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DEMAND SIDE CONSTRAINTS TO SME ACCESS TO EXTERNAL FINANCE: EVIDENCE FROM SURVEY OF MANUFACTURING FIRMS IN ETHIOPIA

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ABSTRACT

Small and medium enterprises (SMEs) are financially constrained due to demand side and supply side factors. Most studies emphasize on the supply side constraints, paying less attention to the demand side constraints that arise from SME inherent characteristics. This paper aims at describing characteristics of SMEs and identifying attributes that hinder their access to external finance. To this end, survey of 102 randomly selected firms from the Ethiopian manufacturing sector was conducted. We find that most SMEs are characterized by having a few or no collateralizable fixed assets. Examination of owner's willingness to admit a new partner as a means of expanding capital base revealed that most SME owners exhibit aversion towards selling ownership control. This shows that, contrary to conventional view, aversion towards relinquishing ownership interest increases with size. In terms of financial transparency, we found that most small firms are not accustomed to keeping books of accounts. In general, we found that firm characteristics and owner perceptions are partly responsible for SMEs limited access to external finance.

Key words: SMEs, Ethiopia, Bank credit, manufacturing.

1. INTRODUCTION

The question of what determines SME access to external finance is an ongoing matter of theoretical and empirical investigation. Quite a lot of studies have been conducted aiming at unraveling impediments to SME access to credit. Closer examination of array of empirical studies reveals that the problems are in fact multifaceted and differ across economies. Although not fundamentally varied, studies in advanced economies, emerging markets, and developing countries imply that a homogenous solution is unlikely to work across countries. This is mainly due to the fact that the nature of the SME sector, level of economic development, and status of financial intermediary system differs across countries, giving rise to differences in the type and intensity of factors that impede SME access to finance. Divergence in the factors that drive SME financing problems calls for a closer look at country case studies. The existing empirical literature is fragmented and hence setting up a framework helps in easily grasping the types of restraints that prevail in a particular economy, hence this paper.

Based on review of the extant literature, we characterize the SME sector using attributes that can reasonably be classified into size-related, owner-attitude related, and financial-transparency related factors. Size-related factors arise from smallness of firms in the sector. Because of their smallness, SMEs resources are dominated more by liquid assets and less by fixed resources that can potentially be used as collateral. Besides, the amount of loan they demand is often not large enough to be attractive to lenders. In addition, owner-attitude related factors involve factors that have to do with the owner's disposition towards partial relinquishment of ownership control. From owner-attitude view point, SME ownership is mostly limited within a sole proprietor, family, or friendship group that often repels an outsider. Strikingly, the repulsion becomes stronger when ownership is limited within family group. The other most important attribute has to do with financial transparency. Most of the small firms are managed by the owner and depend on the wisdom and businesses experience of the major owner, hence very few see benefit in maintaining financial records as a basis of business decision. Consequently, financial opacity is among their distinguishing characteristics.

The rest of the article is organized as follows. Section 2 presents credit constraining characteristics SMEs based on existing literature. Section 3 describes the survey and methodology. Section 4 presents the results and the last section concludes.

2. CREDIT CONSTRAINING CHARACTERISTICS OF SMES

The existing body of literature shows that, besides constraints imposed by the financial intermediary system, SME own inherent characteristics partly contribute towards their problem in accessing external finance. We classify these characteristics into three categories as size-related, owner related, and financial transparency related. The three categories differ in terms of susceptibility to reform. For instance, while size-related characteristics are inherent and can hardly be improved, owner-related and financial-transparency related attributes can be altered by reforming ownership structure and by enhancing the quality of their books of accounts. In the ensuing paragraphs, we summarize the existing empirical work in the stated areas.

Country case studies converge to the view that SMEs across economies share a common attribute. The first of these attributes is related to their size. Because SMEs are smaller, they rely less on capital and hence have relatively lower investment in physical assets that can be used as collateral for a bank loan. Besides, they transact in amounts that may not be large enough to attract lenders. Besides, SMEs are mostly established by a sole proprietor or a small group of friends or family members to whom an outsider is less welcomed. They therefore do not like to sell ownership interest in fear of inviting an outsider, and this constrains their ability to raise external finance, and in the absence of equity capital, SMEs become more desperate to get a bank loan. Moreover, lack of financial transparency, caused by absence of system of books of accounts, further limits their ability in accessing external finance.

2.1 TRANSACTION MAGNITUDE

Employment of capital at a lower magnitude is the primary reasons for their smallness. This is also among the factors that encourage establishment of small businesses, because such firms can be set up without requiring large investment in physical assets. While SMEs generally have large portion of their resources in the form of current assets (Teruel & Solano, 2007) they have few fixed assets that can be potentially pledged as collateral for a bank loan. Excessive liquidity is more prevalent in the sector. This typical characteristic of SMEs restrains their ability to access credit, especially where the financial intermediary heavily relies on tangible assets as a security for a loan. In fact, SME access to credit can be eased where current assets such as merchandise inventory are accepted as a security. Even then such a loan is so small that it can hardly be used for financing expansion, and used only in supplementing their operating cash flow requirements. Consequently, absence of large collateralizable asset base, in a collateral backed lending environment, limits their ability to obtain a loan.

Because of their size, the value of transactions SMEs execute is small in magnitude (Vandenberg, 2003), leading to higher transaction cost. They apply for relatively smaller amount of bank loan. Banks, on the other hand, prefer loans that are large enough to generate income that covers administrative costs and allow a profit. Banks therefore consider SME loans less profitable and find little incentive in lending to them, and when extending credit they charge higher interest. In the worst case, they set a minimum loan size, beyond what SMEs can afford, thereby cleverly excluding SME lending.

2.2 AVERSION TOWARDS DILUTION OF OWNERSHIP INTEREST

Most SMEs are established within family or friendship group. Theory predicts that insider sales of ownership interest tends to convey bad news as they suggest a dwindling of insider's incentives and a lack of insider confidence on business prospect (Livingston, 2007). Empirical studies, however, show that SME operators dislike selling interest to avoid monitoring by outsiders. Besides, the founder may derive utility from his ability to "exercise authority, dictate strategy, and choose which investments the firm will undertake" (Schulze et al, 2003:179). The controlling managers in small firms exhibit a good deal of apparently defensive behavior and as reported by Livingston(2007), managers in firms with substantial family involvement tend to hold higher stakes in their firms and are less likely to break them up. Wu et al (2007) in their survey of family businesses, found that financing decisions of family firms involve a trade-off between family control and the pursuit of growth opportunities. They also show that a highly levered capital structure or limiting growth allows the family firm to maintain control and pursue complex objectives. In addition, family involvement decreases the use of monitoring by both the board and non-family financial managers.

The fact that SME operators detest dilution of control often limits their financing ability and also their growth. Independence and control are often considered the primary reasons for the differences in SME financial behavior compared to what might be expected from the publicly listed firms. According to Vos et al (2007) SMEs exhibit signs of financial contentment, showing that SME owners like to sustain their firm and do not seek growth beyond their ability to control. They claim that financial contentment as a financing pattern describes much of the SME sector. SMEs seeking growth, however, participate more in the external capital markets than those not seeking growth. Small firm owner's control averse behaviour limits SME financing alternatives increasing their reliance on bank credit. This is confirmed by Carey & Flynn (2005) who found that there is a high degree of Irish SME dependence on banks as a source of funding.

2.3 FINANCIAL TRANSPARENCY

Financial transparency is important in the credit market, be it debt or equity market. Investors and creditors want to get as much information as possible about the firm whose share they buy or to which they extend credit. Banks require borrowers' financial information before making a credit decision. If a borrower is unable to present financial statement, either the loan application is rejected or higher interest is charged based on the presumption that it is risky.

SME are non-transparent (Pissarides, 1999), and their informational opacity further exacerbates their problem in accessing credit. Two reasons have been forwarded: most SMEs do not have an accounting system in place to allow production of credible financial reports. Second, even those with an accounting system may elect to stay opaque in order to evade tax.

3. DESCRIPTION OF THE SURVEY AND METHODOLOGY

The survey was conducted covering randomly selected sample of 102 manufacturing SMEs operating in Addis Ababa, the capital that hosts nearly one half of manufacturing SMEs. The sample was drawn from manufacturing enterprise directory obtained from the Ethiopian Central Statistical Authority (ECSA). We define SMEs, by taking into account international experience, the level of economic development of the country, the size of average manufacturing firm relative to firms in other industries as firms using automated manufacturing process employing between 10 to 150 workers and having capital over the range of ETB 50,000 (approximately €3,000) to ETB 15 million (approx €900,000). Based on the foregoing definition, we identified 784 SMEs out of 1,138 manufacturing firms in the country in 2006.

We established a sampling frame by narrowing the population of SMEs down to 375 firms operating in Addis Ababa, the capital. The firms are stratified into 10 industrial classes. The sample was drawn from each stratum on a random basis, and eventually 120 firms were selected for survey. However, only 102 firms were approached due to lack of willingness to participate or absence of the owner for the rest. Industrial composition of firms in the sample is as follows: Food products and beverages (31.4%), wearing apparel (5%), Tanning and dressing of leather; manufacture of footwear, luggage and handbags (7.8%), paper products and printing (15.7%), chemical and chemical products (5%), Rubber and plastic products (6.9%), Non-metallic mineral products (5.9%), fabricated metal products (2.9%), machinery and equipment (7.8%), and Furniture (11.8%). The sample represents 27.2% of manufacturing SMEs operating in the capital. The survey was conducted using a door-to-door self-complete questionnaire filled by SME owners. The response rate is 85%, and hence we

believe the survey outcome is clean from non-response bias. A cross sectional data were generated from survey that comprises responses of each SME operator on financing startup, working capital, and growth. The cross sectional data were analyzed using descriptive statistics.

4. THE RESULTS

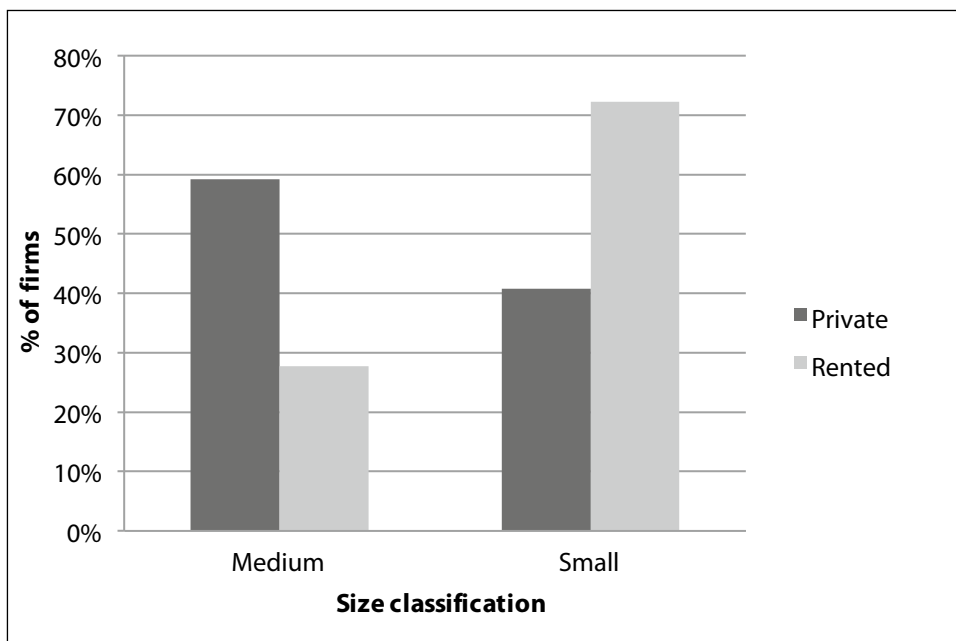
In this section, we describe the Ethiopian manufacturing SMEs using survey data. SMEs are described based on their asset structure, owner's willingness to relinquish control interest, and financial transparency.

4.1 ASSET STRUCTURE

Due to absence of reliable financial information useful in determining the value of fixed assets owned by the firms we resorted to using the status of non-residential buildings¹ wherein the firms conducts business. The non-residential buildings are either owned by the firm or rented. We justify the use of non-residential buildings as a proxy for fixed assets based on the fact that banks in the country see real estate as the most reliable asset to accept as collateral. As depicted in figure 1 below, while most of the small-sized firms use rented buildings as their place of business, medium-sized ones have their own buildings, implying a direct correlation between ownership of non-residential buildings and size, and indirect correlation between using a rented building and size. However, it has to be noted that in countries where there is a weak property right, ownership of a non-residential building *per se* does not guarantee better access to bank credit. A mere ownership of property without possessing ownership title is not sufficient in the eyes of lenders because some of them may not qualify as collateral owing to technical and legal reasons.

¹ Real estate serves as the primary collateral in the credit market in the country. Although there is no organized real estate market, banks have value of buildings assessed by a team of experts.

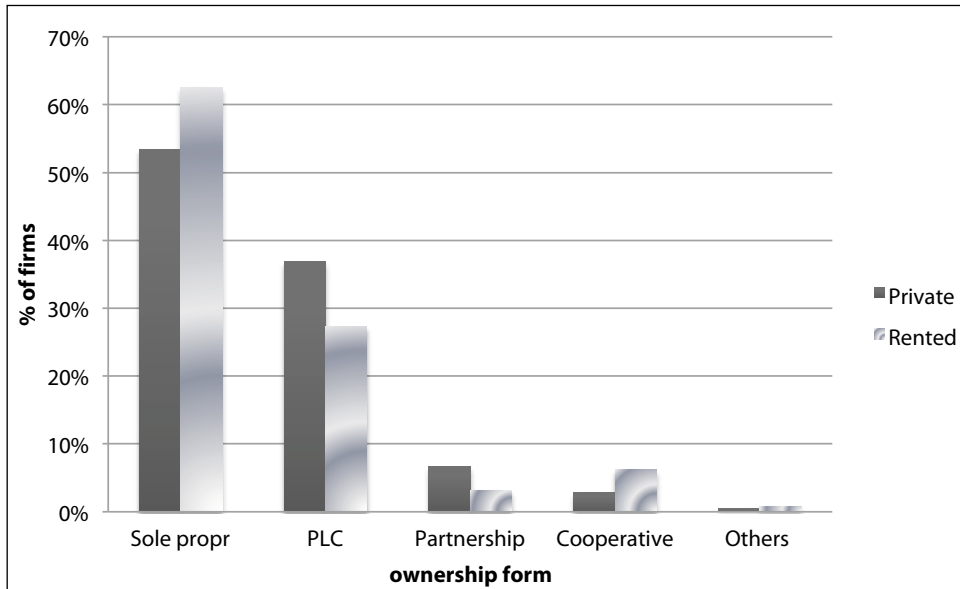
Figure 1: Ownership of non-residential building versus size



Source: Survey

Dissecting the firms into different ownership groups gives a further insight into the distribution of property ownership across different ownership forms. As depicted in Figure 2, sole proprietors are the primary owners and renters of non-residential buildings, followed by privately limited companies (PLCs). Sole proprietor's predominance reveals the fact that ownership of most of the SMEs is confined to a single individual. Per our survey results, even the PLCs are former sole proprietorship businesses reformed into such structure by encompassing family members of the sole proprietor. This, according to some of our respondents, is intended to formalize management of the firm by enhancing commitment of all the members. Besides, organizing it in such a manner relieves the family group from entering into a battle over inheritance upon death of the principal owner. Figure 2 also reveals additional fact that while more sole proprietors rent than own a building to carry out business, more PLCs and partnerships own than renting. One can imply that as ownership form changes from sole proprietor to partnership and PLCs, the tendency of owning a non-residential building increases, leading to a conjecture that re-formation of a firm gives rise to its growth, or at least accompanies it. In general, consistent with existing empirical evidence SMEs have few fixed asset in their structure delimiting their ability to raise bank credit where lending is mostly backed by collateral.

Figure 2: Non-residential building status by ownership forms

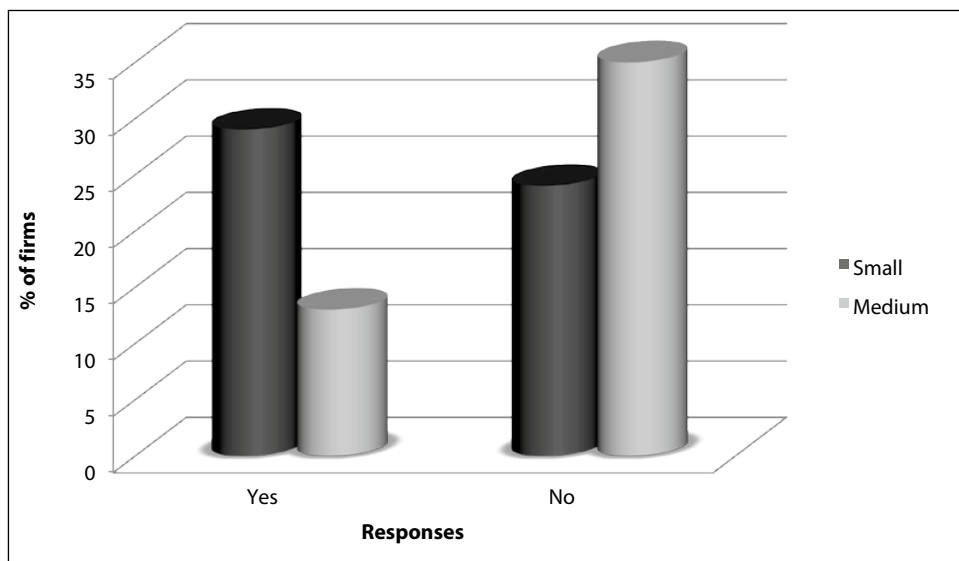


Source: Survey

4.2 WILLINGNESS TO RELINQUISH CONTROL INTEREST

We inquired SME owners whether they are willing to sale ownership interest in order to raise capital. We summarized the responses by size, ownership form and age. Age is measured using regime in which the firm was established. At an aggregate level, the response shows that while 60% of firms replied "No" only 40% replied "Yes", implying that there is general resistance towards relinquishment of ownership interest. As shown in figure 3, owners of small-sized firms show more interest in selling control interest than those that own medium-sized firms, implying that as firms grow bigger so does their resistance to welcome an outsider. Contrary to conventional view, smaller firms are relatively more open to outsiders. This may be explained based on the ground that they have a more serious financing challenge than medium sized ones. Besides, medium firms might be established within family or friendship group where a question of whether to include an outsider is a matter of a collective decision whereas in small firms it solely rests upon a single proprietor.

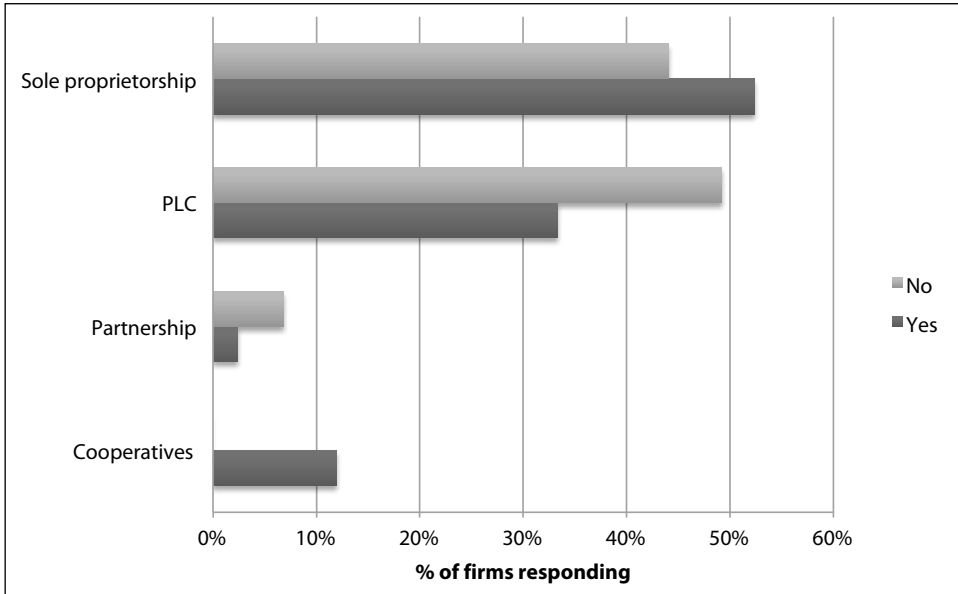
Figure 3: Willingness to sale control interest by size



Source: Survey

A look at owner's inclination towards relinquishing control interest across ownership forms gives as insight into its pattern determined by a change in form of ownership. As depicted in figure 3, most of sole proprietors are willing to relinquish control while a few PLC owners are willing to do so. This confirms our earlier conjecture that most small enterprises are operated by a sole proprietor whereas most of the medium sized ones are partnerships or PLCs. A "Yes" response by most sole proprietors can be regarded as signal of their desperation in accessing external finance despite a potential decline in exercising exclusive control over company affairs. In contrast, a lower degree of willingness by partnership and PLC owners implies that the financing problem they face is not so serious as to compel them to abandon an inherent aversion against an outsider. The general implication of the foregoing discussion is therefore that the intensity of financing problem in the country falls as firms grow in size. However, we like to make a caveat that any contentment on the side of medium sized firms owners about company size can lead to resentment of an outsider, even where there is no improvement in financial access. We have come to understand in our discussion with owners that a decision of whether to admit an outsider has a tradeoff between the newcomer's business skill and additional capital on the one hand and the possibility of conflict of interest that may ultimately grow so much as to bring the firm into closure on the other hand.

Figure 4: Willingness to sale control interest by ownership form



Source: Survey

To see if a decision to admit an outsider is determined by age of a firm and the regime in which it was established, we also analyzed owner’s willingness across companies of different ages. We established three age categories as those established during the imperial regime (the oldest), the socialist regime (medium), and the post reform period (the youngest). As shown in table 2, while majority of *imperial regime* and *post-reform regime* firm owners do not show interest in selling control interest, two-thirds of socialist regime firm owners expressed willingness to admit an outsider. One possible explanation for the attitudinal convergence of *imperial regime* and *post-reform* firm owners is the fact that the two periods witnessed unfettered growth of the private sector. In contrast, the socialist regime was the least favorable for private sector development, and quite significant portion of the economy was controlled by the government. Private investment took only the form of cooperatives, promoted by the government but with a lot of restraints.

The best alternative explanation is that entrepreneurs who set up their firms during the socialist regime have the experience of working in cooperatives and hence do not have the apprehension towards sharing ownership interest. On the other hand, private businesses that flourished during imperial regime and post reform period owing to commitment of the state towards promotion of the private sector did not have to set up cooperatives to un-

dertake business activities. They rather had the chance to establish solely run firms, without seeking a partner. This in turn gave them the leeway in easily setting up a business concern, while at the same time denying them a chance to experience working with others.

Table 2 Willingness to sell control interest by period of establishment

| Period of establishment | Are you willing to sell control interest? | | Total |
|-------------------------------|---|---------|-------|
| | Yes | No | |
| Post reform period (Youngest) | 23(52%) | 39(48%) | 44 |
| Socialist regime (Medium) | 14(67%) | 7(33%) | 21 |
| Imperial regime (Oldest) | 5(28%) | 13(72%) | 18 |

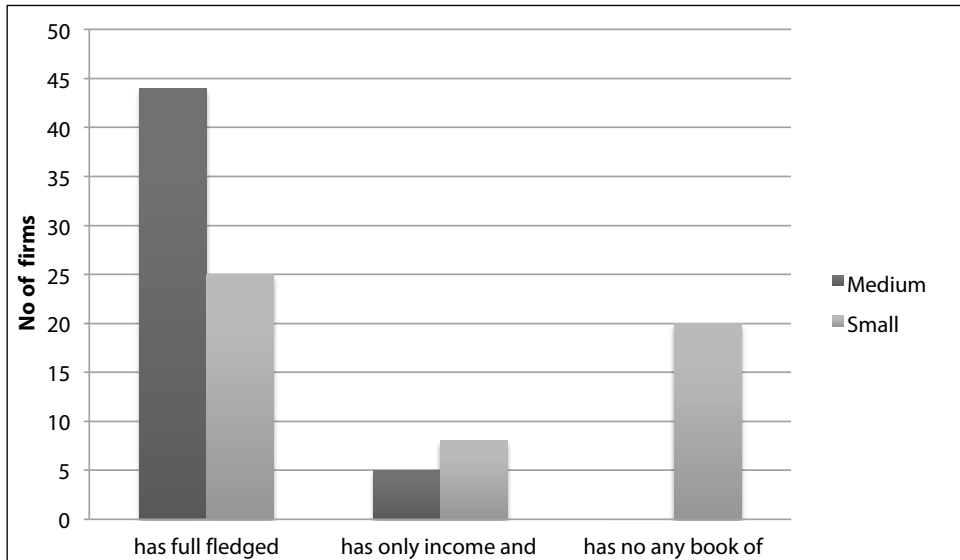
Source: Survey

4.3 FINANCIAL TRANSPARENCY

Informational opacity is among SMEs attributes that are considered to deter their access to formal credit. Lack of financial transparency gives rise to exclusion of the sector from the credit market as it aggravates adverse selection and moral hazard-caused by asymmetric information between the lender and borrower. When lending is based on data supplied through financial statements, firms that cannot produce independently vouched statements are denied credit. We describe extent of financial transparency on the basis of our survey on the type of financial data they keep, and present results across size and ownership group. While 68% of the firms have a full-fledged system of accounting in place capable of producing standard financial statements, 13% have only a record on revenue and expenses in a less professional way, and 19% do not have any kind of record other than sequentially filled vouchers and receipts used to produce statements once a year by accounting consultants.

A look at figure 5 reveals that financial transparency is inversely correlated with size. Medium-sized enterprises are more transparent than smaller ones. While virtually all medium enterprises have a full-fledged accounting system, majority of small firms either have only list of revenue and expenditure or have no record at all. In our attempt to understand the reason behind financial opacity in smaller firms, we inquired small firm owners with no books of account to justify it. We came to realize that most of them saw no compelling reason to maintain accounting records owing to lack of education and simplicity of their transactions. Those that keep books of accounts do so primarily for the purpose of fulfilling tax agency requirements, and its usefulness in business decision making is secondary.

Figure 5: Financial transparency by size class

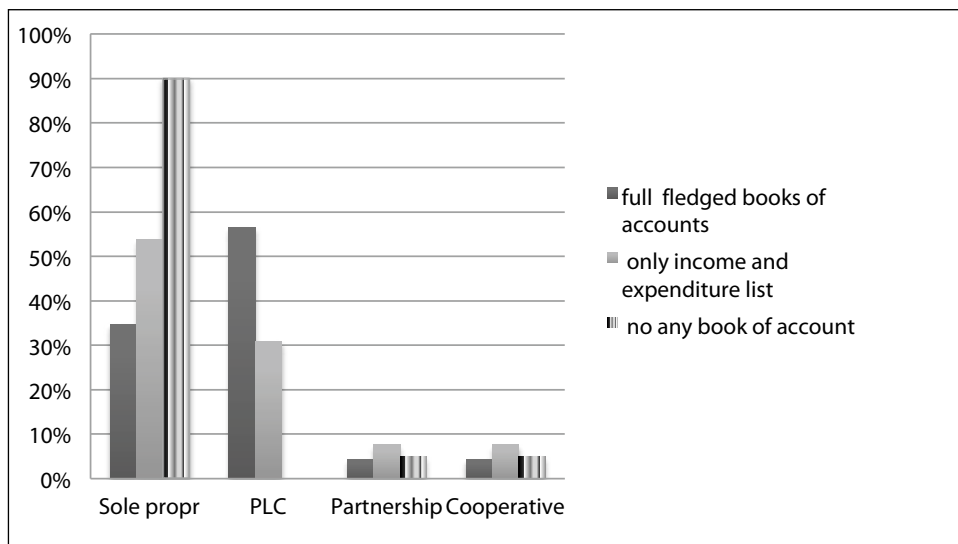


Source: Survey

A look at the disparity in financial transparency across different ownership categories gives an insight into the relation between transparency and ownership form. Of those that do not have any books of accounts², sole proprietors account for 90%, and majority of PLCs have full-fledged system of records, mainly driven by the law that compels such firms to keep standardized system of financial information. For most PLC owners using financial statements in the decision making process is only secondary, the primary reason being fulfilling legal requirements. Very few of them see the benefit of producing financial statements in enhancing their chance to secure bank credit. In fact, banks require financial statements as part of a loan application, but use it only as a mechanism for ensuring financial prospects. Financial statements are not used to circumvent collateral requirement, nor is it used in negotiating more favorable terms with the lender. They are only part of the formality in applying for a loan. The amount and cost of loan is determined primarily based on strength of the collateral. In general, despite the existing evidence that SME opacity limits their access to bank loan, financial statements are of little use in loan decisions in the Ethiopian credit market, and hence financially transparent firms have no perceptible advantage in accessing loan over those that are not.

² Firms with incomplete or no accounting records are often smaller in size and hence fall under category of tax payers whose tax liability is predetermined by the authorities. It means they pay a fixed sum.

Figure 6: Financial transparency by form of ownership



Source: Survey

5. CONCLUSIONS

Studies on SME financing emphasize more on the supply side constraints, giving less regard to SME inherent characteristics that often impede their access to credit. This paper aims at describing characteristics of SMEs with the view to identify attributes that hinder their access to external finance. To this end, survey of 102 randomly selected firms from the Ethiopian manufacturing sector was made. We find that the asset structure of most SMEs is characterized by a few or no collateralizable fixed assets. Most small firms do not own the property where they conduct business, they rather use rented offices. The likelihood of owning a business premise increases with size. Examination of owner's willingness to admit a new partner as a means of expanding capital base revealed that most SME owners exhibit aversion towards selling ownership control. Owners of medium sized firms exhibit greater resistance to sell ownership interest than smaller firms. This shows that, contrary to conventional view, aversion towards relinquishing ownership interest increases with size. In terms of financial transparency, we found that most small firms do not keep books of accounts, and the likelihood of keeping books increases with size.

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OGRANIČENJA U PRISTUPU VANJSKOM FINANCIRANJU MALIH I SREDNJIH PODUZEĆA. PRIMJER PROIZVODNIH TVRTKI U ETOIPIJI

SAŽETAK RADA

Mala i srednje velika poduzeća financijski su ograničena zbog čimbenika ponude i potražnje.

Većina studija naglašava ograničenja faktora ponude ne obraćajući pažnju na ograničenu potražnju koja proizlazi iz prirođenih svojstava malih i srednjih poduzeća. U radu se opisuju obilježja malih i srednjih poduzeća i identificiraju atributi koji kočje njihov pristup vanjskim financijama. U tom je smislu provedeno istraživanje na 102 nasumično odabranih tvrtki iz etiopskog proizvodnog sektora. Ustanovili smo da većinu malih i srednjih poduzeća karakterizira nedostatak instrumenata osiguranja dugotrajne imovine. Ispitivanje spremnosti vlasnika na udruživanje s novim partnerom kao sredstvo širenja osnovnog kapitala pokazalo je da većina vlasnika malih i srednjih poduzeća negativno reagira na gubljenje vlasničke kontrole, u čemu prednjače vlasnici tvrtki srednje veličine nad vlasnicima malih tvrtki.

To pokazuje da se, za razliku od konvencionalnog stajališta, averzija prema gubljenju vlasničkog udjela povećava s rastom tvrtke.

U smislu financijske transparentnosti, otkrili smo da većina malih poduzeća ne vodi poslovne knjige. Općenito, otkrili smo da su obilježja tvrtke te percepcija vlasnika iste djelomično odgovorni za ograničen pristup malih i srednjim poduzeća vanjskom financiranju.

Ključne riječi: mala i srednja poduzeća, Etiopija, bankovni krediti, proizvodnja, financiranje.