

A COMPARATIVE ANALYSIS OF ETHIOPIAN AND GHANAIAN WOMEN ENTREPRENEURS

James Thorson, Southern Connecticut State University
Thorsonj1@southernct.edu

Yilma Gebremariam, Southern Connecticut State University
Gebremariay1@southernct.edu

Samuel K. Andoh, Southern Connecticut State University
Andohs1@southernct.edu

ABSTRACT

The paper examines constraints faced by women-owned businesses in Ethiopia and Ghana. Both countries have recently posted impressive economic growth rates. However, there is still an untapped potential that could be made by women but which are not being realized because of institutional and social obstacles. The paper addresses some pertinent questions related to access to credit with a view to identifying some constraints women may face because of their gender. The paper uses descriptive statistics and probit analysis to investigate whether businesses owned by men and women differ in their access to finance. The results suggest that in both countries, only a small percentage of businesses have loans and this access does not vary by gender. One counterintuitive result is that many businesses claim to have no need for a loan, while many others claim that access to finance is a big problem faced by their business.

INTRODUCTION

Ensuring that economic growth does not exclude some sectors of the economy is an important policy objective of most governments. In particular, governments want to ensure that women are fully included in reaping the benefits, and being part of the process of growth because they constitute an important source of innovation and job creation (Niethammer, 2013). In the developing countries, several studies show that “gender equality is smart economics,” (Somoza, 2015). Women’s “economic participation promotes agricultural productivity, enterprise development and enhances business management and returns on investment (OECD, 2010). The multiplier effect cannot be overemphasized; women tend to reinvest a large portion of their income in their families and communities.” These are very good reasons to ensure that all sectors, particularly women, are fully included in economic growth. Unfortunately, women face obstacles, many of which are not of their own making, but imposed by societal norms and institutions. Women face obstacles when trying to establish new businesses or expand existing

ones. Among the biggest hurdles are discriminatory laws, regulations and business conditions, as well as women's lack of access to property rights, finance, training, technology, markets, mentors, and networks. Bamfo and Asiedu-Appiah (2012) in a study of female entrepreneurs observe that even though conditions for women entrepreneurs are improving, they still face problems of accessing credit from financial institutions, among others.

Ghana and Ethiopia are two of Africa's fastest growing economies. Between 2011 and 2015, Ghana and Ethiopia both grew at 7% and 8.1% respectively. Geoff Cook (2015) points out that "Africa's entrepreneurs and SMEs will catalyze economic growth in 2015." This paper examines some of the obstacles women entrepreneurs face in accessing credit by comparing the two African countries. Our specific objectives in this paper are to determine:

1. Whether women entrepreneurs are more or less likely to apply for credit compared to men,
2. Whether women are more or less likely to apply for credit compared to men, what factors explain the disparity,
3. Whether women entrepreneurs use less leverage than men, and
4. Whether women entrepreneurs are risk-averse.

These four objectives are not of mere academic consequences; knowing whether women entrepreneurs apply for credit or not and, if they do not why they do not, could help initiate policies that could help them seek credit to expand their businesses. A related question of interest is whether women entrepreneurs who apply for and obtain credit use less of the credit than men entrepreneurs. This second question leads into the third objective. If women indeed use less of the credit granted than men, what are some of the possible explanations? Could it be that women are more risk averse than men? The answers to these questions could provide insights on how policy makers can work to include women in the rapid economic growth which countries such as Ethiopia and Ghana are currently experiencing.

The paper is organized as follows. Section II provides a brief literature review. Section III gives a brief description of the data, sources and some stylized facts about female owned businesses. Section IV describes the methodology and reports the results of the estimations. Section V provides summary and conclusions.

REVIEW OF THE LITERATURE

According to several experts including Niethammer (2013), women entrepreneurs "represent a vast untapped source of innovation, job creation and economic growth in the developing world" (p. 31). A World Bank report (2014) on women entrepreneurs suggests that women make significant contributions to economic growth and poverty reduction. According to the same World Bank report, businesses owned by women contribute about \$3 trillion to the U.S. economy and are directly responsible for creating 23 million jobs. The ascendancy of women entrepreneurs is not limited to the developed world. In the developing countries, there are a number of small and medium-sized businesses owned or co-owned by women. It is estimated that in Africa, close to 63% of women not in agriculture, are self-employed compared to a

worldwide figure of 30% (World Bank, n.d.). The importance of women as entrepreneurs in the economy cannot be overemphasized. At the same time, however, several studies suggest that women face significant obstacles to realizing their full potential contribution to the economy. Treichel and Scott (2006) find that women-owned businesses are significantly less likely to apply for bank loans. They conjecture that this might be due to the belief on the part of women that they might face discrimination. The same authors also find that women-owned businesses received smaller loan amounts compared to what men-owned businesses received. Niethammer (2013) finds that women-owned businesses are concentrated in sectors of the economy where firms are typically smaller. Whether this is because the minimum efficient scale of operation is smaller or that there are constraints preventing women-owned businesses from growing bigger is not clear, but she also suggests that women entrepreneurs face unmet financing needs of between \$290 and \$360 billion. In essence, women have difficulties accessing credit.

The vast potential which women entrepreneurs can bring to economic growth and development is only just being recognized. Coleman (2004) discusses the important contribution to economic development women in the Arab world could make if they did not face discrimination on many fronts. Woldie and Adersua (2004) in a survey article on female entrepreneurs in Nigeria, find that one of the challenges women entrepreneurs face is that they are not taken seriously by their male counterparts as well as the society as a whole. Tambunan (2009), for example, finds that many women enterprises operate on informal basis and have no identities. Tambunan also finds that the women entrepreneurs have low access to credit and marketing networks, lack of access to land and property and have a reduced risk-taking capacity. This reduced risk capacity could predispose them to not seeking credit even if they had access it. On the other hand, Coleman (2000) suggests that in reality, women-owned businesses do not face discrimination but because their businesses tend to be smaller and younger than businesses owned by men, and banks prefer to lend to bigger and older businesses, women-owned businesses tend to have difficulty accessing bank loans. That same study does, however, find that women receive loans under less favorable conditions than men-owned businesses, specifically, that women-owned businesses borrow smaller amounts and pay higher interest rates. A G-20 (2011) report confirms the results found by Coleman that “women entrepreneurs have lower access to financing than male entrepreneurs” and that when they do get financing, the terms tend to be less favorable than men.

By almost any measure of economic performance, women in developing countries lag behind their male counterparts. This is especially the case in Africa where both social norms and institutions conspire to keep women behind by making it difficult for them to access economic resources. In many countries, the most important asset one can hold is land. Although some African countries have made efforts at land reforms according the Food and Agricultural Organization (FAO), it is still the case that in many of the African countries including Ghana and Ethiopia, access to land by women is restricted. The FAO report (n.d.b) concludes that in Ghana “the system that regulates land ownership varies widely across regions, but ascribed men the exclusive property right to land excluding women” (p. 1). In Ethiopia, “because of traditional patriarchal practices or beliefs centered on male domination, women’s access to land is not officially recognized” (FAO, n.d.a, p. 1).

The unequal access to economic resources and institutional discrimination manifest themselves in a concentration of poverty among women and thus their confinement to mostly petty

economic activities. For example, the female to male wage ratio in Ghana is .59 and the corresponding ratio for Ethiopia is .69. Female to male earned income ratio is .66 in Ghana and only .51 in Ethiopia. Fewer women work in the professional and technical areas of industries than men (.52 in Ghana and .48 in Ethiopia); the result of fewer women being enrolled in tertiary education (.61 in Ghana and .32 in Ethiopia).

It has often been stated that in Africa, credit is a big obstacle to businesses especially for businesses owned by women. Even if it were possible to use land as collateral to access credit, women would be at a disadvantage given their lack of access to land property rights in general. Coleman (2000), however, argues that the credit constraint faced by women entrepreneurs is the result of their businesses being small relative to businesses owned by men. Sabarwal and Terrell (2008) come to the same conclusion in their study of 26 countries in Eastern Europe and Central Asia, finding that there is a significant gap in the scale of operations between women and men measured by sales revenue. An interesting finding from the study is that both men and women operate in a region of the production function with increasing returns to scale, however, they also conclude that women's return to scale is larger than men's. They also find that the total factor productivity (TFP) for women was worse than men in industries that are capital intensive but the same in labor intensive industries. In their further analysis of the data, they conclude that women are less likely than men to get financing from banks, pay higher interest rates when they do than men. They also find that women who need loans are less likely to get them than men who need them and that firms that have access to capital are larger in scale hence women are capital constrained.

This thesis appears to be supported by an earlier study done by Bigsten et al. (2003) who conclude from their study of credit needs of manufacturing enterprises in six African countries, that the smaller the firm, the less likely it is to obtain a bank loan. Since according to Coleman (2000) women owned businesses tend to be smaller, *ipso facto* they will face credit constraints, but this begs the question; which is: why are they small in the first place?

DATA AND STYLIZED FACTS

The data for this study comes from the World Bank Enterprise Surveys. The World Bank interviews a representative sample of business owners and managers on a variety of issues related to business operations. One advantage of this data source is that the questions are similar across countries which allow comparison across countries. The data for Ethiopia are from the 2011 survey, while the data for Ghana are from the 2007 survey.

What kind of business are women in the two countries mostly engaged in?

For Ghana, three sectors: retail, garment and food account for 75% of women owned businesses in the sample. In the case of Ethiopia, women owned businesses are less concentrated by industry. Retail, recorded media and food sectors account for 41% of women owned businesses

In Ghana, businesses owned by men were a bit less concentrated, with 59% of businesses in the retail, other manufacturing and garments sector. In the case of Ethiopia, the retail, food and wholesale sectors comprised 41% of businesses.

Size of enterprises by value and volume

In the case of Ghana, firm size did not vary significantly by gender of ownership. The median sale of firms was 250 million cedis for both men and women owned firm. The number of employees was similar with a median of 8 employees for women and 7 employees for men. In the case of Ethiopia, women owned firms had median sales that were about 20% larger than firms owned by men. The median number of employees was similar for both groups (Table 1).

TABLE 1: SIZE OF ENTERPRISES

	Ghana		Ethiopia	
	Median Sales (millions of cedis)	Median number of Workers	Median Sales (thousands of birr)	Median number of Workers
Women	250	8	1201	19.5
Men	250	7	1000	20

Educational background of proprietors/manager

Within each country, education levels for managers/proprietors were similar across gender for most educational categories (Table 2). Women were a little more concentrated in the lower educational levels. The biggest difference was for Ethiopia, where 57% of managers of women owned firms had a college education as opposed to 48% for firms owned by men. In addition, in Ethiopia, individuals with a college degree were much more likely to be business owners.

TABLE 2: EDUCATION OF MANAGERS (Percent)

	Ghana			Ethiopia	
Education of Manager	Women	Men	Education of Manager	Women	Men
No Education	6.29	0.96	No Education	2.08	0.55
Primary School	9.6	4.78	Primary School	1.04	2.74
Some Secondary School	11.26	11.15	Secondary School	12.5	16.42
Secondary School	25.83	28.66	Vocational Training	9.38	10.58
Vocational Training	23.18	21.34	Some University	17.71	20.99
Some University	9.6	9.24	Completed University	57.29	48.18
Completed University	10.26	18.79			
MBA, Local	1.99	1.91			
MBA, Foreign	1.32	1.59			
Other Postgraduate, Local	0.66	1.29			
Other Postgraduate, Foreign	0	0.32			

Other Characteristics

Exports did not account for a significant percentage of sales for either country. In Ethiopia, exports accounted for 5.6% of sales for women owned firms as opposed to 3.6% for firms owned by men. In Ghana, exports accounted for less than 2% of sales for both men and women. In terms of employment growth, firms owned by men hired 9 more workers in the past three years, while women owned firms hired approximately 5 more workers. In Ethiopia, women owned firms hired almost twice as many workers (50.32) than firms owned by men (24.29).

Constraints faced by businesses

When businesses were asked why they did not apply for a loan, the most common response among all businesses was that there was no need for a loan. Somewhat paradoxically, when asked what are the most important constraints facing the business, the most common response from Ethiopian businesses was access to finance. For Ghanaian businesses, access to finance was the second most common constraint, after access to electricity. This raises the question of what types of businesses have loans and what are the characteristics of businesses that take out loans and those that say they have no need for loans.

For women owned businesses in Ethiopia, businesses that have loans are fairly evenly spread among the various industry sectors. The most concentrated sectors are retail and recorded media which each hold 14% of firms with loans. However, in each of these industries there are many more firms that do not have loans. In addition, the level of education seems to affect whether women owned businesses apply for loans (Table 3). Firms that have loans have significantly

more employees (Table 4). All women owned firms with loans were led by a manager with greater than a secondary education. When looking at the characteristics of firms that say they have no need for loans, firms that do not need loans are a bit smaller in terms of the number of employees. In the case of the retail sector, ten firms responded they had no need for loans, while ten others gave other reasons for not applying for loans.

TABLE 3: WOMEN – LOAN OR NO LOAN BY EDUCATION

	Ethiopia		Ghana	
Education	No Loan	Loan	No Loan	Loan
Secondary or less	20%	0%	22.64	59.44
Post-Secondary	80%	100%	77.36	40.56
College Graduate	53.30%	71.40%	49.06	6.83

TABLE 4: SIZE OF WOMEN OWNED BUSINESSES BY LOAN STATUS

	Ethiopia		Ghana	
	No Loan	Loan	No Loan	Loan
Mean employees	393.38	42.25	50.11	14.269
Median	50	15	15	7

For women owned businesses in Ghana, those with loans were more concentrated, with 60% in the food and retail sectors, although there were many more firms in these industries without loans. Firms with loans had an average of three times more employees than those businesses without loans. In addition, businesses run by managers with less education were less likely to have loans. When looking at the businesses who claimed they had no need for loans, in Ghana they were a bit bigger, with an average of 19 employees compared to 17 employees for businesses that did not say they had no need for a loan. Businesses that had no need for a loan were concentrated in the food, garments and retail sectors. However, like the case in Ethiopia, there were many more firms in these sectors who did not say they had no need for a loan.

To investigate these questions we will use data for Ghana and Ethiopia from the World Bank Enterprise Surveys. The World Bank performs a stratified random sample of businesses across a large number of countries. One advantage of these surveys is that the questions asked in the surveys are often similar which allows for comparisons across countries. We chose Ghana and Ethiopia because they both have had strong economic performance relative of other countries in Sub-Saharan Africa. We also limited our sample to two countries because we wanted to focus on the institutional characteristics of a limited set of countries, rather than aggregating across a number of countries.

The data for Ethiopia comes from the 2011 survey. A business was defined as female owned if at least 50% of the owners were female. In Table 5, we see that only about 15% of responding enterprises had female owners in Ethiopia. However, these businesses with female owners were a bit more likely to have borrowed money than male owned business. In Ghana, on the other

hand, the percentage of businesses owned by women is about the same as men and they are just as likely to have a loan as men. In Table 6, we compare business investment in firms that have a loan versus those that have not borrowed money. Businesses that borrow money tend to make significantly larger investments in both equipment and land.

TABLE 5: BUSINESS BY GENDER & WHETHER THEY HAVE A LOAN OR NO LOAN

	Ethiopia			Ghana		
	Female	Male	Total	Female	Male	Total
Loan	21	78	99	53	53	106
No Loan	75	470	545	249	261	510
Total	96	548	644	302	314	616
Percentage	15	85		49	51	

TABLE 6: AVERAGE AMOUNT SPENT LAST FISCAL YEAR ('000S OF BIRR FOR ETHIOPIA) AND (MILLIONS OF CEDIS FOR GHANA).

	Ethiopia			Ghana		
	Equipment	Land	Total	Equipment	Land	Total
Loan	6,422	1,973	8,395	2,702	423	3,125
No Loan	2,241	579	2,820	24	17	41

The survey asked participants who did not apply for a loan, why they did not apply (Table 7). The biggest reason was because it was felt that there was no need for a loan. Female owned businesses were more likely to give this response than male owned businesses. Interestingly, female owned businesses were less likely to be concerned about being turned down for a loan and with the size and maturity of the loan. Finally, when asked what the biggest obstacles that firms faced were, both women and men were largely in agreement (Table 8). The biggest obstacle was access to finance. This was interesting given the large number of respondents who said they did not apply for a loan because they did not need a loan. Other obstacles faced by businesses include access to land and access to electricity. Female owned business were more concerned with tax administration, while male owned businesses were concerned about tax rates. Finally, Table 9 investigates whether firms who receive loans are concentrated by industry sector. For the case of Ethiopia, firms with loans are not highly concentrated in industry sectors. For Ghana, firms were more concentrated, with 60% of firms receiving loans being in the food and retail sectors.

TABLE 7: REASONS FOR NOT APPLYING FOR A LOAN. (PERCENT)

	Ethiopia		Ghana	
	Female	Male	Female	Male
No need	58	45	19	16
Complex application	9	5	17	14
Interest rates too high	6	5	18	16
Collateral too high	13	2	15	15
Size and maturity of loan	1	5	2	3
Did not think it would be approved	6	9	6	6
Other reasons	7	29	24	30
Total	100	100	100	100

TABLE 8: BIGGEST OBSTACLE FACED BY FIRM (PERCENT)

	Ethiopia			Ghana	
	Female	Male		Female	Male
Access to finance	19.79	29.93	Electricity	45.36	45.54
Access to land	16.67	18.25	Access to finance	33.44	32.17
Electricity	16.67	18.07	Tax rates	5.30	8.92
Tax Administration	10.42	8.39	Access to land	4.64	4.78
Other Obstacles	36.45	25.36	Other Obstacles	11.26	8.59
Total	100.00	100.00	Total	100.00	100.00

TABLE 9: INDUSTRY SECTORS THAT HAVE NO NEED FOR A LOAN

	Ethiopia			Ghana	
	No Need	Other Reasons		No Need	Other Reasons
Retail	10	10	Food	16	33
Recorded Media	5	1	Garments	15	53
Transportation	4	0	Retail	15	48
Base Metals	3	0	Other Services	3	9
Food	1	5	Hotel and Restaurants	3	18
Employees (mean)	39.58	50.69	Employees (mean)	19.47	16.767

The data for Ghana comes from the 2007 survey. A business was defined as a female owned business if the respondent answered yes to the question: “Are any of the principle owners female?” From Table 5, we see that approximately half the businesses in the sample were female owned. However, like the case in Ethiopia, only a small fraction of businesses had a loan. This fraction did not vary based on the gender of the owner.

Having access to a loan clearly influences the investment decisions of firms. Firms that had a loan made significantly larger investments in both equipment and capital. However, female owned businesses tended to have less debt outstanding. Reasons for not applying for loans were similar between women and men. Like the case in Ethiopia, the biggest reason was the lack of need for a loan. However, Ghanaian businesses were more likely to be concerned about interest rates and the complexity of the loan application process. When asked about the biggest obstacles faced by the firm, the concerns were similar to Ethiopia, although in a different order. First on the list was access to electricity, then access to finance, then tax rates and finally access to land.

METHODOLOGY AND RESULTS OF ESTIMATIONS

To address the question of whether gender influences the financing decisions of firms, a probit model is used. The probit model, like the logit is used for binary responses where a dependent variable takes on one of two (dichotomous) values, e.g. 0, 1 for say “yes” or “no”. The probit model uses the cumulative density function (cdf) of the standard normal distribution as the transformation function F , calculating the probability responses as follows:

$$P(y_i = 1|x_i) = \Phi(x_i'\beta) = \int_{-\infty}^{x_i'\beta} \frac{1}{\sqrt{2\pi}} e^{-\frac{1}{2}t^2} dt$$

The logit model uses the logistic function as the transformation F and calculates the response probabilities as follows:

$$P(y_i = 1|x_i) = \frac{e^{x_i'\beta}}{1 + e^{x_i'\beta}} = \frac{1}{1 + e^{-x_i'\beta}}$$

The two models are almost identical and hence the decision to use one or the other is often the choice of the user. It must be mentioned though that the parameters are not directly comparable because they are scaled differently. Multiplying the parameters of the probit model by 1.6 however, makes them approximately the same as the logit model estimates (Schmidheiny, 2015). The signs of significance are identical and the models lead to the same conclusions. The logit however, has “fatter” tails in the graph of its distribution than the probit (Jones, 2009). The probabilities of both models are symmetrical about 0.5. There is no significant difference between the two except that the probit model has normal errors while the logit model displays logistic errors.

In model estimation, the dependent variable is equal to one if the firm has a loan and zero if not. The independent variables include the legal status of the firm, the size classification, number

of employees, the sector of the firm, whether the firm has an overdraft account, the age of the firm, its location and whether or not it is a female owned firm.

The probit equation for Ethiopia is shown in Table 10. If a firm is a sole proprietorship, it is less likely to have a loan. The number of employees has a positive impact and was marginally significant. Firms in the service sector were more likely to have a loan. Firms that had an overdraft account were more likely to have a loan. A counterintuitive finding is that firms located in Addis Ababa were less likely to have a loan. The effect of female ownership was not statistically significant.

The results for Ghana are also shown in Table 10. In this sample, firms that were private limited companies were more likely to have loans. Firms that have more employees are also more likely to have a loan. Firms in the retail sector were more likely to have loans. Similar to the case in Ethiopia, firms that had an overdraft account were also more likely to have loans. The female variable was not statistically significant.

TABLE 10: PROBIT MODEL OF WHETHER FIRMS HAVE A LOAN

Dependent variable: haveloan						
Standard errors based	Ethiopia		Sig	Ghana		Sig
	<i>Coefficient</i>	<i>z</i>		<i>Coefficient</i>	<i>z</i>	
Constant	-1.844	-3.490	***	-2.563	-2.556	**
Sole Proprietorship	-0.502	-3.079	***	0.087	0.363	
Limited Partnership	0.134	0.633				
PrivateLtdCo				0.598	2.418	**
Small	-0.008	-0.024		0.197	0.315	
Medium	0.034	0.149		0.392	0.869	
Ln Employment	0.180	1.944	*	0.306	1.706	*
Retail	0.238	1.242		0.405	2.083	**
Service	0.407	2.425	**	0.174	0.721	
Overdraft	0.977	6.562	***	1.521	8.259	***
Age of Firm	0.002	0.362		-0.004	-0.534	
Capital City	-0.304	-1.926	*	-0.163	-1.002	
Female	0.268	1.452		0.142	0.895	
McFadden R-squared	0.206			0.291		
Log-likelihood	-211.150			-168.140		
Schwarz criterion	499.510			410.681		
*** significant at the 1% level						
** significant at the 5% level						
* significant at the 10% level						

In Table 11 we show a probit analysis of whether a firm applied for credit in the past year. For Ghana, the only statistically significant variable was whether the firm had an overdraft account. In the case of Ethiopia, firms in the service sector were more likely to apply for a loan. Sole proprietorships were less likely to apply for a loan and firms with an overdraft account were more likely to apply.

TABLE 11: DEPENDENT VARIABLE: APPLY LOAN

	Ethiopia			Ghana		
	Coefficient	z	Sig	Coefficient	z	Sig
Constant	-1.068	-2.320	**	-0.672	-0.744	
Sole Proprietorship	-0.271	-1.955	*	0.027	0.129	
Limited Partnership	-0.044	-0.228				
Private Limited Co				0.246	1.091	
Small	0.075	0.269		-0.556	-0.971	
Medium	-0.128	-0.619		-0.080	-0.194	
Ln Employment	0.092	1.135		0.074	0.454	
Retail	0.062	0.405		0.271	1.605	
Service	0.272	1.990	**	0.139	0.661	
Overdraft	0.557	4.211	***	1.153	6.537	***
Age of Firm	0.000	0.86		-0.009	-1.361	
Capital City	-0.103	-0.79		-0.180	-1.281	
Female	-0.037	-0.23		0.040	0.294	
*** significant at the 1% level						
** significant at the 5% level						
* significant at the 10% level						
McFadden R-squared	0.06054			0.160		
Log-likelihood	-323.91			-227.870		
Schwarz criterion	725.255			530.144		

The stylized facts show conflicting results in that when firms are asked why they didn't apply for a loan, the most frequent response was that there was no need for a loan. However, when asked what was the biggest problem faced by the firm, access to finance was also a frequent response. Probit equations were estimated using these responses as the dependent variable to attempt to understand what types of firms don't have a need for loans and what types of firms see access to finance as a significant problem.

The probit equations for the dependent variable, *no need for a loan*, are presented in Table 12. For Ethiopia, sole proprietorships and limited partnerships were significantly less likely to respond that they had no need for a loan. Firms in Addis Ababa and female owned firms were more likely to say they had no need for a loan. For the case of Ghana, the only significant variable was the age of the firm. Older firms were more likely to say they had no need for a loan.

TABLE 12: DEPENDENT VARIABLE: NO NEED FOR A LOAN

	Ethiopia			Ghana		
	<i>Coefficient</i>	<i>z</i>	<i>Sig</i>	<i>Coefficient</i>	<i>z</i>	<i>Sig</i>
Constant	-0.3084	-0.6081		-0.5310	-0.5557	
Sole Proprietorship	-0.5924	-3.7380	***	-0.0780	-0.3618	
Limited Partnership	-0.5188	-2.3030	**			
Private Limited Co				0.0445	0.1900	
Small	-0.1032	-0.3361		-0.2083	-0.3369	
Medium	0.0265	0.1171		0.1811	0.3957	
Ln Employment	0.1070	1.1310		-0.2185	-1.2700	
Retail	-0.1627	-1.0180		0.1452	0.8592	
Service	0.1062	0.7066		0.1555	0.7769	
Overdraft	-0.1067	-0.6645		0.1153	0.6098	
Age of Firm	-0.0001	-0.3084		0.0165	2.4980	**
Capital City	0.5183	3.6990		-0.0059	-0.0426	
Female	0.3402	1.9750	**	0.0513	0.3754	
*** significant at the 1% level						
** significant at the 5% level						
* significant at the 10% level						
McFadden R-squared	0.070			0.022		
Log-likelihood	-302.790			-230.633		
Schwarz criterion	679.439			535.673		

The probit equations for access to finance as a problem are shown in Table 13. For Ethiopia, sole proprietorships and limited partnerships were more likely to say access to finance was a problem. Female owned firms were less likely to say that access to finance was a problem. For Ghana, private limited companies and firms with more employees were less likely to say access to finance was a problem. Older firms were more likely to say access to finance was a problem.

TABLE 13: DEPENDENT VARIABLE: ACCESS TO FINANCE A PROBLEM

	Ethiopia			Ghana		
	<i>Coefficient</i>	<i>z</i>	<i>Sig</i>	<i>Coefficient</i>	<i>z</i>	<i>Sig</i>
Constant	-0.974	-2.119	**	1.823	2.060	**
Sole Proprietorship	0.395	2.740	***	-0.211	-1.080	
Limited Partnership	0.523	2.624	***			
Private Limited Co				-0.529	-2.375	**
Small	0.357	1.274		-1.003	-1.762	*
Medium	0.105	0.499		-0.626	-1.479	
Ln Employment	-0.019	-0.233		-0.559	-3.356	***
Retail	0.190	1.352		-0.059	-0.382	
Service	-0.133	-0.977		0.077	0.424	
Overdraft	-0.085	-0.627		-0.131	-0.689	
Age of Firm	0.000	-0.445		0.015	2.443	**
Capital City	-0.005	-0.042		-0.120	-0.944	
Female	-0.339	-2.077		0.111	0.890	
*** significant at the 1% level						
** significant at the 5% level						
* significant at the 10% level						
McFadden R-squared	0.048					
Log-likelihood	-363.187					
Schwarz criterion	803.818					

SUMMARY AND CONCLUSIONS

The results of this paper show some differences and some surprising similarities between women owned firms in Ghana and Ethiopia. Ghana had more women owned firms; 50% of firms have women ownership. Ethiopia had much fewer women owned firms, but they were much bigger, with the median number of employees over twice as high in Ethiopia as in Ghana.

For most variables, results were similar between men and women owned businesses in both countries. For example, only a small fraction of businesses had loans. The economic effect of having loans was strong and clear. Firms with loans had more employees and made larger investments than firms without loans. The difference between those with loans and those without was not of small magnitude either. For example, firms with loans in Ethiopia made investments in equipment that were three times larger than those without loans. In Ghana, firms with loans made investments that were on average over a hundred times larger. Both countries appear to be starved for capital. However, many in both countries also claim they have no need for loans.

There is a paradoxical result that many say they have no need of a loan and yet a significant fraction of business owners also say access to finance is a problem. It would be useful to perform additional surveys to more fully understand why some say there is a need for more capital and at the same time we find that they say they have no need for loans. In addition, given that so few businesses have loans, it is difficult to determine if women owned businesses are being treated differently in the marketplace. The information available from the Enterprise Surveys do not suggest significant differences between businesses owned by women and men. More detailed information would be useful to determine if and how women are being treated differently in the marketplace.

These results suggest that some future research is needed. First, it would be useful to more directly measure the attitude towards risk of women entrepreneurs. For example, did women entrepreneurs say they had no need for a loan because they were risk averse, or because they thought there were institutional barriers to obtaining a loan? In addition, it would be useful to have more detail on the existing financial relationships of entrepreneurs. This would help us to understand whether firms lack access to credit because of limited financial relationships, or for some other reason.

REFERENCES

- G-20 Report. (2011). *The Global Partnership for Financial Inclusion (GPII)*. IFC, World Bank Group.
- Bamfo, B. A., & Asiedu-Appiah, F. (2012). Investigating the Challenges and Prospects of Female Entrepreneurs in Ghana. *Journal of Business and Management Studies*, 1(1), 43-54.
- Bigsten, A., Collier, P., Dercon, S., Fafchamps, M., Gauthier, B., Gunning, J. W., Oduro, A., Oostendorp, R., Pattillo, C., Söderbom, M., Teal, F., & Zeufack A. (2003). Credit Constraints in Manufacturing Enterprises in Africa. *Journal of African Economies*, 12(1).
- Coleman, I. (2004). The Payoff from Women's Rights. *Foreign Affairs*, 83(3), 80-95.
- Coleman, S. (2000). Access to Capital and Terms of Credit: A Comparison of Men- and Women-Owned Small Businesses. *Journal of Small Business Management*, 38(3), 37-52.
- Cook, G. (2015, February 2). Africa's entrepreneurs and SMEs will catalyze economic growth in 2015. *African Business Review*.
- FAO. (n.d.a). Gender and Land Rights Database, Ethiopia. Retrieved from: http://www.fao.org/gender-landrights-database/country-profiles/countries-list/general-introduction/fr/?country_iso3=ETH.
- FAO. (n.d.b). Gender and Land Rights Database, Ghana. Retrieved from: http://www.fao.org/gender-landrights-database/country-profiles/countries-list/general-introduction/en/?country_iso3=GHA.
- Jones, B. (2009, April 21). *Logit and Probit*. Retrieved from: <http://psfaculty.ucdavis.edu/bsjjones/binaryresponse.pdf>.
- Niethammer, C. (2013). Women, Entrepreneurship and the Opportunity to Promote Development and Business. In *The 2013 Brookings Blum Roundtable Policy Briefs, The Enterprising Solutions: The Role of the Private Sector in Eradicating Global Poverty* (pp. 31-39).
- OECD. (2010, June 4). Investing in women and girls the breakthrough strategy for achieving all the MDGs. Retrieved from: <http://www.oecd.org/dac/gender-development/45704694.pdf>

- Somoza, L. (2015, October 1). Gender Equality Is Smart Economics, Expert Says. *Economy Matters*. <https://www.frbatlanta.org/economy-matters/2015/10/01/gender-equality-is-smart-economics>.
- Treichel, M. Z., & Scott, J. A. (2006). Women-Owned Businesses and Access to Bank Credit: Evidence from Three Surveys Since 1987, *Venture Capital*, 8(1), 51-67.
- Tambunan, T. (2009). Women entrepreneurship in Asian developing countries: Their development and main constraints. *Journal of Development and Agricultural Economics*, 1(2), 027-040.
- The Economist. (2011, January 6). Africa's impressive growth. Daily chart.
- Sabarwal, S., & Terrell, K. (2008). Does gender matter for firm performance? Evidence from Eastern Europe and Central Asia. (IZA discussion papers, No. 3758).
- Schmidheiny, K. (2015, Fall). *Binary Response Models*. Retrieved from <http://kurt.schmidheiny.name/teaching/binaryresponse2up.pdf>.
- World Economic Forum. (2014). *The Global Gender Gap Report*. 2015: The Year of Gender Equality in the Workplace, Maybe.
- Woldies, A., & Adersua, A. (2004). Female entrepreneurs in a transitional economy: Businesswomen in Nigeria. *International Journal of Social Economics*, 31(1/2), 78-93.
- World Bank. (Various Years). *Enterprise Surveys*.
- World Bank. (2014). *Goldman Sachs, World Bank Launch \$600 Million Fund for Women Entrepreneurs*.



INTERNATIONAL JOURNAL OF INTERDISCIPLINARY RESEARCH

VOLUME 6, NUMBER 1, AUGUST 2017

ISSN 2165-3240



**A PUBLICATION OF EASTERN WASHINGTON UNIVERSITY AND THE
INTERNATIONAL ACADEMY OF BUSINESS DISCIPLINES**

WWW.IJIR.NET