Gender differences in non-farm micro and small enterprise financial performance in Ghana

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Key Words
Enterprise, financial, Gender, Ghana, performance, risk, Sharpe ratio.

Abstract

The study compared the financial performance of male-owned and female-owned micro and small enterprises in Ghana and tested the female-underperformance hypothesis. The results are drawn from a comprehensive survey data obtained from the Economic Growth Centre (EGC) and the Institute for Statistical, Social and Economic Research (ISSER) Socio-Economic Panel Survey in Ghana. The data covered 5009 households with a total of 18,889 individuals. Most literature generally agree that female-owned enterprises underperformed male ones but most often than not, no appropriate methods have been employed to empirically test these assertions. Literature suggests that the stereotype of underperformance attributed to female management may not be the result so much of poorer management skills as to using unsuitable comparative performance measures. Most studies did not consider risk in comparing performance across gender.

This study adjusted for risks in analyzing enterprise performance using the reward-to-variability ratio. The study found that when risks are not adjusted for, female-owned enterprises underperformed male-owned ones but when risks were adjusted for, female-owned enterprises performed no differently from male-owned ones. This is consistent with social feminism theory, which argues that men and women are inherently different by nature and these differences will cause them to operate their ventures differently. The results from the Sharpe Ratio indicate that male-owned enterprises had a higher Sharpe ratio (0.473) as compared to female-owned (0.399). The lower Sharpe Ratio for female-owned enterprises suggests that females are more risk averse as compared to males. The findings indicate that females are not necessarily discriminated against, but that females prefer to take fewer risks as compared to males.

The recommendation is for a rethinking and reconstruction of the mindset regarding female-underperformance hypothesis. What is required is dispelling risk perception among female-owned entrepreneurs and encouraging capacity building for female-owned entrepreneurs in risks management.

1. Introduction

1.1 Micro and Small Enterprise and Socio-economic Development

Micro and Small Enterprises (MSEs) play a crucial role in the socio-economic development of many countries over the world especially in developing countries. MSEs have contributed to the socio-economic development in both industrialised and developing countries (Carree & Thurik, 2008; Nichter & Goldmark, 2009). In developing countries, the bulk of micro and small enterprises are in the informal sector (Maloney, 2003; Nichter & Goldmark, 2009; Roy & Wheeler, 2006), and are the major sources of employment and income, especially for the poorest members of society (Mead & Liedholm, 1998).

Agriculture and the non-farm are linked and supporting each other to grow. The extra income from agricultural growth can create demand for goods and services from non-farm sector, thus starting

a virtuous cycle in which agricultural and rural off-farm income grow and sustain each other's growth (Stamoulis & Zezza, 2003). Diversification beyond agriculture is often considered a promising pathway out of poverty for impoverished rural economies, and there is a widespread belief that small enterprises may play an important role especially in the early stages of diversifying beyond agriculture (Lanjouw & Lanjouw, 2001; Reardon et al., 2000).

1.2 Characteristics of the Non-farm Sector in Ghana

According to the GLSS 5 report of 2008, majority of household enterprises are operated by a single individual without the assistance of family members. Household enterprises are defined to mean non-farm business enterprises operated by the household (Vijverberg & Mead, 2000). Household enterprises which can be described as MSEs have employed a great majority of Ghanaians. Across the manufacturing, distribution and service sectors in Ghana, MSEs account for a large proportion of business establishments and employment (ILO, 2000). According to the GLSS 6 report of 2014, about 3.7 million households, representing 44.3 percent of households in Ghana operate non-farm enterprises and about 70.6 percent of non-farm business enterprises are operated by females. The proportion of females operating non-farm enterprises is much higher in urban areas (71.4%) as compared to the rural areas (69.1%).

Despite the critical role of MSEs in the processes of socio-economic development in developing countries, they face problems of low growth rates and high failure rates (ILO, 2002). The sector is typified by stagnation and high rates of enterprise failure (Daniels & Mead, 1998; Hung Manh, Benzing & McGee, 2007; McPherson, 1996) suggesting the need to transform the sector in order to free micro-entrepreneurs from capture by a 'low level poverty trap' (McKenzie & Woodruff, 2006). The MSEs sector is also associated with poor and/or costly access to credit, problems acquiring new and more productive technologies, low levels of technical and/or managerial skills, high levels of competition among enterprises (Livingstone, 1991, Daniels & Mead, 1998, Mead & Liedholm, 1998). Studies have shown that in many countries, macroeconomic policies have also not favoured a vibrant MSEs sector (Atieno, 2001; Fisman & Raturi, 2003; Steel & Andah, 2004). Access to credit is often at the 'top of the list' of problems faced by MSEs especially among proponents of microcredit (Aryeetey et al., 1997).

Past research into small and medium scale enterprise performance has generally focused on sales and/or profit without any explicit control for risk, even though we know from finance theory that expected returns and risks are positively related. Robb and Watson (2012) similarly found that risk is typically not considered even though evidence suggests that women tend to be more risk averse than men. A study by Marco (2012) suggests that the stereotype of underperformance attributed to female management may not be the result so much of poorer management skills as to using unsuitable comparative performance measures, as well as not taking into account structural characteristics that may be detrimental to the financial performance of companies managed by women. It remains unclear as to whether females in non-farm MSEs in Ghana are under-performing or equally productive in that sector as compared to males even if adjustment is made for risks. This study will particularly test the female-owned firms' under-performance hypothesis taking risks into account

2. Literature Review
2.1 Defining Micro and Small Enterprises in Ghana

In Ghana, there are several definitions of micro, small and medium size enterprises. Some definitions are based on the number of people employed whiles others consider the turnover and value of fixed assets. There have been various definitions given for small-scale enterprises in Ghana, but the most commonly used criterion is the number of employees of the enterprise (Kayanula & Quartey, 2000). However, the National Board for Small Scale Industries (NBSSI) considers both fixed assets and number of employees. It defines a small-scale enterprise as one with not more than 9 workers, has plant and machinery (excluding land, buildings and vehicles) not exceeding 10 million Cedis (US$ 9506, using 1994 exchange rate). This study adopts this definition of MSEs. Based on the number of people employed, NBSSI has categorized enterprises into micro, small, medium and large as

follows; micro enterprises employing 1-5 people; small enterprises employing 6-29 people; medium enterprise employing 30-99 people and large enterprises employing 100 or more people.

2.2 Gender and Attitudes towards Risks

There have been several discussions about gender differences and risk perception, but it appears that there is considerable evidence to suggest that females may be more risk-averse than their male counterparts. It has been noted in general and business-specific literature that females exhibit a lower preference for risk (Powell & Ansic (1997). A study by Jianakoplos and Bernasek (1998) examining household holdings of risky assets in the United States found that single women exhibited relatively more risk aversion in financial decision-making than single men. Sexton and Bowman-Upton (1990) found that female entrepreneurs were ''less willing than their male counterparts to become involved in situations with uncertain outcomes (risk taking)''.

As noted by Powell and Ansic (1997), females tended to focus on strategies that would avoid the worst situation in order to gain security. In a similar study Cliff (1998), found that female entrepreneurs are more likely to establish maximum business size thresholds beyond which they would prefer not to expand, and that these thresholds are smaller than those set by their male counterparts. Female entrepreneurs seem to be more concerned than male entrepreneurs about the risks of fast-paced growth and tend to deliberately adopt a slow and steady rate of expansion. This attitude of risk aversion may translate into the type of businesses that females are likely to engaged in, and this might explain the reasons why female businesses have lower profits. It has been well established in finance theory that riskier assets must compensate risk averse investors with higher expected returns'' (Jianakoplos & Bernasek, 1998).

2.3 Gender Difference in Firm Enterprise Performance

Gender differences in firm performance have been long recognized in literature. There are two major schools of thought that appear to prevail in the literature that compares the performances of female- and male-owned firms, namely: liberal feminism and social feminism (Black, 1989). Liberal feminism is 'rooted in liberal political philosophy', while the roots of social feminism are more diverse 'ranging from social learning theory to psychoanalysis' (Fischer et al., 1993). Literature has recognized several factors which may be responsible for the relatively poor performance of women operated enterprises (Daniels & Ngwira, 1993).

A commonly held view is that female-owned businesses suffer from many disadvantages compared to male-owned businesses, and that these disadvantages lead, in turn, to relatively lower levels of efficiency and smaller firm-size among female-owned businesses (Amin, 2011) hence female-owned firms are hypothesized to under-perform. For example, Sabarwal and Terrell (2008) found that female-owned businesses in the formal sector in 26 transition countries are significantly less profitable than male-owned businesses. Female-owned businesses generally underperform those headed by males using financial performance measures such as earnings, survival or growth (Bird et al., 2001; Du Rietz & Henrekson, 2000). Rijkers and Söderbom (2013) in studying the effects of risk and shocks on non-farm enterprise development in rural Ethiopia found that male-operated enterprises are more productive than enterprises managed by women.

2.3.1 Liberal Feminism

Liberal feminism followers believe in equal rights and opportunities for all. They believe that not everybody is born with access to the same level of rights and opportunities in the world, and that some political or market intervention is required to rectify this. Fischer et al. (1993) note that liberal feminist theory is predicated on a belief that women and men are equally capable and, therefore, any observed female under-performance must be because women are overtly discriminated against (for example, by lenders) and/or because of other systematic factors that deprive women of important resources (for example, lack of an appropriate education). Ahl (2006) indicates that studies that adopt a liberal feminist perspective appear to assume (either implicitly or explicitly) that female-owned firms

underperform male-owned firms and then set out to explain this under-performance on the basis of potential discrimination.

2.3.2 Social Feminism

Social feminism holds the belief that women's liberation must be sought in conjunction with the social and economic justice of all people. Socialist feminists see the fight to end male supremacy as key to social justice, but not the only issue, but rather one of many forms of oppression that are mutually reinforcing (Lapovsky, 2008). In contrast to liberal feminist theory, social feminist theory suggests that men and women are inherently different by nature and these differences (rather than discrimination) will cause them to operate their ventures differently; for example women might seek to take fewer risks (Kepler & Shane, 2007; Watson & Robinson, 2003); grow their businesses more slowly (Morris et al., 2006) and/or attain a better balance between their work and family life (Jennings & McDougald, 2007; Kepler & Shane, 2007). They could also be less inclined to seek funds from a financial institution (Watson, Newby & Mahuka, 2009). Social feminist theory recognizes that men and female by nature are different, but it does not predict that difference should result in females underperforming as compared to men. This proposition, however, is contrary to much of the established literature, which typically concludes that female-owned businesses underperform relative to male-owned businesses (Klapper & Parker, 2011). Both liberal and social feminist theories believe that female-owned businesses should perform equally well as compared to male-owned ones.

3. Research Methodology
3.1 Survey Design, Sampling and Data

Data for this study was obtained from the EGC/ISSER Socio-Economic Panel Survey. The survey provides a regionally representative data for all the 10 regions of Ghana. It covered 5009 households with a total of 18,889 individuals. It was a nationally representative survey from 334 Enumeration Areas (EAs) across the country. A two-stage stratified clustered sample design was used for the survey. Stratification was based on the regions of Ghana. The first stage involved selecting geographical precincts or clusters from an updated master sampling frame constructed from the 2000 Ghana Population and Housing Census (EGC/ISSER, 2011). A total of 334 clusters (census enumeration areas) were selected from the master sampling frame. The clusters were randomly selected from the list of EAs in each region. A complete household listing was conducted in 2009 in all the selected clusters to provide a sampling frame for the second stage selection of households. The second stage of selection involved a simple random sampling of 15 of the listed households from each selected cluster. The main field work for the survey covered a 6-month period (November 2009 to April 2010).

3.2 Methods of Data Analysis

To compare the performance of female-owned micro and small enterprises relative to male-owned enterprises with and without adjusting for risks, the study first considered the traditional variables used in the literature to compare the performance of male and female firm owners/operators (such as profits, sales, number of employees) and then adjusted for risks using the reward-to-variability ratio proposed by Sharpe (1975). The study compared the profits across gender first without adjusting for risks and then compared again after adjusting for risks using a t-test. The Sharpe ratio has often been applied to stock exchange prices, however, because many small and medium scale enterprises are not listed and, therefore, stock price information is not available, profit is used as the reward measure and standard deviation in profit as the variability (risk) measure (Watson & Robinson, 2003). Watson and Robinson indicated that using profit rather than stock market returns as a reward measure is not out of place because: (i) for small and medium enterprise owners, the profit earned by their ventures is clearly a significant reward; and (ii) stock prices are largely driven by profits (particularly future expected profits). One main advantage of the Sharpe ratio is that it is directly computable from any observed series of returns without need for additional information surrounding

the source of profitability. One challenge with the use of Sharpe ratio is that lay people find it difficult to interpret Sharpe ratios of different investments. The revised ex-ante Sharpe ratio is given as;

$$S = \frac{E[R_a - R_b]}{\sigma} = \frac{E[R_a - R_b]}{\sqrt{\text{var}[R_a - R_b]}}$$

Where, R_a is the asset return, R_b is the return on a benchmark asset. $E[R_a - R_b]$ is the expected value of the excess of the asset return over the benchmark return, and σ is the standard deviation of this excess return. In this study, there is no attempt to compare different investments. The Sharpe ratio is only used here as a risk adjustment measure. In this case, the top part of the formula $E[R_a - R_b]$ thus becomes $E[R_a]$, which is the returns of the asset (profits), and the lower part ($\sqrt{var}[R_a - R_b$ thus becomes ($\sqrt{var}[R_a]$ which is the standard deviation of the profits). The derived formula can be written as;

$$S = \frac{E[R_a]}{\sqrt{\text{var}[R_a]}}$$

This study following Sharpe (1975) and Watson and Robinson (2003), considered profit as reward and the standard deviation of the profit as variability (risk). The formula for the *ex-post* Sharpe ratio is the same as given above in equation 3.6 except, that the ex post use realized returns of the asset and benchmark rather than expected.

4. Results and Discussions
4.1 Profitability and Socio-Demographic Characteristics
Comparing the performance of male and female-owned is important considering the fact that about 70% of those engaged in micro and small enterprises in this study are females. This figure (70%) is close to 70.6% as reported by the GLSS 6 report of 2014. Understanding the source of the difference in terms of enterprise performance is important from a policy perspective since majority of women are into enterprises and therefore increasing the performance of women will result in an aggregate increase in economic welfare.

Some socio-demographic characteristics were analysed and compared across gender. The analyses showed that being married improves enterprise profitability. From the results, both married men and women had higher profits than single men and women. But within the married category, married men had higher profits as compared to married women. Married couples may be able to combine resources together better than single persons. The results for education were mixed. Men who had no formal education had more profits as compared to men that had formal education. But women who had formal education had higher profits as compared to those who do not. It is possible that education is not crucial for enterprise performance, especially at the micro level where majority may not be keeping business records. Enterprises that formally registered their businesses had higher profits than those who did not. Details are presented in Figure 4.1. Enterprises located in urban areas are more profitable as compared to those in the rural areas. MSEs in urban areas tend also to have better and less costly access to inputs, larger and more dynamic markets, opportunities for networking with larger firms and within themselves offering a greater pool of information (Fafchamps & Minten, 2002).
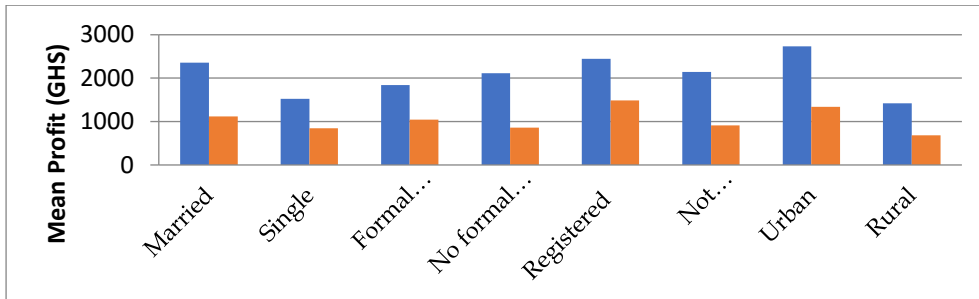
Figure 4.1: Mean Profit and Socio-demographic Characteristics

4.2 Individual and Enterprise Characteristics by Gender

In order to compare some of the relevant parameters, it is important to analyse and subject the results of the analysis to statistical tests. The results from Table 4.1 showed that in terms of educational background, there is no statistical difference between genders in terms of formal education. Hence any difference in enterprise performance in this sample cannot be attributed to differences in education. In terms of firm registration, male-owned enterprises were more likely to be formally registered as compared to female-owned ones. The difference was statistically significant. This is not surprising given the fact that female-owned enterprises were smaller in terms of the number of people employed as compared to male-owned enterprises. This finding is consistent with that of Cliff (1998) and Sabarwal and Terrell (2008). It is expected that as enterprises grow in terms of size, they are more likely to become formal as compared to the smaller ones. Comparatively, male-owned enterprises had on the average operated more years as compared to the female-owned ones.

Variable	Male	Female	t-values
Formal education (%)	82.2	80.6	-0.77
Technical education (%)	6.14	4.88	-0.83
Tertiary education (%)	4.09	3.10	-0.84
Formal registration (%)	24.0	9.4	-6.99***
Age of the enterprise owner (years)	42.4	42.4	0.03
Size of enterprise (number of employees)	1.7	1.4	-4.25***
Age of business (years)	10.8	8.5	-4.59***
Value of assets (GHS)	986.2	284.2	7.63**8

Table 4.1: Individual and Enterprise Characteristics by Gender

4.3 Hours and days worked by Sector and Gender

Male enterprise owners on the average spent 8.9 hours a day on their enterprises as compared to 8.5 days worked by female enterprise owners. There was no significant difference between the number of hours worked by male and female enterprise owners. The manufacturing sector recorded the least number of days worked in a year in both male and female-owned enterprises. There is marked difference in the number of days spent by female in the manufacturing sector and that of the other sectors. It is interesting to note that female enterprise operators worked more days per year in the trade, restaurant and services sectors as compared to male-owned ones, and yet it does not reflect in terms of profits. Details of the hours and days worked by female and male enterprise owners in the various sectors are presented in Table 4.2.

Sector	Male		Female	
	Hours/day	Days/year	Hours/day	Days/year
Manufacturing	8.8	232.3	8.2	201.8
Trade	8.1	247.0	8.8	255.3
Restaurants	8.9	241.8	7.3	254.6
Services	8.7	237.9	7.6	252.5

Table 4.2: Hours and Days Worked by Sector and Gender

4.4 Ecological Zones and Enterprise Performance

Generally, enterprises in the Coastal zone are more profitable as compared to those in the Savannah and Forest zones. The Savannah zone however, performed better than the Forest zone. The mean profit for enterprises in the Coastal zone was about GHS1,458. Savannah zone was GHS1,291, and Forest zone mean profit were GHS 1,217. Disaggregating the data by gender showed a completely different picture (see figure 4.2). Although in all the three zones male-owned enterprises were more profitable as compared to female-owned enterprise, the difference was more evident in the Savannah zone. Male-owned enterprises in the Savannah zone are more profitable as compared to those in the Coastal and Forest zones. Male-owned enterprises in the Savannah zone made almost three times the profits made by female-owned enterprises.
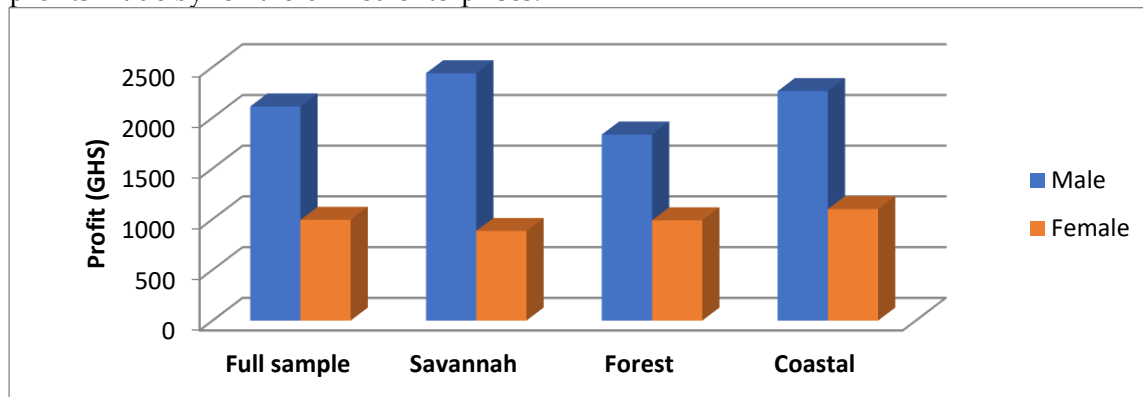

Figure 4.2: Mean Profit, Gender and Ecological Zones

4.5 Assets and Gender

Male-owned enterprises had more assets as compared to female-owned enterprises across the ecological zones. Enterprise assets were categorized into three: land and building, transport equipment and machinery. In all these categories, male-owned enterprises had more assets compared to their female counterparts. Male-owned enterprises had almost three times the value of land and buildings as compared to female-owned ones and more than five times the value of transport equipment and machinery. This again emphasizes the disparities with respect to ownership of assets. Women enterprises seemed less capital intensive as compared to men. Most of the women engaged in enterprises which returns were very low. For instance, while men traded in electronics such as mobile phones, auto parts, selling cement, the women traded in food stuffs, pure water and table provisions, which are less capital intensive and hence low returns to capital invested. Figure 4.3 shows the comparison of assets by gender.
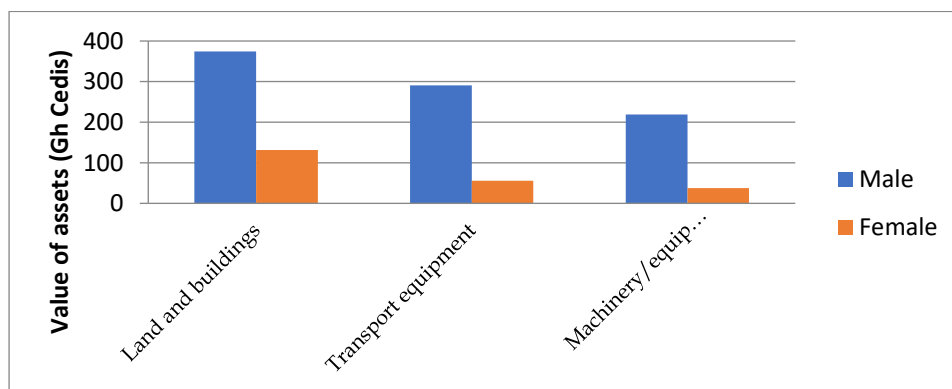

Figure 4.3: Men Own more Assets as Compared to Women

4.6 Gender and Industry

Following the International Standards Industrial Classification (ISIC), Rev. 3.1, MSEs were classified into four distinct industries namely: manufacturing, trading, restaurants and services. About 55 percent of all enterprises operated by both males and females were in the trade industry, while about 25 percent were in the manufacturing. Disaggregating the data based on gender indicates that the majority of the women (about 60%) were in trade and almost 40% of the men were also in trade. About 22 percent of the women were into manufacturing as compared to 33 percent of men. On profitability, the trade industry was the most profitable followed by the services industry. Males had higher profits as compared to females in all the four industries (see figure 4.4). The difference in profitability was more pronounced in the trade industry. The males in the trade industry made almost three times the profits that the females made. Further analysis revealed that most of the women were in enterprises with the lowest returns. As indicated by von Masson (1999), gender division of labour and the gender stereotypes tend to push women into low status and low-income business activities. The value of assets owned by males was more than three times that of females, and if assets play a role in enterprise performance then one is not surprised that profit levels of females are lower than that of males.
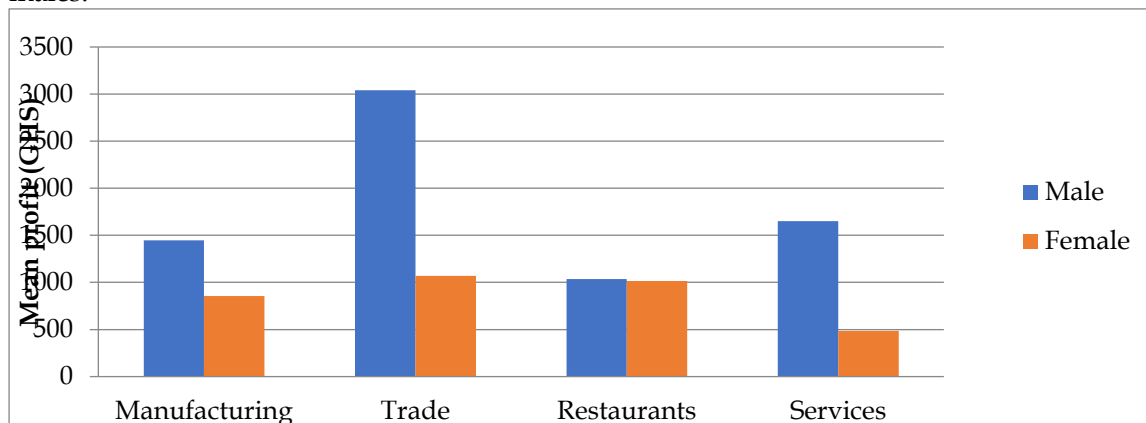

Figure 4.4: Mean Profit by Industry

4.7 Sources of Capital for Enterprise Start up

About 60 percent of the enterprise owners had relied on household savings as a means to finance their non-farm enterprises. Both male-owned and female-owned enterprises used household savings to set up their businesses. This finding is similar to that of the GLSS 5 report of 2008, which indicated that 60 percent of non-farm enterprise operators relied on household savings to set up their enterprises. About 17 percent of enterprise operators had capital from relatives and friends to start their non-farm enterprises, which is close to the 20 percent as reported in the Ghana GLSS report of 2008. About 2 percent of enterprise operators had credit from banks to set up their non-farm enterprises, which is close to 2.4 percent as reported in the GLSS 5 report. Although proceeds from farms is an important source of capital for setting up businesses as compared to household savings and capital from relatives and friends (see Figure 4.5). The study revealed that the percentage of male-owned enterprises relying on proceeds from farms was higher as compared to female-owned enterprises. This is not surprising considering the fact that household resources are mostly controlled by men. However, the percentage of female-owned enterprises who had capital from friends and relatives was higher as compared to male-owned enterprises. This could be the case because females seem to have more social relations as compared to males.
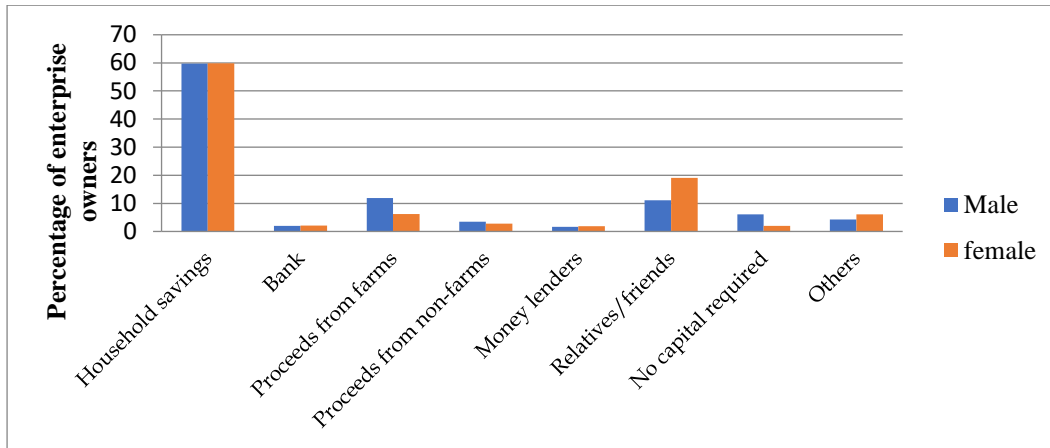
Figure 4.5: Sources of Capital for Setting up Enterprises

4.8 Constraints to Setting up Non-farm Enterprises

Several factors affect enterprise operators including poor and/or costly access to credit, problems acquiring new and more productive technologies, low levels of technical and/or managerial skills, lack of basic knowledge in record keeping, high levels of competition among enterprises and unfavourable macroeconomic conditions. This study identified inadequate or lack of capital or credit as the major obstacle to establishing non-farm enterprises in Ghana (see Figure 4.6). Lack of capital was a major constraint across all the three main ecological zones in Ghana. About 68 percent of non-farm enterprises in the Savannah zone indicated that capital was the main constraint. In the Forest zone, about 70 percent of enterprises indicated that capital was the main constraint and about 64 percent in the Coastal zone. Technical knowhow was the second major constraint confronting enterprise operators in establishing non-farm enterprises. However, more females faced capital as a constraint as compared to males. About 70 percent of the females had identified capital as the main constraint as compared to 65 percent males.
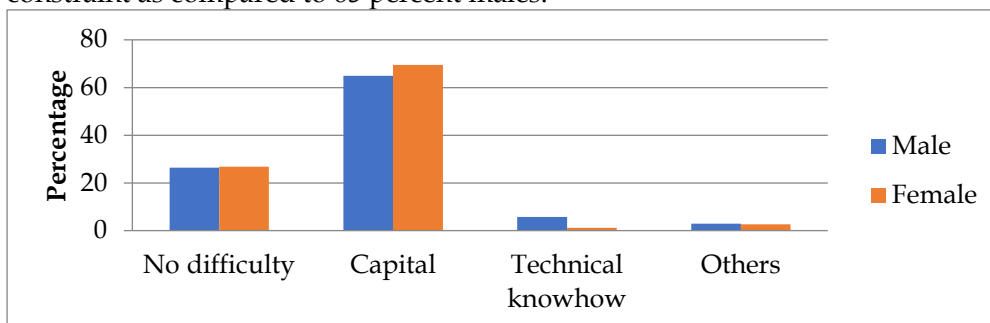

Figure 4.7: Constraints to Setting up Non-farm Enterprises

4.9 Comparing Male and Female Enterprises with and Without Adjusting for Risks

Most literature conclude that female-owned enterprises tend to underperform male-owned ones. Profitability was the main measure here and so mean profits from male-owned enterprises were compared to mean profits from female-owned enterprise, first without adjusting for risks and secondly, with adjustment for risks. When risks are not adjusted for, the results indicate that female-owned enterprises underperform male-owned ones. The mean profit for male-owned enterprise was GHS2111.25 while that for female-owned was GHS993.73 (see Table 4.3). The t-value was 5.4388 indicating that there is significant difference between the two. Clearly, male enterprise owners made twice the profits obtained by females. The study found that on average, female-owned firms were about 25 percent less productive than male-owned firms, controlling for time-invariant characteristics

like sector, location, and union status. In a related study, Amin (2011) found that a typical worker in a female-owned business produces only 76 percent of the output of a worker in a male-owned business.

Industry	Male		Female		t-test of difference between means
	% of Male involved	Mean profit (GHS)	% of female involved	Mean profit (GHS)	
Manufacturing	26.01	567.24	38.80	963.27	-2.78**
Trade	57.06	713.02	36.40	2058.01	-3.24***
Restaurants	14.55	763.36	4.00	699.00	0.29
Services	2.38	663.12	20.80	1286.30	-1.65
Total	100	993.73	100	2111.25	5.44***

Table 4.3: Profits by Gender and Industry

In the case of adjusting for risks, the results from the Sharpe Ratio indicate that male-owned enterprises had a higher Sharpe ratio (0.473) as compared to female-owned (0.399). The t-value was -1.4489 thus indicating that there is no statistically significant difference between male-owned and female-owned enterprises after adjusting for risks. Females tended to be more risk averse as compared to males from the Sharpe ratio. It is possible that females are avoiding riskier activities which are more rewarding. This finding is similar to that of Robb and Watson (2012), who found no statistically significant difference between male-owned and female-owned in the performances of male and female-owned new ventures in the United States of America. The results are also consistent with the findings of Kepler and Shane (2007) and Watson and Robinson (2003). Kepler and Shane (2007) found that women prefer to start less risky new ventures than men. Watson and Robinson (2003) found no statistical significance difference in the performance of male-owned and female-owned businesses in Australian firms after adjusting for risks.

5. Conclusion

The study compared the financial performance of male-owned and female-owned enterprises and tested the female-underperformance hypothesis. This study has broadened the scope in knowledge by including risks in the analysis which adds fresh impetus to the understanding of risks, gender and enterprise performance in Ghana. The study concluded that when risks are adjusted for, women performed no differently from men. This is consistent with social feminism theory, which argues that men and women are inherently different by nature and these differences (rather than discrimination) will cause them to operate their ventures differently. The results also showed that when risks are not adjusted for, female-owned enterprises underperform male-owned ones. This implies that females are more risk averse as compared to males, and that the way and manner in which females operate their enterprises differ from males. The results from the Sharpe Ratio indicate that male-owned enterprises had a higher Sharpe ratio (0.473) as compared to female-owned (0.399). The lower Sharpe Ratio for female-owned enterprise suggests that females are more risk averse and perhaps may decide to grow their businesses more slowly as compared males.

Generally, male-owned enterprises were more profitable as compared to female-owned ones. Promoting education among women and access to productive resources such as credit, land is vital. This study was not able to include all the variables that could possibly cause female-owned enterprises to underperform male-owned ones. It was possible to capture risks and some socio-demographic factors, but there could be other factors that have not been investigated here. For example, prior research suggests that there are gender differences in the motivation for entering self-employment (Kepler & Shane, 2007). This study suggests that further research should be conducted taking some of these variables into consideration.

The recommendation is for a rethinking and reconstruction of the mindset regarding female-underperformance hypothesis. Women should be given equal chances as men because they are equally

capable. The study strongly recommends that there should be deliberate policies to enhance the access of women to productive resources for enterprise development, because women owned fewer assets as compared to men.

References

Ahl, H. (2006). Why Research on Women Entrepreneurs Needs New Directions. *Entrepreneurship Theory and Practice*, 30(5), pp.595-621.

Amin, M. (2011). *Labour productivity, firm-size and gender: The case of informal firms in Argentina and Peru* (Enterprise Surveys, Enterprise Note Series No.22). The World Bank.

Aryeetey, E., Hettige, H., Nissanke, M. and Steel, W. (1997). Financial Market Fragmentation and Reforms in Ghana, Malawi, Nigeria, and Tanzania. *The World Bank Economic Review*, 11(2), pp.195-218.

Atieno, R. (2006). *Female participation in the labor market: The case of the informal sector in Kenya* (AERC research paper 157). Nairobi: African Economic Research Consortium.

Bird, S., Sapp, S. and Lee, M. (2009). Small Business Success in Rural Communities: Explaining the Sex Gap. *Rural Sociology*, 66(4), pp.507-531.

Black, N. (1989). *Social feminism*. New York, NY: Cornell University Press.

Carree, M. and Thurik, A. (2007). The Lag Structure of the Impact of Business Ownership on Economic Performance in OECD Countries. *Small Business Economics*, 30(1), pp.101-110.

Cliff, J. (1998). Does one size fit all? exploring the relationship between attitudes towards growth, gender, and business size. *Journal of Business Venturing*, 13(6), pp.523-542.

Daniels, L. and Mead, D. (1998). The Contribution of Small Enterprises to Household and National Income in Kenya. *Economic Development and Cultural Change*, 47(1), pp.45-71.

Daniels, L., & Ngwira, A. (1993). *Results of a national-wide survey on micro, small and medium enterprises in Malawi* (GEMINI technical report No. 53). Washington, D.C: PACT.

Du Rietz, A. and Henrekson, M. (2000). Testing the female underperformance hypothesis. *Small Business Economics*, 14 (1), pp. 1–10.

Fafchamps, M., and B. Minten, 2002. Returns to social network capital among traders. *Oxford Economic Papers* 54(2):173.

Fischer, E., Reuber, A. and Dyke, L. (1993). A theoretical overview and extension of research on sex, gender, and entrepreneurship. *Journal of Business Venturing*, 8(2), pp.151-168.

Fisman, R., & Raturi, M. (2003). *Does competition encourage credit provision? Evidence from African trade credit relationships* (NBER Working Papers No. 9659). National Bureau of Economic Research, Inc.

ILO (2002). *The informal sector in Sub-Saharan Africa* (Working Paper on the informal economy No. 2002/10.). Employment Sector. Geneva: International Labor Office.

Jennings, J. and McDougald, M. (2007). Work-family interface experiences and coping strategies: Implications for entrepreneurship research and practice. *Academy of Management Review*, 32(3), pp.747-760.

Jianakoplos, N. and Bernasek, A. (1998). Are Women More Risk Averse? *Economic Inquiry*, 36(4), pp.620-630.

Kayanula, D., & Quartey, P. (2000). *The policy environment for promoting small and medium-sized enterprises in Ghana and Malawi* (Finance and Development Research Programme, Working Paper Series, Paper No 15). Manchester: IDPM, University of Manchester.

Kepler, E., & Shane, S. (2007). *Are male and female entrepreneurs really that different?* Shaker Heights, OH: SBA Office of Advocacy.

Klapper, L. and Parker, S. (2010). Gender and the Business Environment for New Firm Creation. *The World Bank Research Observer*, 26(2), pp.237-257.

Lanjouw, J. and Lanjouw, P. (2001). The rural non-farm sector: issues and evidence from developing countries. *Agricultural Economics*, 26(1), pp.1-23.

Lapovsky, E. (2008). Socialist feminism: What difference did it make to the history of women's studies? *Feminist Studies*, 34 (3), pp.497-525.

Livingstone, I. (1991). A reassessment of Kenya's rural and urban informal sector. *World Development*, 19(6), pp.651-670.

Maloney, W. (2003). Informal self-employment: Poverty trap or decent alternative. In: G. Fields, ed., *Pathways out of poverty. Private firms and the economic mobility in developing countries.* London: Kluwer Academic Press., pp. 65-84.

Marco, R. (2012). Gender and economic performance: Evidence from the Spanish hotel industry. *International Journal of Hospitality Management*, 31(3), pp.981-989.

McKenzie, D. and Woodruff, C. (2006). Do Entry Costs Provide an Empirical Basis for Poverty Traps? Evidence from Mexican Microenterprises. *Economic Development and Cultural Change*, 55(1), pp.3-42.

McPherson, M. (1996). Growth of micro and small enterprises in southern Africa. *Journal of Development Economics*, 48(2), pp.253-277.

Mead, D. and Liedholm, C. (1998). The dynamics of micro and small enterprises in developing countries. *World Development*, 26(1), pp.61-74.

Morris, M., Miyasaki, N., Watters, C. and Coombes, S. (2006). The Dilemma of Growth: Understanding Venture Size Choices of Women Entrepreneurs. *Journal of Small Business Management*, 44(2), pp.221-244.

Nichter, S. and Goldmark, L. (2009). Small Firm Growth in Developing Countries. *World Development*, 37(9), pp.1453-1464.

Powell, M. and Ansic, D. (1997). Gender differences in risk behaviour in financial decision-making: An experimental analysis. *Journal of Economic Psychology*, 18(6), pp.605-628.

Reardon, T., Taylor, J., Stamoulis, K., Lanjouw, P. and Balisacan, A. (2000). Effects of Non-Farm Employment on Rural Income Inequality in Developing Countries: An Investment Perspective. *Journal of Agricultural Economics*, 51(2), pp.266-288.

Rijkers, B. and Söderbom, M. (2013). The Effects of Risk and Shocks on Non-Farm Enterprise Development in Rural Ethiopia. *World Development*, 45, pp.119-136.

Robb, A. and Watson, J. (2012). Gender differences in firm performance: Evidence from new ventures in the United States. *Journal of Business Venturing*, 27(5), pp.544-558.

Roy, M. and Wheeler, D. (2006). A survey of micro-enterprise in urban West Africa: drivers shaping the sector. *Development in Practice*, 16(5), pp.452-464.

Sabarwal, S., & Terrell, K. (2008). *Does gender matter for firm performance? Evidence from Eastern Europe and Central Asia* (IZA Discussion Paper Series No. 3758). Bonn, Germany: The World bank.

Sharpe, W. (1975). Adjusting for Risk in Portfolio Performance Measurement. *The Journal of Portfolio Management*, 1(2), pp.29-34.

Stamoulis, K., & Zezza, A. (2003). *A conceptual framework for national agricultural, rural development, and food security strategies and policies* (ESA Working Paper No. 03–17). Agricultural and Development Economics Division, Food and Agriculture Organization of the United Nations.

Steel, W. F., & Andah, D. O. (2004, July). *Rural and microfinance regulation in Ghana: Implications for development and performance of the industry*. Paper presented at an International conference on Ghana at the half century, Ghana.

Vijverberg, W. (1991). *Measuring income from family enterprises with household surveys* (Living Standard Measurement Study Working Paper No. 84). Washington D.C: World Bank.

Watson, J. and Robinson, S. (2003). Adjusting for risk in comparing the performances of male- and female-controlled SMEs. *Journal of Business Venturing*, 18(6), pp.773-788.

Watson, J., Newby, R. and Mahuka, A. (2009). Gender and the SME 'finance gap'. *International Journal of Gender and Entrepreneurship,1* (1), pp. 42–56.