 2010; Bennett, 2008) has shown that social programs lead to informality by taxing formal sector workers and subsidizing informal sector and non-salaried workers, who receive the benefits of these programs but do not contribute to these costs. Several other factors may determine the higher wage costs in formal sector firms, including the higher productivity of workers employed there. We do not address all those issues here, but instead the magnitude of difference in labor costs between these firms. Median labor costs per worker are presented in Figure * below. We see that differences in labor costs are highest for urban formal versus informal microenterprises. Both groups pay much higher wages compared to the universe of MSMEs. The averages for the MSME universe are much lower, indicating earnings and costs of living in other areas of Zambia. The few firms that are registered for taxes outside the urban areas of

[16] This was also confirmed during field interviews. Informal firms repeatedly complained about the need for short-term capital to purchase inputs, and the inability to access bank loans. But, they saw this as a tradeoff with taxes. Firms also noted the restrictions on hiring low cost contract workers if they formalized operations.

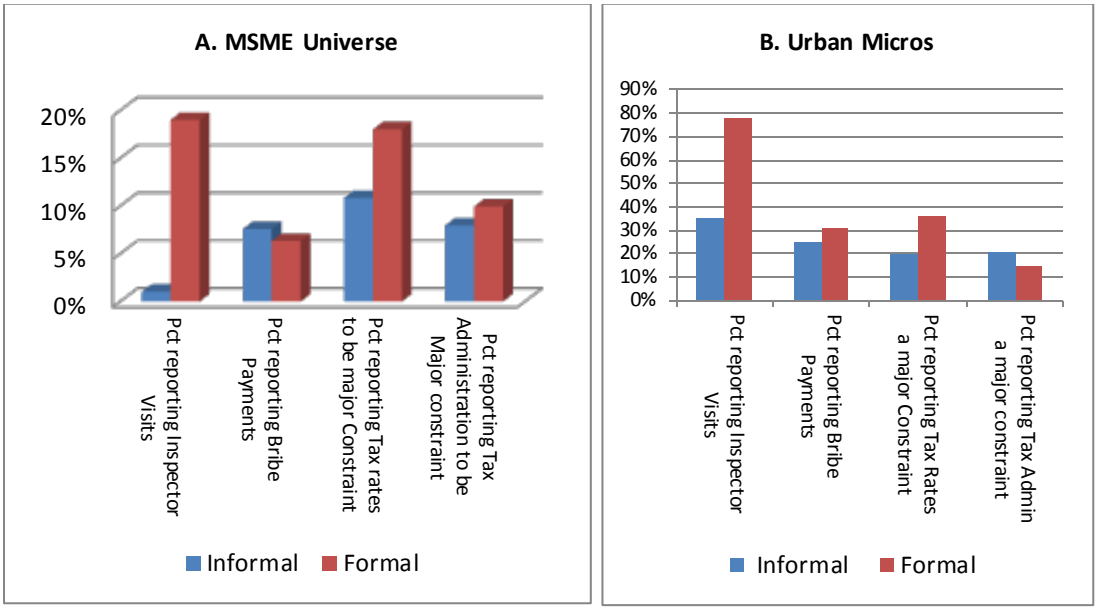
FIGURE 8: LABOR COSTS PER WORKER



Bureaucratic Burden of Taxes and Bribes

Several other costs are associated with formalization. A key factor driving the decision to become formal is the cost of formalization. A firm with a given level of revenues may choose informality in a country which has higher tax rates and much greater compliance costs, compared to countries where such costs are low. It may also choose to remain informal if the benefits of formal registration are not realized because of poor delivery of financial or infrastructure services. It may also remain informal if compliance costs are low i.e. if inspectors are equally likely to seek bribes whether a firm is formal or informal. How different are these costs for firms in Zambia?

FIGURE 9: BUREAUCRATIC BURDEN IN INFORMAL VERSUS FORMAL ENTERPRISES



III: DETERMINANTS OF FORMALITY: ECONOMETRIC ESTIMATES

We see above that microenterprises in Zambia are not a homogenous group of firms. Using the registration characteristics to classify firms into two groups, we see that formal enterprises have greater access to public services and formal financial sector. However, they are also more likely to be subject to bribe payments and inspections by tax officials. But, these observed differences may simply be a function of entrepreneurial quality between these groups, and between microenterprises versus firms in the formal sector. Better educated and productive owners may self-select themselves into formality and into greater access. Which factors drive the formalization decision, once we control for entrepreneurial quality and firm size effects? These are examined using maximum likelihood estimations of a probit model. Results are presented in Tables 7 and 8 below.

Regression results corroborate the findings presented in the descriptive sections above. Even after controlling for differences in human capital and life cycle effects, formal sector firms differ from those in the informal sector: formal sector firms have better access to infrastructure services, and banking sector services. Formal sect or firms also have higher labor costs, and face greater bureaucratic burden.

Some interesting differences emerge when we compare determinants of formalization in urban microenterprises versus the MSME universe. Compared to other city centers (Ndola, Kitwe and Livingstone markets), firms in Lusaka are significantly less likely to formalize operations, indicating limited clustering effects. However, when compared to other firms in the MSME universe, firms in Lusaka province are more likely to formalize operations. Unit labor costs-measured as the ratio of labor costs divided by firm sales-is significantly lower for registered microenterprises in the urban areas. These firms have to pay higher wages and benefits, but these additional costs are offset by greater revenues realized from formalizing operations. Firm age is positively correlated with formalization for the MSME universe, indicating life cycle effects. But, this variable is insignificant for firms in urban areas, indicating that informal firms in these marketplaces are not typically young entrants in the early stages of growth.

TABLE 7: PROBIT ESTIMATES: PROBABILITY OF REGISTERING: MSME UNIVERSE

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Intercept	-4.51***	-2.44***	-1.99***	-2.78***	-2.56***	-2.81***
	(0.430)	(0.272)	(0.285)	(0.154)	(0.137)	(0.156)
Log(Sales)	0.15***	–	–	–	–	–
	(0.031)	–	–	–	–	–
Log (Labor Costs per Worker)	–	0.1**	–	–	–	–
	–	(0.044)	–	–	–	–
Unit Labor Costs	–	–	-0.48	–	–	–
	–	–	(0.420)	–	–	–
Log(Firm Age)	0.11**	0.19***	0.12	0.11**	0.1**	0.11**
	(0.053)	(0.071)	(0.085)	(0.049)	(0.046)	(0.050)

Agriculture	-0.36***	-0.63***	-0.62***	-0.29***	-0.42***	-0.24**
	(0.114)	(0.149)	(0.182)	(0.109)	(0.098)	(0.111)
Lusaka	0.31***	0.56***	0.67***	0.08	0.18*	0.03
	(0.121)	(0.156)	(0.177)	(0.116)	(0.109)	(0.120)
Secondary	0.45***	0.3	0.33	0.23*	0.48***	0.23*
	(0.143)	(0.201)	(0.235)	(0.132)	(0.120)	(0.134)
Vocational Ed.	1.18***	0.98***	0.91***	0.45***	1.32***	0.44***
	(0.160)	(0.213)	(0.249)	(0.162)	(0.130)	(0.166)
University Ed.	1.67***	1.86***	1.35*	1.16***	2.19***	1.11***
	(0.443)	(0.491)	(0.772)	(0.332)	(0.316)	(0.350)
Electricity	–	–	–	0.76***	–	0.66***
	–	–	–	(0.112)	–	(0.116)
Water	–	–	–	0.19*	–	0.16
	–	–	–	(0.100)	–	(0.102)
Bank Account	–	–	–	0.94***	–	0.91***
	–	–	–	(0.112)	–	(0.114)
Inspector Visits	–	–	–	–	1.2***	0.92***
	–	–	–	–	(0.132)	(0.144)
Number of Observations	3707	1045	797	4650	4650	4650
Log Likelihood	-359.1281	-212.3206	-149.2363	-429.8586	-475.1305	-410.62

TABLE 8: PROBIT ESTIMATES: PROBABILITY OF REGISTERING IN URBAN MICROENTERPRISES

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Intercept	-3.68***	-1.36	0.92*	-1.29*	-0.17	-1.74***
	(1.122)	(0.897)	(0.504)	(0.667)	(0.446)	(0.708)
Log (Sales)	0.44***	–	–	–	–	–
	(0.117)	–	–	–	–	–
Log(Labor Costs per worker)	–	0.39**	–	–	–	–
	–	(0.191)	–	–	–	–
Unit Labor Costs	–	–	-2.0***	–	–	–
	–	–	(0.864)	–	–	–
Log (Firm Age)	-0.25	-0.22	-0.21	-0.29	-0.27	-0.44**
	(0.185)	(0.180)	(0.181)	(0.198)	(0.191)	(0.224)
Lusaka	-0.79***	-0.75***	-0.71***	-0.55*	-0.6**	-0.49
	(0.306)	(0.296)	(0.296)	(0.317)	(0.301)	(0.342)
Vocational Ed.	0.86***	0.97***	0.93***	0.9***	0.87***	0.71*
	(0.332)	(0.317)	(0.322)	(0.341)	(0.330)	(0.371)
University Ed.	1.47***	1.65***	1 .7***	1.51***	1.61***	1.38***
	(0.454)	(0.439)	(0.437)	(0.481)	(0.453)	(0.501)
Electricity	–	–	–	1.03**	–	0.96*
	–	–	–	(0.521)	–	(0.547)
Water	–	–	–	0.12	–	0.13
	–	–	–	(0.317)	–	(0.346)
Bank Account	–	–	–	1.13***	–	1.3***
	–	–	–	(0.328)	–	(0.361)
Inspector Visits	–	–	–	–	1.06***	1.22***
	–	–	–	–	(0.281)	(0.326)
Number of Observations	114	114	114	114	114	114
Log Likelihood	-54.3179	-60.27	-59.6882	-51.3417	-54.974	-43.7318

IV. POLICY CONCLUSIONS AND DIRECTIONS FOR FURTHER RESEARCH

This paper is a first attempt in understanding the size and scope of the informal sector in Zambia. Using available Enterprise surveys, it estimates more than a million informal businesses in Zambia. However, most of these businesses are rural, agricultural operations, run by farmers with low skills and generating low revenues. A small subset of firms comprise the urban informal sector. Our findings indicate that these firms form the top tier of the informal sector, measured by revenues: many of these firms lie above the income tax threshold of 24 million kwacha annually, and form the most likely candidates for formalization and making positive contributions to the treasury.

Decisions to formalize operations for urban microenterprises are significantly correlated with access to electricity services, and banking sector access. Our results indicate that many informal operators in urban areas can also receive electricity services (through "societies" in which they belong)-changing regulations and enforcement that tie provision of these services to registration are likely to bring more businesses into the formal sector. In addition, majority of urban informal sector firms are shielded from tax inspector visits, unlike registered operators. Stricter enforcement of the tax code, and shifting focus on collection towards informal operators would increase the threat of detection and the costs of non-compliance, which would increase the likelihood of formalization. Firms in Lusaka are less likely to be registered compared to firms in other marketplaces, and indicate lax enforcement of tax laws in the capital city, and can be improved.

For the vast majority of informal operators outside the urban areas-in agriculture or services- our findings indicate that many of these firms are likely to benefit from policies that improve productivity of businesses and increase sales. However, further research is needed to understand the drivers of productivity and the nature of costs for the vast majority of informal sector operators in Zambia, based on their location and sectors of operation, and to identify the segments that are most likely to benefit from government programs.

Our results on labor costs show that there are wide dispersions in average labor costs for informal sector operators, compared to formal sector firms. Further research is warranted to identify the threshold costs of entry into the formal sector, how these costs differ across the different provinces in Zambia, and what can be done to lower these costs, which act as a deterrent to formalization.

This paper has not examined the contributions of the Informal sector to the State treasury, and how changes in specific tax laws can have an impact on formal sector entry. Informal sector operators often source their raw materials from upstream manufacturers and pay Value Added tax (VAT). They also pay other fees to local councils, and charge VAT to their customers. All firms are expected to pay the Turnover Tax; however, this tax is calculated on annual revenues, and in the absence of good record keeping, and in a system dominated by cash transactions, it is difficult to estimate turnover accurately. Better enforcement may not necessarily lead to higher revenue collections. None of these issues are dealt with here, but merit further research.

REFERENCES (to be updated)

Almeida, Rita and Carneiro, Pedro Manuel. 2005. "Enforcement of Labor Regulation, Informal Labor, and Firm Performance." World Bank Policy Research Working Paper No. 3756

Conway, Patrick, and Manju Shah. 2010. "Who's Productive in Zambia's Private Sector." World Bank: Lusaka, Zambia

De Soto, Hernando. *The Mystery of Capital*. Basic Books. 2000

Djankov, Simeon, Ira Lieberman, Joyita Mukherjee and Tatiana Nenova, 2002. "Going Informal: Benefits and Costs" in Boyan Belev, editor. *The Informal Economy in the EU Accession Countries*. Center for the Study of Democracy.

Fafchamps, Marcel. 1994. "Industrial Structure and Micro-Enterprises in Africa." *Journal of Developing Areas*, 29(1):1-30, October.

Fortin, Bernard, Guy Lacroix, and Claude Montmarquette. 1997. "Are Underground Workers More Likely to be Underground Consumers?" Cahiers de Recherche, Université Laval.

Fox, Louise and Ana Maria Oviedo, 2008. "Are Skills Rewarded in Sub-Saharan Africa? Determinants of Wages and Productivity in the Manufacturing Sector," World Bank Policy Research Working Paper 4688.

Gatti, Roberta and Maddalena Honorati, 2008. "Informality among Formal Firms: Firm-level, Cross-country Evidence on Tax Compliance and Access to Credit," World Bank Policy Research Working Paper 4476.

Ramachandran, Vijaya and Manju Kedia Shah 2006. "Why Are There So Few Black-Owned Firms in Africa? Preliminary Results from Enterprise Survey Data". Working Paper 104, Center for Global Development.

Rauch, James E., 1991. "Modelling the informal sector formally," *Journal of Development Economics*. Elsevier, vol. 35(1), pages 33-47, January.

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