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Is There Discrimination Against Women Entrepreneurs in Formal Credit Market in Nigeria?

Nwosu, Emmanuel O.

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UNIVERSITY OF NIGERIA
To restore the dignity of man

Contents

Context

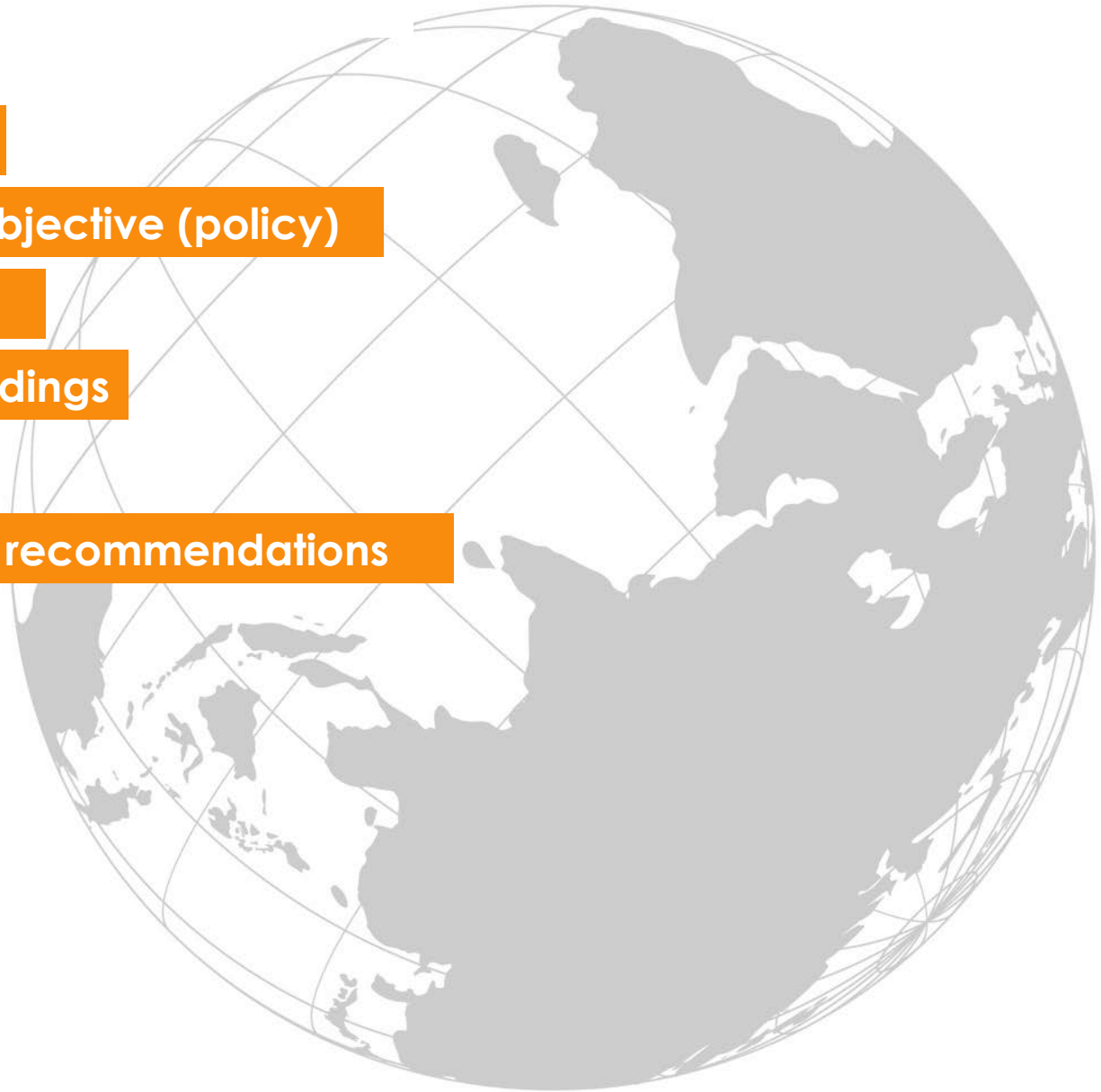
Research project and objective (policy)

Methodology and data

Research results/key findings

Policy implications

Conclusions and policy recommendations



Context - motivations

Background

- **The role of women entrepreneurs in National development is fast gaining prominence in economic development literature**
 - The rate at which women now contribute to economic development through their participation in small and medium-scale enterprises is quite unprecedented.
 - In developed & developing countries, women are starting businesses at a faster rate than men, and are making significant contributions to job creation, poverty reduction and economic growth. (GPMI, 2011)

Context - motivations

Background

- **In the last two decades, Nigerian economy has seen increasing participation of female entrepreneurs operating at the small and medium enterprise (SME) level.**
 - In 2010, the total number of enterprises in Nigeria stood at 17,284,671 (micro-17,261,753, small- 21,264 and medium-1,654). (SMEDAN,2010)
 - the female entrepreneurs accounted for 42.1 percent in the ownership structure of microenterprises, and 13.57 percent of the ownership structure in small and medium enterprises.

Context - motivations

Background

- **Access to finance and discrimination are often cited as major factors impeding the growth of women-owned business in developing countries.**
 - There is no consensus in the literature yet
 - Studies such as Becker, 1971; Coleman and Robb, 2009; Malapit, 2010; among others) argue that there is gender bias against women-owned firms in access to credit
 - Others such as Riding and Swift (1990), Bardasi et al 2011, etc have shown that women entrepreneurs are not more credit constrained compared to their male counterparts.



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Research project and objectives

- **The broad objective of this research project is to ascertain if women are discriminated in the formal credit markets in Nigeria. The specific objectives include:**
 1. To ascertain if women entrepreneurs are more credit constrained in the formal credit markets in Nigeria
 2. To determine the extent to which enterprise characteristics explain gender credit gap in Nigeria, and
 3. To ascertain the impact of credit on the performance of women entrepreneurs in Nigeria.

Methodology

Ascertaining Gender Credit Constraint

In order to ascertain if women are more credit constrained than men in the formal credit markets, we specified the following model of credit constraint which we estimated by different firm sizes.

$$\begin{aligned} \text{Constraint}_{1,1} = & \beta + \beta_{\downarrow 1} \text{ experience} + \beta_{\downarrow 2} \text{ educ}_{\downarrow \text{sec}} + \beta_{\downarrow 3} \text{ finan}_{\downarrow \text{statement}} + \\ & \beta_{\downarrow 4} \text{ children} < 10 + \beta_{\downarrow 5} \text{ status} + \beta_{\downarrow 6} \text{ female} + \beta_{\downarrow 7} + \beta_{\downarrow 8} \text{ Age dummy} + \beta_{\downarrow 9} \\ & \text{Owner CEO} + \beta_{\downarrow 10} \text{ Informal} + \beta_{\downarrow 11} \text{ food} + \beta_{\downarrow 12} \text{ garments}_{\downarrow \text{textile}} + \beta_{\downarrow 13} \\ & \text{wood}_{\downarrow \text{furniture}} + \beta_{\downarrow 14} \text{ non}_{\downarrow \text{metallic}} + \beta_{\downarrow 15} \text{ metals}_{\downarrow \text{othermanuf}} + \beta_{\downarrow 16} \text{ retail} \\ & + \beta_{\downarrow 17} \text{ hotels} + \beta_{\downarrow 18} \text{ Zonal}_{\downarrow \text{dummy}} + \mu \dots \dots \dots 1.1 \end{aligned}$$

Data

Data Issues

- The data for the proposed study were sourced from the World Bank Investment Climate Survey in Nigeria in 2010.
- The data collection consisted of a series of structured, face to face interviews with key senior managers/owners of a sample of 3,157 establishments across 26 states

Research results

Table 1: Probit Estimates of Determinants of Credit Constraint and their Marginal Effects

	Prob2_all	Marg2_all	Prob2_micro	Marg2_micro	Prob2_medium	Marg2_medium
Gender(Female=1)	0.0741 (0.605)	0.0202 (0.597)	0.0561 (0.717)	0.0146 (0.712)	0.258 (0.426)	0.0835 (0.390)
age_dummy	0.477*** (0.000)	0.125*** (0.000)	0.539*** (0.001)	0.131*** (0.000)	0.439** (0.029)	0.156** (0.031)
experience	-0.0182** (0.031)	-0.00507** (0.031)	-0.0181* (0.057)	-0.00481* (0.058)	-0.0218* (0.073)	-0.00753* (0.075)
status	0.200 (0.308)	0.0592 (0.335)	0.152 (0.508)	0.0425 (0.529)	0.305 (0.153)	0.110 (0.167)
ownerCEO	0.338** (0.031)	0.104** (0.044)	0.302 (0.120)	0.0886 (0.151)	0.219 (0.240)	0.0764 (0.246)
children<10	0.0490 (0.680)	0.0137 (0.682)	0.0409 (0.756)	0.0109 (0.758)	0.495** (0.014)	0.176** (0.015)
informal (d)	0.382** (0.028)	0.0944** (0.011)	0.382** (0.041)	0.0897** (0.018)	0.175 (0.544)	0.0579 (0.526)
finan_statement	-0.387*** (0.001)	-0.104*** (0.001)	-0.356*** (0.004)	-0.0919*** (0.003)	-1.041*** (0.000)	-0.273*** (0.000)
educ_sec	-0.237* (0.095)	-0.0619* (0.078)	-0.241 (0.125)	-0.0597 (0.103)	-0.0212 (0.933)	-0.00731 (0.933)

Research results

Table 1: Probit Estimates of Determinants of Credit Constraint and their Marginal Effects

food (d)	-0.147 (0.670)	-0.0430 (0.685)	-0.227 (0.592)	-0.0655 (0.620)	0.0446 (0.890)	0.0153 (0.889)
garments_textile (d)	1.506*** (0.000)	0.215*** (0.000)	1.728*** (0.000)	0.210*** (0.000)	0.910* (0.085)	0.230*** (0.006)
wood_furniture (d)	0.400* (0.087)	0.0987* (0.051)	0.331 (0.213)	0.0791 (0.167)	0.739* (0.073)	0.209** (0.018)
non_metallic (d)	0.115 (0.683)	0.0307 (0.669)	0.0656 (0.835)	0.0170 (0.830)	-0.191 (0.612)	-0.0688 (0.624)
metals_othermanuf (d)	0.0329 (0.894)	0.00908 (0.893)	0.0192 (0.946)	0.00508 (0.946)	-0.115 (0.729)	-0.0404 (0.734)
retail (d)	-0.511** (0.024)	-0.162** (0.041)	-0.594** (0.021)	-0.184** (0.040)	0.118 (0.718)	0.0397 (0.711)
hotels (d)	-0.0263 (0.899)	-0.00738 (0.900)	-0.0724 (0.762)	-0.0196 (0.766)	0.368 (0.224)	0.120 (0.193)
Observations	1301	1301	988	988	313	313
Pseudo R ²	0.144	0.144	0.156	0.156	0.160	0.160

Key findings

Summary of Probit Results

- The results suggest that although women entrepreneurs appear to be credit constrained overall and at different firm sizes, the difference in credit constraint between male and female entrepreneurs is not statistically significant.
- The effect of age on the probability that a firm will be credit constrained is statistically significant and the results show that firms with ageing owners overall, are 12.5% more likely to be credit constrained.
- Firms with experienced managers are significantly less likely to be credit constrained, other things being equal. This is true for all firm sizes. Managers with experience can manage the firm's financial and credit policies better than inexperience ones.
- Firms whose top owner is also CEO are 10.4 percent more likely to be credit constrained. This may be related to risk-averse policies the owner may adopt or skepticism of the loaning financial institution.

Key findings

Summary of Probit Results...contd

- Firms that have good financial records have significantly less probability of being credit constrained and this may be as low as 27.3 percent for medium sized firms.
- The results also suggest that firms that borrow in the informal sector face significant credit constraint in the formal credit markets. This may be attributed to the fact that those firms are not able to present collateral requirements in the formal credit markets.
- Overall, if the owner has at least secondary education, the probability of facing credit constraint in the formal credit market reduces by about 6 percent on the average. Educated owners are better able to gather and utilise credit information better.
- Zonal factors and industry characteristics are significant in explaining credit constraint. Garments and wood industry face significant credit constraint compared to the construction industry in Nigeria.

Research results

Fairlie Nonlinear Decomposition of Gender Constraint

Variable	micro	medium	both
Model:			
Pr(Y!=0G=0)	0.772	0.657	0.762
Pr(Y!=0G=1)	0.726	0.760	0.728
Difference	0.046	-0.103	0.033
Total explained	0.057	-0.021	0.052
Explained by:			
age	.018**	.0394*	.0203**
experience	-0.005	-0.003	-0.004
status	-0.006	-0.003	-0.007
ownerCEO	-0.003	-0.006	-0.004
children10	-0.0001	0.005	-0.0002
informal	0.006	-0.001	0.005
finacial_s~t	0.004	-.0125*	0.003
educ sec	0.004	0.0015	0.005

Key findings

Summary of Fairlie Decomposition Results

- In the decomposition results, positive difference means that women are more favoured while negative difference shows they are less favoured. The results suggest that women entrepreneurs have lower average probability of being credit constrained in the formal credit market in Nigeria when they operate at micro/small enterprise level.
- At the medium enterprise level, however, women begin to be less favoured significantly and the difference in average probability of being credit constrained is more than 10 percent. These differences are not visible when we combine micro and medium enterprises in a single estimation sample.

Key findings

Summary of Fairlie Decomposition Results..cont

- Detailed decomposition of the explained component shows that years of experience, being a sole owner, owner running the business and having children less than 10 years tend to decrease gender credit gap to in favour of male entrepreneurs,
- while age, borrowing in the informal sector, being educated, having good financial records and zonal factors, tend to favour women in the formal credit markets at the micro enterprise level.
- On the other hand, almost all the endowments work to disfavor women entrepreneurs in formal credit markets at the medium enterprise level.

Research results


PSM: Kernel Estimates of the Impact of Credit on Enterprise Performance

Micro and Medium Firms					
	Treat.	Contr.	ATT	Std. Err.	t
output	928	373	-0.16*	0.115	-1.39
output per worker	928	373	-0.24**	0.121	-1.978
capital per worker	928	373	-0.23*	0.135	-1.717
labour	928	373	-0.011	0.712	-0.015
Fixed Assets	928	373	-0.312**	0.058	-5.376
Male Entrepreneurs					
output	780	317	-0.136	0.143	-0.949
output per worker	780	317	-0.241**	0.127	-1.894
capital per worker	780	317	-0.183*	0.128	-1.429
labour	780	317	0.222	0.771	0.288
Fixed Assets	780	317	-0.301**	0.062	-4.858
Female Entrepreneurs					
output	132	55	-0.23	0.239	-0.962
output per worker	132	55	-0.188	0.212	-0.89
capital per worker	132	55	-0.518**	0.237	-2.184

Key findings

Summary of PSM Results

- Our focus is to ascertain the impact of credit on enterprise performance.
- In all the P-score estimates, the balancing property was satisfied and the kernel estimates accounted for sample weights.
- Propensity score results show that credit constraint decreases enterprise performance significantly in almost all the performance indicators considered. Women entrepreneurs that face credit constraint in the formal credit markets have significantly lower capital per worker and acquisition of fixed assets.

 For the credit constrained firms, output per worker and labour employment are also lower.

Policy implications and Conclusions

- These results underlie the importance of access to credit in the growth of micro and medium enterprises and hence in the overall growth of the economy.
- One major conclusion from this study is that access to formal credit by small and medium enterprises in Nigeria is still very low at an average of about 29%.
- Our findings show that gender credit constraint depends on firm size, that is, women entrepreneurs have higher probability of being constrained in the formal credit markets at the medium enterprise level while at the micro enterprise level they are more favoured.

Policy Recommendations

- We recommend that Micro finance banks and other formal financial institutions should ensure timely disbursement of loans to female entrepreneurs who apply and are more likely to utilize their financial resources efficiently.
- The Central Bank of Nigeria, Bank of Industry and other monetary authorities should evolve sound financial policies that will make it less stringent for females at all levels of entrepreneurship to acquire loans and credit for useful business purposes.
- According to Sanusi, (2013), “Between 2003 and 2012, commercial bank loans to small scale enterprises dropped at an exponential rate, from about 7.5 percent in 2003 to less than 1 percent in 2006 and a further decline in 2012 to 0.14 percent”.

Policy Recommendations

- Second, there is need for adequate implementation of the Revised Microfinance Policy in Nigeria. Section 4.2 (iv) of the Policy provides that women's access to financial services should increase by 15% annually in order to eliminate any form of gender disparity (CBN, 2013).
- Third, Female entrepreneurs should be given constant orientation on the need to develop themselves and acquire more education or use managers with better education and experience since firms with experienced and educated managers are significantly less likely to be credit constrained, other things being equal.
 - Managers with experience can manage the firm's financial and credit policies better than inexperienced ones.

Policy Recommendations

- Fourth, government should set up Advisory Councils for Men and Women Entrepreneurs (ACMWE) at the local, state and national levels. Their role will be to educate male and female entrepreneurs constantly on how to access credits in formal financial markets and also invest profitably.
- Finally, government and monetary authorities should exert serious effort on improving the functioning and competitiveness of the financial sector in Nigeria, and support female entrepreneurs through the implementation of useful bank credit schemes.

Thank you!

This research work was carried out by :

Nwosu, Emmanuel .O
Orji, Anthony
Nnetu, Vivian
Nwangwu, C



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