DIGITALES ARCHIV

ZBW – Leibniz-Informationszentrum Wirtschaft
ZBW – Leibniz Information Centre for Economics

Lotto, Josephat

Article

Credit availability for Tanzania's small businesses : a gender perspective

Provided in Cooperation with:
University of Dar es Salaam (UDSM)

Reference: Lotto, Josephat (2016). Credit availability for Tanzania's small businesses : a gender perspective. In: Business management review 19 (1), S. 19 - 33.

This Version is available at:
http://hdl.handle.net/11159/3055

Kontakt/Contact
ZBW – Leibniz-Informationszentrum Wirtschaft/Leibniz Information Centre for Economics
Düsternbrooker Weg 120
24105 Kiel (Germany)
E-Mail: *rights[at]zbw.eu*
https://www.zbw.eu/econis-archiv/

Standard-Nutzungsbedingungen:
Dieses Dokument darf zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden. Sie dürfen dieses Dokument nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, aufführen, vertreiben oder anderweitig nutzen. Sofern für das Dokument eine Open-Content-Lizenz verwendet wurde, so gelten abweichend von diesen Nutzungsbedingungen die in der Lizenz gewährten Nutzungsrechte.

https://zbw.eu/econis-archiv/termsofuse

Terms of use:
This document may be saved and copied for your personal and scholarly purposes. You are not to copy it for public or commercial purposes, to exhibit the document in public, to perform, distribute or otherwise use the document in public. If the document is made available under a Creative Commons Licence you may exercise further usage rights as specified in the licence.

ZBW Leibniz-Informationszentrum Wirtschaft
Leibniz Information Centre for Economics

Mitglied der Leibniz-Gemeinschaft

CREDIT AVAILABILITY FOR TANZANIA'S SMALL BUSINESSES: A GENDER PERSPECTIVE

Josephat Lotto[1]

ABSTRACT

The purpose of this study was to examine whether firm and owners' characteristics are driven by gender and whether gender is attributable to credit accessibility in small and locally-owned firms in Tanzania. The study uses data collected from 400 small businesses through questionnaires and interviews and analyses it using univariate and multivariate statistical tools The findings show that female owners are less educated, have less work experiences and their firms are relatively smaller and younger than in the case for males. Moreover, female-owned firms were more likely to be organised as sole proprietorship or partnerships. Also the findings indicate that female-owned firms are more likely to have a need for credit during the three years prior to the survey. Nevertheless, when it comes to applying for credit, male owners were more likely to apply for credit than their counterpart female owners. Surprisingly, the credit applications of female-owned firms were more likely to be approved than those from the male-owned firms. The results suggest that policy-makers and regulators should not use the "one-size-fits all" approach when setting policies for the growth and survival of small firms due to the differences in firm and owners' characteristics with regard to credit accessibility between male and female-owned firms. Furthermore, the results imply that when formulating policies for credit accessibility the issues of size and gender are pertinent. On the whole, the study contributes to the extensive literature on gender and entrepreneurship for a specific Tanzanian context.

***Key words**: Gender, Accessibility, Credit, SMEs*

INTRODUCTION

Background

The new ideas in entrepreneurial investments and businesses are important to the overall economic growth in Tanzania and other nations. In essence, entrepreneurs are the propelling engine for the economic growth of any country. Although economic growth depends on so many factors, it more importantly depends on the efficient allocation of human capital. In developing economies small businesses contribute vastly to economic growth (Olomi, 2001).

However, the financing of small businesses has been a source of grave concern to policy-makers and academic researchers as previous literatures such as Beck *et al.* (2008), Autio (2007), and Cole and Mehran (2009) have illustrated. Tanzania is one of the developing economies whose markets are imperfect. The country also faces a problem of strong information asymmetry between small and large businesses. These characteristics, market imperfections and information asymmetry inevitably bring about difficulties in accessing credit. In this study, the term credit availability refers to three variables: credit need, credit applied for and credit approved. In other words, if a firm indicated a need for credit during the previous three years it is referred to as a *Need-Credit Firm* otherwise we call it a *No-Need Credit Firm*. When a firm indicated a need for credit but did not apply for one due to fear of rejection this firm is referred to as a *Discouraged Firm* and the firm that needed credit and did apply is referred to as an *Applied Firm*. If a firm indicated a need for credit and was successful in obtaining funds from its prospective lender it is called an *Approved Firm* and a business entity is called a *Denied Firm* if it indicated a need for credit but was unsuccessful in obtaining funds from its prospective lender. The characteristics of small firms such as lack of proper record-keeping, poor management and unstructured business plan make the risk of lending to such firms much higher (Berger & Udell, 1995).

[1] Senior Lecturer, Institute of Financial Management, Tanzania. Email: tathioga@yahoo.co.uk

In Tanzania, the situation becomes even more untenable when the issue of gender is taken into account as Barne (2011) has illustrated. According to Barne (2011), Exim Bank in collaboration with the IFC (International Financial Corporation) in 2007 developed a programme to serve women entrepreneurs in Tanzania. The programme offered loans to businesswomen and facilitated advisory services in terms of gender-sensitisation training to Exim Bank staff to enhance their ability to access and cover the women's market. Furthermore, the programme supported the establishment of Exim's Women Programme Unit, and helped to develop financial services products that better responded to the specific needs of businesswomen. According to Barne, women in Tanzania generally faced major hurdles in the financial sector.

Although, according to MSME National baseline survey (2012) Tanzanian women own 54.3 percent of micro and small enterprises, only five percent of them reportedly had access to bank finance in 2006, only 0.53 percent of female-headed farm households had access to credit. One of the reasons suggested by the author is their failure to meet the bank loan requirements such as title-deeds to be used as collateral. This lack generally made the women entrepreneurs ineligible for bank loans. According to Nchimbi (2002), this problem rarely faced men in Tanzania, and perhaps elsewhere in Africa, because patriarchal values generally tend to favour them in owning assets that could be used as collateral. Indeed, land is owned by men, hence they tend to use title-deeds as collateral, which makes them easily qualify for bank loans.

According to Nchimbi (2002), women are also limited by education/training, business experience, discrimination, socialisation/networking and unwillingness to take risk. Moreover, the negative attitudes by men towards the business owned by women, and inadequate and affordable business premises also constrain the overall performance of female-owned enterprises. On sources of funds for starting and running business, the insufficient internally-generated liquidity is, therefore, one of the factors which are frequently cited as the causes of micro entrepreneurs' business failure (Chijoriga & Cassimon, 1999).

Previous literature on gender and entrepreneurship conceals the fact that there are differences in the financing behaviour of male and female-owned firms as highlighted in Brush (1992), Carrington (2006), and Robb and Wolken (2002). Moreover, in many cases gender classification has a negative impact on women during business financing process (Marlow & Patton, 2005). Other readings in this area suggest that gender matters in credit availability. For instance, Bellucci *et al.* (2010) highlights the fact that female entrepreneurs face tighter access to credit, despite not paying higher interest rates than their male counterparts.

Although a large body of work exists on women and entrepreneurship in general with respect to other developing countries such as Latin America, and the Caribbean (Global Entrepreneurship Monitor [GEM], 2007), there are relatively few studies (if any) that have reported on a baseline of stylised facts about gender and credit availability in small firms in Tanzania. This study, therefore, examines whether credit is more and easily available to male-owned small firms in Tanzania than it is to their female counterparts and whether gender differences in credit availability is attributable to firm owners' characteristics.

Generally, the pattern of small business owners' availability in the context of Tanzania remains largely unknown. In fact, the rapid entrepreneurial growth in Tanzania justifies the conducting of context-specific studies. This study is in response to this particular need and potentially adds fresh insight into research in this area based on data drawn from the context of Tanzania.

Assembling some standard facts on whether firms' and owners' characteristics are driven by gender apart from market imperfection definitely provides a critical basis for testing our study's hypothesis that gender drives credit availability. These facts are even more important for small firms, on which there is limited information, thus increasing their risk profile and making it difficult for them to access lending.

A thorough understanding of the firms' ownership differences based on gender in their financing behaviour in each context is crucial for policy-makers and investors, who are interested in financing small firms. In the context of a developing country such as Tanzania these facts are important for this research area given the scarcity of data on the subject matter. This study, therefore, contributes to the extensive literature on gender and entrepreneurship. The work is unique due its context-specific nature as it identifies those important gender differences in relation to *firm* and *owner* characteristics, and also the *credit availability* of small firms in Tanzania.

Research Objective
The objective of this study is to investigate whether gender is attributable to credit accessibility in small and locally-owned firms in Tanzania. More specifically, the study is aims:

a) Examining whether credit is more and easily available to male-owned small firms in Tanzania than it is to their female counterparts.
b) Determine whether gender differences in credit availability are attributable to owners' characteristics

Research Hypothesis
Based on the literature review, the following hypotheses were tested in this paper:

H1: Credit is more easily available to female-owned firms than it is to male-owned firms

H2: Gender differences in credit availability are attributable to owners' characteristics

LITERATURE REVIEW

Theoretical Underpinnings

Gender Differences and Theories of Growth
Although different studies have revealed that enterprises owned by women experience similar problems as those owned by their male counterparts, some characteristics are typical for many female-owned firms. According to Coleman (2002), these characteristics include small size, limited prospects for profitability and failure to provide collateral for obtaining loans. Also, the overall negative attitudes particularly by men towards the businesses owned by women as well as inadequate and affordable business premises is suggested to limit the overall performance of female-owned enterprises.

Additionally, there is a significant variation between male and female, especially when considering sources of funds for start-up capital and running of their businesses. In this regard, Katwalo (2007) established that female entrepreneurs relied more on family funds than male entrepreneurs. In this case, it is difficult for female-owned enterprises to take advantage of external finance opportunities. This orientation is inconsistent with the internal finance theory of growth. The theory as advocated by Carpenter and Petersen (2002); Brinks and Ennew (1996) contends that firms which need more financial resources than those their disposal may be limited to pursuing potential opportunities for growth. Insufficient financial resources, therefore, constitutes one of the factors frequently cited as the causes of micro and small business failure in developing countries as reported by Chijoriga and Cassimon (1999).

Despite the importance of funding as start-up capital to allow business operations to function, there are other factors that can explain differences between male and female-owned enterprises. These factors in their totality can be explained by the human motivation view of growth. The human motivation perspective of growth embraces the view that the social and psychological motive can influence significantly growth seeking behaviour and, therefore, growth itself as Shane *et al.* (2003), Olomi (2001) and Nchimbi (2002) have demonstrated. According to Shane *et al.* (2003), growth results from personal desires of the owner-managers. These desires are socially-generated, sustained and changed. The theories under this view of growth can be grouped into two. The first group consists of explanatory models, which relate growth to motivations and antecedents whereas the second group attempts to categorise owner-managers into unique typologies on the basis of the meaning they attach to business activity, which in turn implies different levels of growth motivation (Olomi, 2001).

Theories Governing Availability /Access to Finance
Theoretically, a problem of access to finances exists when the project, which otherwise could have been internally-financed had the resources been available, fails to get funding from external sources. This comes into existence because the expected rate of return of the project has a variation with the rate of return of the loan expected by the lender. Inevitably, this situation results into the borrowers having a significant problem in debt-servicing. Stiglitz and Weiss (1981) associate the variation between the rates of return on the project and on loan principal-agent problem.

The classical principal-agent problems are adverse selection and moral hazard. According to Bataa Ganbold (2008), the adverse selection problem occurs because high-risk borrowers, who might not only fail to meet the obligation of repaying their debts but may also not be willing to do so are the ones more willing to apply for external finance. Thus, the loan provider may decide to offer the loan to the borrower by charging a more risk premium; however, this approach may also backfire due to the adverse selection problem, for example, as the risk premium increases the riskiness of a pool of interested borrowers also increases. As such, high-risk borrowers tend to be adversely selected by high-risk premiums.

Ultimately, the higher borrowing interest rate imposed by the lenders might not be a useful and reliable device of sorting out good against bad borrowers. This situation is the one where the debtor knows in advance whether his/her project is bad or good and may have an incentive to window-dress the bad ones; unfortunately, the creditors cannot screen all the projects adequately due to lack of sufficient information. In consequence, the lenders are forced to use non-price criteria to screen projects and apportion credit rather than further increasing risk premiums.

Moral hazards, on the other hand, concern the situation which prevails after a borrower (agent) had received a loan. According to De la Torre *et al.* (2007), the problem in this case may arise when the borrower has an informational advantage of using the loan in ways which are inconsistent with the interest of the lender (principal) such as diverting the borrowed money to riskier activities or even looting and running away with money and the lender may not have an effective way of monitoring and preventing such behaviour from happening.

Empirical Evidence

Extensive literature on gender and entrepreneurship shows that there are differences between male and female-owned firms using a number of attributes (Ahl, 2006; Brindley, 2005). These differences are in terms of education level of the firm owners, experience level of the owners, and the performance of the firm. These differences are reported to be the attributes which may be accounted for by the difference in male and female psychology (Brush, 1992). Verheul and Thurik (2001) further note that differences in the way owners finance their businesses can also be attributed to the type of business, type of management, and experience of the entrepreneur.

Evaluating the women entrepreneurial experience and access to finance, Brindley (2005) argued that socio-cultural norms establish gender-structured constraints which influence access to financing and the overall success of firms. This review, however, focuses on the relationship between gender and credit availability. Other explanatory variables such as owner and firm characteristics were also analysed to determine whether credit availability is a function of market imperfections or is merely a function of the characteristics of the owner and firm. Previous studies such as Robb and Wolken (2002) have reported that credit market imperfections do not necessarily result into discrimination of gender-based lending patterns.

Marlow and Watson (2006) also report that, female-owned enterprises are more likely to be under-capitalised in a variety of forms from the outset in addition to being located in crowded sectors and hence naturally under-perform over time. Smith and Jackson (2004), from the gender-perspective segregation that permeate policy formulation as well, proffer thusly: "Not only does policy appear to concentrate on areas traditionally associated with men in self-employment, but [also] the systems of finance and advice are also firmly oriented towards them, leaving women to face a range of barriers when engaging with self-employment".

Carter *et al.* (2001), on their part, contend that access to finance is one of the aspects of the wider set of issues which surround start-up by women entrepreneurs. Hisrich and Brush (1986 quoted in Carter *et al.* 2001), note that there is a perception that women are "not as serious as men about business" as

> A woman entrepreneur who lacks experience in executive management has had limited financial responsibilities, and proposes a non-proprietary product, the task of persuading a loan officer to lend start-up capital is not an easy one. As a result, a woman must often have her husband consign a note, seek a co-owner, or use personal assets or savings. Many women entrepreneurs feel strongly that they have been discriminated against in this financial area.

The study by Carter and Rosa (1998), based on survey of 600 firms equally split by gender, reports the quantifiable gender differences in some areas of business financing, although intra-sectorial similarities exhibit that gender forms only one of a number of variables that influences the financing process.

Asiedu *et al.* (2012), on their part, examine the racial discrimination of male and female in as far as credit access is concerned. The paper reports that, there is a significant difference in the loan approval rate and the interest rate charged on approved loans for businesses owned by minority or white females and firms owned by white males. According to Carter *et al.* (2001) the difficulties in accessing finance are contributed by several factors. Of these factors, collateral is mentioned as the first obstacle because the financial guarantees required for external financing may be beyond the scope of most women's personal assets and credit track record. Apart from the problem of collateral, there is also the issue of networks, which is one of the major constraints impending women's access to credit to finance their on-going business as reported by Green *et al.* (2001). In this regard, finance might be less readily available for female-owned firms than it is for male-owned enterprises largely due to the women's inability to penetrate the informal financial networks (ibid.)

Apart from networks, discrimination is also reported as another obstacle to women's access to finance relative to men's. Hisrich and Brush (1986) and Carter *et al.* (2001) attest to the fact that female entrepreneurs' relationships with bankers may suffer because of sexual stereotyping and discrimination. In fact, Carter *et al.* (2007) have documented discrimination cases by banks as men and women are treated differently in the banks' lending criteria and processes.

Examining the role of gender in credit availability of the firms, some studies have highlighted interesting results. Cole and Mehran (2009) have reported that female-owned firms in the US are considerably smaller than male-owned firms. The study further reports that, female-owned firms are also much younger in terms of the age of the firm and their organisational form reflects sole proprietorship compared to male-owned firms which are mostly corporations. It is further noted that these firms normally operate in the retail trade and business services sub-sectors and less likely to be in the wholesale business. Most importantly, the researchers found that female-owned firms were more likely to have shorter banking relationships and fewer relationships with their financial institutions.

supporting these results on privately owned US firms, Verheul and Thurik (2001) argue that female entrepreneurs have a smaller start-up capital that male entrepreneurs, which ultimately influences the type and size of their business entities. On the whole, previous studies show that female-owned firms do not frequently use commercial banks for their financial services as Carter and Rosa (1998) and Haynes (1999) have reported. This short-term relationship may impact on the firm's ability access the credit market as the firm might not have a formal relationship in the credit market (Berger &Udell, 1995). In this regard, Cole and Mehran (2009) insist that when female-owned firms apply for credit, they are more likely to obtain it although they tend to be credit-constrained.

As far as risk taking behaviour is concerned, researchers such as Jianakoplos and Bernasek (1998) contend that women are, indeed, more risk-averse than men because in their household, as wealth increases, the holdings of risky assets increases by smaller amounts for females relative to males. Supporting this hypothesis, researchers such as Sunden and Surett (1998) pin-point that women make more conservative choices than men in their defined-contribution retirement plans. Robb and Wolken (2002) in their study of US firms found that female-owned firms are less likely to have applied for credit in the last three years than male-owned firms. This risk-adverse behaviour can affect wealth endowments. The risk-adverse nature of female-owned firms generally account for their being credit constrained because of their limited access to the credit market. Some firms may also not apply for credit for fear of rejection. This may account for the appearance of female-owned firms being constrained by credit (Robb & Wolken, 2002).

And yet, a number of other factors could also influence the risk and behaviour of female-owned firms. These include social, personal and political factors, which impact on risk tolerance of investors (Brindley, 2005). In previous literature, it has also been reported that gender differences vary among firms in relation to demographic characteristics. Some studies such as Brush (1990) and Robb and Wolken (2002) have reported that female-owned businesses tend to be smaller and younger than male-owned firms. Additionally, female-owned businesses are reported to be more likely to be organised as sole proprietorships as opposed to corporations and on average; male-owned firms, on the other hand, have principals with higher levels of education than female-owned firms (Robb & Wolken, 2002). This was also true for the level of experience as designated by the total number of years the owner has spent operating a business. In this regard, Robb and Wolken (2002) further report that male owners on average had a relatively higher level of experience than female owners. Their report also shows that male owners were found to be slightly older than female owners. These results also relate to the international context.

From a Tanzanian perspective, there is no published work directly related to gender-based firm owners' credit availability. Tanzanian-related literature agrees that, women entrepreneurs differ in many ways in terms of age, religion, ethnicity, wealth, education, literacy, marital status, social status, experience and socio-economic position. These differences are also reportedly attached to their motivation to start and develop businesses which ultimately, according to Koda and Omari (1991), are responsible for a considerable variation in the nature, scope and magnitude of women's entrepreneurial activities.

Furthermore, literature on Tanzania report that, entrepreneurial behaviour is a function of environmental factors including cultural and traditional values and prejudices. Chijoriga and Cassinon (1999) argue that, as the Tanzanian culture reduce women to domesticity as wives and mothers they are generally socialised to be non-argumentative, passive and easy to accept defeat. This might explain why women in Tanzania have significantly suffered in terms of their self-confidence, achievement-motivation and even their willingness to take risk, qualities that are closely linked to success in business. Nchimbi (2002) asserts that the empirical findings support the view that women have less of these qualities. Nchimbi found women entrepreneurs to be more internally-oriented, suggesting a lack of confidence. Also, Olomi and Sinyamule (2007) report a high level of women involvement in small businesses and becoming the main breadwinners in their families. This development shows that the female-owned businesses are relatively new in Tanzania and, hence, are organised as proprietorship as discussed by Robb and Wolken (2002). In other words, such businesses are more risky for financing as the women entrepreneurs appear less creditworthy than their male counterparts.

Generally, from Robb and Wolken (2002) it can be noted that the legal framework under which a firm operates usually affect the ability of the creditors to collect returns on delinquent loans and, this scenario, therefore, affects the supply of credit to a firm. The literature suggests that corporations attract more credit than proprietorship. The contributory factors for this legal framework appear to boil down to the level of start-up capital a firm's owner has access to.

METHODOLOGY AND DATA

Data and Sample Size

This study draws on data from a survey of small businesses in Tanzania. In all, 400 small businesses were randomly sampled, 100 businesses from each region of Dar es salaam, Mwanza, Arusha and Mbeya. The sample involved small businesses, which were identified by using the business register requested from Business Registration and Licensing Authority (BRELA). To ensure the efficiency and effectiveness of data collection exercise, important information of business owners of selected businesses in each region were collected from BRELA. Crucial data included telephone numbers, name of the key owners of the business, and business location. Because the study stressed on the gender differences, the gender of the business owners was also considered and the number of firms selected had to be gender-balanced.

A questionnaire was designed and interview questions were set to supplement information derived from questionnaires. No questionnaire was left and picked later; instead the researchers guided the exercise of filling out the questionnaires and collected them the same day to avoid misunderstanding of questions by the respondents and misplacements of the questionnaires.

The study areas were chosen because of two major reasons: one, they constitute a fair zonal representation of the country. Arusha, for example, represents the Northern Zone; Dar es Salaam represents the eastern and coastal zone; Mwanza represents the lake zone; and Mbeya represents the southern highland zone. Second, the selected regions are business centres of the country as many businesses are located in these regions. The key informant in firms visited was the principal owner. These were asked to complete the research questionnaire under the guidance of the researcher. In addition, they were also interviewed.

Variables used in the Study

This study is generally concerned with the way gender relates to the gender-based credit availability for small firms. Therefore, the critical variables of interest were gender and credit availability. Gender is captured by biological difference. It looks at whether the principal is male or female, hence a dichotomous variable. The other critical variable, credit availability, is presented by indicators such as *credit need*, *credit applied* and *credit approved*. These

indicators are similar to those used in other studies (see, for example, Robb & Wolken, 2002; Cole & Mehran, 2009).

Since gender is not the only variable that might influence credit availability (Brindley, 2005), other commonly studied factors were also incorporated in the analysis. These are treated in this study as control variables, as used in the econometric sense of the word. These control variables include owner characteristics as indicated by *education level* and *work experience* as adapted from Cole and Mehran (2009). According to Cole and Mehran, *education* level is the hiatus of education of the entrepreneur such as primary school, secondary school, high school and college/university level whereas *work experience* is the time the entrepreneur has been involved in the business. Another variable is a firm's characteristics indicated by *size, age* and *organisational form*. Size is broadly defined as the number of employees in a given firm whereas age is defined as the number of years in operation since the firm's establishment. Organisational form looks at the legal structure of the business. These variables are also representative of variables used in previous related works such as Bush (1992); Cole and Mehran (2009) and Robb and Wolken (2002). Finally, in this study the market characteristic is represented by the *location of the firm*, that is, whether the firm is located in an urban or rural setting.

Indeed, given the difficulty of collecting data on small firms in the Tanzanian context, the variables that are easily identifiable and for which respondents were willing to share information were used in this research. These firms are privately owned; as such, they are under no obligation to provide data on their operations. The choice of variables selected for this study took this reality into consideration.

Analysis Technique(s)

The purpose of the study was to determine the gender-based differences in credit availability for small, locally-owned firms in Tanzania. Both univariate and multivariate statistical analysis were employed to determine whether there is such gender difference in credit availability.

Univariate Analysis

Univariate statistical analysis was employed to establish whether gender matters when it comes to financial characteristics of business owners when determining credit eligibility and creditworthiness. In this regard, the study employed a cross-tabulation technique to carry out this analysis. More specifically, the gender of the major business owner was cross-tabulated with a vector of variables measuring credit availability such as *credit need, credit applied* and *credit approved*; a vector of variables measuring characteristics of the firm i.e. size, age and organizational form and a vector of variables measuring characteristics of the firm's controlling owner i.e. age, education level and work experience. To establish the gender difference in credit availability, for comparison purposes, paired samples t-test for credit availability variables between male-owned and female-owned businesses was employed.

Multivariate Analysis

Multivariate Tests of Differences in Male- and Female-Controlled Firms

In this study, the multivariate regression model was also estimated to identify significant differences in male- and female-controlled firms. Multivariate logistic regression model was deemed suitable to perform our analysis because the dependent variable in this model is binary—i.e., it takes only two values, male or female .The analysis was made possible by the use of SPSS (Statistical Package for the Social Sciences). Our model takes the following form:

Gender= f (Market Characteristics, Firm Characteristics, and Owner Characteristics)

Where:

Gender is a binary variable equal to one if the firm is controlled by a female and zero when otherwise;

Firm Characteristics constitute a vector of variables measuring characteristics of the firm;

Market Characteristics constitute a vector of variables measuring characteristics of the banking market in which the firm is located;

Owner Characteristics constitute a vector of variables measuring characteristics of the firm's controlling owner.

Like in Cole and Mehran (2009), the results of this analysis were expected to be simple correlations and that they say little about causality. Clearly, the explanatory variables of this study do not determine the gender of the primary owner.

However, this multivariate analysis enabled us to disentangle and better understand the results from our univariate tests. According to Cole and Mehran (2009), because theory offers us little guidance in choosing a firm and owner characteristics that should vary by gender we relied upon policy-related considerations when choosing our set of explanatory variables. Similar to Cole and Mehran (2009), we specifically look at the literature on the availability of credit to small firms for variables that are important in determining the types of firms and owners more likely to receive credit.

EMPIRICAL RESULTS

Univariate Results

Firm Characteristics and Gender of Business Owners

Previous researches show that firms owned by women tend to be smaller, younger and more likely to provide retail sales or services than their counterpart male-owned firms (Robb, 2000, and Brush, 1990).

To test the difference in means of firm characteristics for male-owned and female-owned companies the mean differences were calculated along with t-statistics as presented in Table 1. The table shows that female-owned firms are smaller than male-owned firms as measured by the total number of employees.

It is also reported that female-owned firms are more likely to be organised as proprietorship or partnership than male-owned firms, which are more likely to be organised as corporations. Likewise, the table shows that female-owned firms are significantly younger than male-owned firms.

Table 1: Mean difference test of Owners' characteristics

Firm's Characteristics	***Mean difference*** **[$Mean_{male}$-$Mean_{female}$]**	***t-statistic and p-values***
Firm size	0.242	2.87***(0.004)
Firm age	0.232	1.887*(0.06)
Organizational form	0.179	2.383*** (0.018)

To assess the association between the gender of the firm's owner and firm characteristics, cross-tabulation was employed. This is the statistical process that summarises categorical data to create contingency tables.

When firm size was cross tabulated with the gender of the business owner; it was found in Table 2 that 86 percent of the firms surveyed were female-owned companies with employees between one and nine whereas 75 percent of the firms with this range of employees were male-owned.

On the other hand, 25 percent of the firms surveyed were male-owned firms with 10 – 249 employees whereby only 14 percent of the firms owned by women had this range of employees. This result preliminarily shows that female-owned firms are more likely to be small in size in terms of number of employees than men-owned firms.

Table 2: Cross tabulation of the association between firm size and the gender of owner

		What is the gender of the owner/director/CEO of your firm?		Total
		male	female	
How many people does your company employ either full or part time?	From 1 employee to 3	69	55	124
	From 4 employees to 9	108	56	164
	From 10 employees to 49	54	15	69
	From 50 employees to 249	5	3	8
Total		236	129	365

Cross tabulation of the firm's age and the business owner's gender presented in Table 3 below shows that about 81percent of companies owned by women surveyed were less than 10 years in establishment compared to 66 percent of those owned by men in existence for a similar period. On the other hand, 34 percent of older companies aged above 10 years in establishment in the sample were owned by men whereas only 19 percent of these companies were owned by women.

Table 3: Cross-tabulation of the association between firm age and the gender of owner

		For how long has your firm been operating?					Total
		2-3 years	4-5 years	6-9 years	10-19 years	20 years and over	
What is the gender of the firm's owner	Male	34	44	75	57	22	232
	female	16	33	55	21	4	129
Total		50	77	130	78	26	361

Furthermore, the organisational form was tabulated with the gender of the business owner to examine the association between the two variables. Table 5 shows that a firm owned by a man is more likely to be a registered or limited corporation than the one owned by a woman and the firm owned by a woman is more likely to be a proprietorship or a partnership than the male-owned firm. The table shows that about 66 percent of the corporations owned by women were organised as proprietorship or partnership whereas 55 percent of such corporations owned by men were organised as proprietorship or partnership.

Likewise, about 45 percent of corporations in the study sample owned by men were organised as registered or limited companies whereas 34 percent of the companies surveyed were owned by women.

To test for the statistical significance of the association between a firm's characteristics and the gender of the firm's owner a chi-square test was conducted. The resultant values are presented in Table 5. The table shows that the association between the gender of the business owner and the firm's size is statistically significant at five percent with p=0.018 and that of between the gender of business proprietor and firm's age is also statistically significant at five percent with p=0.019. Also the organisational form has a statistically significant association with the gender of the business owner but at a 10 percent significant level as shown in Table 6 whereby the p-value is 0.078.

		What is the legal status of your firm?				**Total**
		Publicly listed	Proprietorship /Partnership	Registered Corporation	Limited Liability	
What is the gender of the owner/director/CEO of your firm?	male	0	127	74	31	232
	female	0	85	36	8	129
Total		0	211	110	39	361

Table 4: Cross-tabulation of between organisational form and gender of owner

Table 5: Chi-square test for association between firm characteristics and gender of owner

Firm Characteristics	***Pearson Chi-Square Value***	***p-value***
Firm Size	10.11	0.018
Firm Age	11.78	0.019
Organizational form	6.83	0.078

Owner's Characteristics and Gender of Business Owners

Evidence from previous studies suggests that characteristics attributed to "successful" entrepreneurs are more commonly attributed to men than to women (Buttner & Rosen, 1988) and that human capital plays a crucial role in the growth and survival of a business (Lucas, 1978; Jovanovic, 1982; Robb, 2000). The success of a business tends to be dependent on the owner's ability to get business funding from banks and other sources (Adrich & Zimmer, 1985). This ability is often a function of the perceived human capital of the firm. Since human capital is not easy to quantify, the education level of business owners and experience often tend to be considered as proxies as applied in this study. Experience is taken as the total number of years the owner's business has been in operation. Male owners

had higher levels of both education and experience on average than women, and these differences were both statistically significant (see Table 6). Hence, there is some evidence that the levels of human capital of female-owned firms were lower than those of male-owned ones.

Table 6: Mean difference test of Owners' characteristics

Owner's Characteristics	***Mean difference* [Mean$_{male-owned}$- Mean $_{female-owned}$]**	***t-statistics and p-values***
Owner work experience	0.302	3.359***(p=0.001)
Owner Education	0.500	4.06***(p=0.000)

When the owner's education level was cross-tabulated with the gender of the business owner it was realised in Table 7 that 26 percent of the firms surveyed were female-owned companies with owners having a primary school education whereas only about 15 percent of male-owned firms surveyed had primary school education level. On the other hand, 46 percent of the firms surveyed were female-owned firms with owners having education level ranging from high school to college level whereby 54 percent of the firms whose owners had either high school or college education were male-owned. However, it was also found that 37 percent of the firms owned by men surveyed had owners with a university education whereas only 20 percent of their counterpart female-owned firms had attained such an education level. This cross-tabulation shows that, female-owned firms have owners with lower education level than male-owned firms. In other words, owners of female-owned firms have lower education level than their corresponding male-owned firms.

Table 7: Cross-tabulation of the association between business owner's education and the gender of the firm's owner

		What is the education level of the owner/director/CEO of your firm?				**Total**
		Primary	High School	College	University	
What is the gender of the owner/director/CEO of your firm?	male	36	70	36	85	227
	female	33	52	17	24	126
Total		69	122	53	109	353

Cross-tabulation between the owner's work experience and the business owner's gender presented in Table 8 below shows that about 80 percent of female-owned companies had proprietors with work experience of less than 10 years compared to the 65 percent of male-owned companies whose owners had work experience of 10 or fewer years. Nevertheless, 35 percent of the male-owned surveyed companies had work experience of more than ten years as opposed to only 20 percent of female-owned firms surveyed whose owners had work experience of more than 10 years. This preliminarily confirms that owners of many female-owned firms have lower work experience than those of male-owned firms.

Table 8: Cross-tabulation of the association between firm's owner work experience and the gender of the firm's owner

		What is the work experience of the owner/director/CEO of your firm?			**Total**
		1-5 Years	6-10 Years	More than 10 Years	
What is the gender of the owner/director/CEO of your firm?	male	82	70	82	234
	female	65	38	26	129
Total		147	108	108	363

The statistical significance of the owners' characteristics and gender of business owner is presented in Table 9. The table shows that p-values of the association between gender of the business owner and owner's education are statistically significant at 1% with p=0.001 and that of between the gender of business owner and owner's work experience to be also statistically significant at 1% with p-value =0.004.

Table 9: A Chi-square test for the association between business owners' characteristics and the gender of the business's owner

Business Owner's Characteristics	***Pearson Chi-Square Value***	***p-value***
Owner's Education Level	16.16	0.001
Owner's work experience	11.036	0.004

Market's Characteristics and Gender of Business Owners

Cross-tabulation between firm's location and the gender of the firm's owners shows that the gender of the business owner has no association with whether a firm is located in an urban or rural area. Table 10 shows that almost all the firms surveyed (about 99%) were located in urban areas whether male or female-owned.

Table 10: Cross-tabulation of the association between a firm's location and the gender of the firm's owner

		Where is your firm located?		Total
		Urban	Rural	
What is the gender of the owner/director/CEO of your firm?	Male	227	2	229
	female	125	1	126
Total		352	3	355

Credit Market Outcomes and Owner's Gender

Table 11 presents the frequency distribution for credit market outcomes: *Credit Need*, *Credit Applied* and *Credit Approved*. The table reports that female-owned firms were more likely to have a need for credit during the three years prior to the survey than male-owned ones. Table 11 shows that 85 percent of all female-owned firms surveyed had a need for credit whereas 78 percent of male-owned firms showed a need for credit.

However, male owners were more likely to apply for credit than their female counterparts. Indeed, as Table 11 demonstrates, 71 percent of male-owned firms, which had a need for credit, applied for loans whereas only 56 percent of female-owned firms in similar did not apply for credit due to fear of rejection, which appeared to discourage many a female owner. Further analysis shows that 40 percent of male-owned firms, which did not apply for credit, said they were discouraged whereas 54 percent of female-owned firms, which did not apply for credit, indicated that they had not done so because of discouragement. Surprisingly, the credit applications of women-owned firms were more likely to be approved than those of their male-owned firms. Table 11 shows that 82 percent of female-owned credit applications were approved, which is six points higher than the approval rates for male-owned firms:

Table 11: Credit Market Outcomes and Owner's Gender

	CREDIT MARKET OUTCOMES					
NATURE OF FIRMS	*Credit Need*	*No credit Need*	*Credit Applied*	*No credit Applied*	*Credit Approved*	*Credit Denied*
Male-Owned Firms	186	51	143	56	111	35
Female-Owned Firms	108	19	81	33	69	15
Total	294	70	224	89	180	50

Multivariate Results

Table 12 presents the estimates from a logistic regression model whereby the dependent variable equals 1 if the firm is female-owned and 0 if the firm is male-owned. The table indicates that the variables that showed significant

differences between male- and female-owned firms in previously discussed univariate results are also significant in explaining the gender of the firm's owner except the organisational form and firm's location.
Compared to female owners, male owners are significantly likely to be more experienced and educated. The multivariate results show that a firm's size (measured as the total number of employees in the firm) and a firm's age are also consistently significant in explaining the gender of the business owner. Contrary to the univariate results, Table 12 shows that an organisation's form and a firm's location do not explain the gender of the business owner.

Table 12: A Multinomial Logistic Regression

Variable	Coefficient (B)	*Std. Error*	*Exp(B)*
Owner's Education	**0.348***(0.002)**	**.110**	**.706**
Owner's work experience	**0.526**(0.014)**	**.174**	**1.109**
Firm's Size	**0.302*(0.092)**	**.169**	**.654**
Firm's Age	**0.103**(0.042)**	**.134**	**.752**
Organizational Form	**0.369(0.556)**	**.129**	**.854**
Firm's Location	**0.378(0.765)**	**.119**	**.625**

Note: In these regression results, the dependent variable is a gender of the business owner

CONCLUSION

The objective of this study was to examine whether a firm's and owners' characteristics are driven by gender and whether gender is attributable to credit accessibility in small and locally-owned firms in Tanzania. The analysis has revealed several significant differences in firm and owner characteristics of small businesses. Regarding the organisational structure of the businesses surveyed the analysis shows that female-owned firms are more likely to be organised as proprietorship or partnership than male-owned firms, which are more likely to be organised as corporations. When firms were compared based on their age and size, the results show that female-owned firms were significantly younger in establishment than male-owned firms whereas female-owned firms were more likely to be small in size in terms of number of employees than male-owned ones.

The results also show that female owners of firms had a lower education level than their male owning counterparts. Likewise, it was established that many female-owners of firms had less work experience than males owning firms. This is confirmed by both univariate and multivariate analyses. Concerning the credit status of business owners, it is found that female-owned firms are more likely to have need for credit during the three years prior to the survey. However, when it comes to applying for credit, male owners were more likely to apply for credit than their female counterparts. Surprisingly, the credit applications of women-owned firms were more likely to be approved than those of their male counterparts.
These results suggest that policy-makers and regulators should not use the "one-size-fits-all" approach to formulate policies for the growth and survival of small firms. The established facts for Tanzanian small businesses show that male-owned firms differ from female-owned ones in different aspects. Therefore, when policies are being formulated to deal with issues such as offering credit, variables such as the size of the firms should be taken into account.

Because female-owned firms are generally less likely to take up credit maybe due to their size, or fear of being turned down, a policy that offers credit to all firms without taking cognisant of these variables will not be attractive to female-owned firms, and as such they may not benefit from the capital needed for the growth and survival of their firms. Taking into consideration the basic facts that are presented in this study, policy-makers can design policies which fit the context of the firm to make the terms most beneficial to different types of firms. This study opens up more avenues for further studies particularly on extending the study to more regions and differentiating between rural-based and urban-based women-owned firms.

REFERENCES

Ahl, H. (2006). Why research on women entrepreneurship needs new directions. *Entrepreneurship Theory and Practice*, 595-621.

Asiedu, E., Freeman, J.A., & Akwasi Nti-Addae, A. (2012). "Access to Credit by Small Businesses: How Relevant Are Race, Ethnicity, and Gender?" *American Economic Review, 102, 532-37*

Autio, E. (2007). High growth entrepreneurship. *Babson College and London Business School: Global Entrepreneurship Monitor,* 1-48.

Barne, (2011). In Tanzania, Female Entrepreneurs Tap Financing. *The World Bank.*

Beck, T., A. Demirgue-Kunt &. Peria, M.S.M, (2008). Bank financing for SMEs around the world: Drivers obstacles, business models, and lending practices. *Policy Research Working Paper. World Bank: Development Research Group.*

Bellucci, A., Borisov, A., & Alberto Zazzaro. (2010). Does gender matter in bank–firm relationships? Evidence from small business lending. *Journal of Banking & Finance, 12,* 2968-2984.

Berger, A. N. &Udell, G. E. (1995). Relationship lending and lines of credit in small firm finance. *Journal of Business,* 351-381.

Binks, M. R. and C. T. Ennew (1996). Growing firm and credit constraint. *Journal of Small Business Economics, 8* (1), 17-25.

Brindley, C. (2005). Barriers to women achieving their entrepreneurial potential: Women and risk. *International Journal of Entrepreneurial Behaviour and Research,* 144-161.

Brush, C. (1990). Women and enterprise creation: Barriers and opportunities. In S. Gould & J. Parzen (Eds.), *Entrepreneuring women: Local initiatives for job creation* (pp. 37-58). Paris: OECD.

Brush, C. (1992). Research on women business owners: Past trends, a new perspective, and future directions. *Entrepreneurship Theory and Practice, 16*(4), 5-30.

Buttner, E.H. & B. Rosen (1988).Bank loan officers' perception of the characteristics of men, women, and successful entrepreneurs. *Journal of Business Venturing,* 249-258.

Carter, S. & P. Rosa (1998). The financing of male and female owned businesses. *Entrepreneurship and Regional Development, 10*(3), 225-241.

Carter, S., Anderson, S., Shaw, E. (2001). *Women's business ownership: A review of the academic, popular and internet literature.* Glasgow, UK: University of Strathclyde.

Carter, S. Shaw, E. Lam, W., Wilson, F. (2007). *Gender, entrepreneurship and bank lending: The criteria and processes used by bank loan officers in assessing applications. Entrepreneurship Theory and Practice* (forthcoming).

Carter, S., Rosa, P. (1998). The financing of male and female-owned businesses. *Entrepreneurship & Regional Development,* 225-241.

Carrington, C. (2006). Women entrepreneurs. *Journal of Small Business and Entrepreneurship,* 83-94.

Carpenter, R. E. and B. C. Petersen, (2002). Is the growth of small firms constrained by internal finance? *The Review of Economics and Statistics*, 298 - 309.

Chijoriga, M. & Cassimon, D. (1999). Micro enterprises financing: Is there a best model? In Rutashobya L.K. and Olomi, D.R. (Eds), *African Entrepreneurship and Small Business Development,* Dar es Salaam: DUP (1996) Ltd.

Cohen J. (1988). Statistical power analysis. *Hillsdale, Lawrence Erlbaum.*

Cole, R. & H. Mehran (2009). Gender and the availability of credit to privately held firms: Evidence from the survey of small business finance. *Staff Reports No. 383, Federal Reserve Bank of New York.*

Coleman, S. (2002). Constraints faced by women small business owners: Evidence from the data. *Journal of Development Entrepreneurship,* 151-174.

De La Torres, Augusto, Carlos Gozzi and Sergio Schumukler (2007). Innovative experiences in access to finance: Market friendly roles for the visible hands? *Policy Research Working Paper. Washington DC: World Bank.*

GEM (2007). Global entrepreneurship monitor. *Report on Women and Entrepreneurship.* Babson College; USA.

Green, P.G. Brush, C.G. Hart, M.M., Saparito, P. (2001). Patterns of venture capital funding: is gender a factor? *Venture Capital,* 63-83.

Haynes, G.W. (1999). Executive summary on financial structure of female-owned businesses (mimeo). *Small Business Administration, Office of Advocacy*.

Hisrich, R.D., Brush, C. (1986). *The woman entrepreneur: Starting, financing, and managing a successful new business.* Lexington, MA: Lexington Books, Inc.

Jianakoplos, N. & Bernasek, A. (1998). Are women more risk averse? *Economic Inquiry,* 620-631.

Jovanovic, B. (1982). Selection and evolution of industry. *Econometrica*, 649-670.

Katwalo A. M. (2007). Differences between men and women entrepreneurs in the informal business sector of Uganda: A cultural perspective. *IAABD Proceedings,* 54 - 59.

Koda, B. & Omari, C. K. (1991). Crisis in household economy: Women's strategies in Dar es Salaam. In Mohamed Suliman (Ed.) *Alternatives strategies for Africa*: Volume 11:10. London: IFAA.

Marlow, S. & Patton, D. (2005). All credit to men? Entrepreneurship, finance and gender. *Entrepreneurship Theory and Practice,* Baylor University, 1042 - 2587.

Marlow, S., Watson, E. (2006). A safety net or ties that bind? Women, welfare and self-employment. *International Journal of Sociology and Social Policy,* 397 410.

Nchimbi, M.I. (2002). *Gender and entrepreneurship in Tanzania*: A comparative analysis of male-female's start-up motivation, individual characteristics and perceptions of business success. Unpublished PhD Thesis, Dar es Salaam: University of Dar es Salaam.

Olomi, R.D & Sinyamule, S.R. (2007). Entrepreneurial inclinations of vocational education students: A comparative study of male and female trainees in Iringa region. *Tanzania Uongozi Journal of Management Tanzania.*

Olomi, D. R. (2001). *Entrepreneurial motivation in a developing country context-incidence-antecedents, and consequences of growth-seeking behaviour among Tanzanian owner-manager.* Unpublished PhD. Thesis, Dar es Salaam: University of Dar es Salaam.

Robb, A. (2000). *The role of race, gender, and discrimination in business survival*. *Doctoral Dissertation, University of North Carolina at Chapel Hill. Chapel Hill, NC.*

Robb, Alicia and Wolken, John D. (2002). Firm, owner, and financing characteristics: differences between female- and male-owned small businesses. *FEDS Working Paper. Available at SSRN: http://ssrn.com*

Shane, S., E. A. Locke and C. J. Collins (2003). Entrepreneurial motivation. *Human Resource Management Review,* 257-279.

Smith W, I., Jackson, C. (2004). Women creating wealth through rural enterprise. *International Journal of Entrepreneurial Behaviour & Research*, 369-383.

Sunden, A. & B. Surette (1998). Gender differences and the allocation of assets in Retirement Savings Plans. *American Economic Review*, 207-211.

Stiglitz, J.E & Weiss, A.(1981). Credit rationing in markets with imperfect information. *American Economic Review*, 21- 41.

Verheul I. & R. Thurik (2001). Start-up capital: Does gender matter? *Small Business e-Economics*, 329-346.