African Development Review
Revue africaine de développement

African Development Review, Vol. 29, No. S1, 2017, 56–72

Addressing Poverty and Gender Inequality through Access to Formal Credit and Enhanced Enterprise Performance in Nigeria: An Empirical Investigation

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Abstract: Addressing poverty and gender inequality is one of the fundamental targets of the sustainable development goals. Access to finance, however, has been identified as one of the ways to reduce poverty and gender inequality. The main focus of this study, therefore, is to ascertain the impact of access to formal credit on enterprise performance. The study uses Nigerian Enterprise Surveys data for 2010 to construct a direct measure of credit constraint. From propensity score estimations, the results show that access to formal credit matters and has significant impact on enterprise performance indicators. Firms that are credit constrained have significantly lower output per worker, capital per worker, employment of labour and investment in fixed assets for expansion compared to firms that are not credit constrained. This is more pronounced for women-owned enterprises after adjusting for bias in the estimations and controlling for sampling weights. This suggests that one way to support the growth of enterprises in Nigeria is to make access to formal credit less stringent. Also, government and monetary authorities should support credit expansion policies for medium and small enterprises in Nigeria.

1. Introduction

The importance of women entrepreneurs and access to finance in national development have been well documented in the literature, both in developed and developing economies (Asiedu *et al.*, 2013; Aterido *et al.*, 2011; and Ayyagari *et al.*, 2007). Thus, in the last two decades, the Nigerian economy has seen increasing participation of female entrepreneurs operating at the small- and medium-sized enterprise (SME) level. For example, in 2010, a survey carried out by the Small and Medium Enterprises Development Agency of Nigeria (SMEDAN, 2010) shows that the total number of enterprises in Nigeria was 17,284,671: micro, 17,261,753; small, 21,264 and medium-sized, 1,654. The total number of persons employed by the micro, small and medium enterprises (MSME) sector as at December 2010 was 32,414,884. Of this number, the female entrepreneurs account for 42.1 per cent in the ownership structure of microenterprises, and 13.6 per cent of the ownership structure in SMEs. The SMEDAN survey shows that SMEs' contribution to the nation's GDP in nominal terms was 46.5 per cent as at the period under review. The survey also highlighted that access to finance in formal credit markets is one of the priority areas where SMEs need assistance in Nigeria.

The Nigerian credit market can be broadly categorized into the formal and informal sectors, based on how structured the lending process is. The better organized and formal sector of the credit market is driven largely by the deposit money banks (DMBs). Although the capital market and other financial markets such as microfinance banks (MFBs) are also part of the formal credit market, the DMBs dominate the market. Most of the credit granted by deposit money banks is short term (CBN, 2010). The informal credit market in Nigeria includes money lenders, self-help groups (SHGs), rotating savings and credit associations (ROSCAs), relatives and friends. In order to enhance the flow of financial services to MSMEs in the country, the Federal Government of Nigeria launched the new Microfinance Policy, Regulatory and Supervisory Framework in 2005. This policy document was subsequently reviewed in 2011 (CBN, 2013). Despite the recent policy review, few problems still plague the sector. The key ones include location of MFBs, financing and the rates of interest charged. Some studies such as Abiola (2011) and Orodje (2012) suggest that the levels of interest rates charged by the MFBs in Nigeria (20 per cent to over 50 per cent) are too high, which makes it very difficult for many micro and medium-scale business owners to seek or access loans from the MFBs.

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Nevertheless, where the entrepreneurs are able to access lines of credit, it is still not clear if such access has any significant impact on the performance of enterprises in Nigeria. Thus, access to credit and enterprise performance in Nigeria and other sub-Saharan African countries has been an issue of serious concern. Several other constraints were identified among the MSMEs and the formal credit markets in Nigeria and other sub-Saharan African countries, such as: poor credit penetration, the issue of collateral, the complex application procedure and asymmetric information, among others (Asiedu *et al.*, 2013).

This study therefore contributes to empirical literature by investigating and analysing the impact of credit on enterprise performance in Nigeria using a gender perspective. It is important to Nigeria and other developing/developed countries seeking to give women entrepreneurs the required support to enable them to access credit more easily and also grow their enterprises more significantly. Thus, it is argued that the findings of this study can be replicated or utilized by such countries who truly wish to investigate the impact of access to credit on performance of enterprises in their economies, paying particular attention to women-owned firms. This perspective and other arguments raised in this paper constitute the justification for this study.

2. Overview of the Literature and Identified Research Gaps

Following the authors' extensive literature on women entrepreneurship and access to formal credit, the lesson learned from existing literature is that there is no clear conclusion on the impact of access to credit from formal credit markets and enterprise performance. Thus, the mixed results in the literature suggest that the argument of whether or not access to formal credit improves the performance of women entrepreneurs especially in developing countries, still remains an empirical issue. For example, Winker (1999) and Ojah *et al.* (2010) argue that SMEs that are financially constrained find it hard to invest in fixed capital and also lack the capabilities to innovate. Similarly Ayyagari *et al.* (2007) show that enterprises perform better and innovate more quickly if they have access to external financing. In another study, Buyinza and Bbaale (2013) investigate the factors influencing manufacturing firms' access to credit and the effect of credit constraints on firm performance in the East African Community (EAC) using the World Bank (2006) enterprise survey for five EAC countries. They adopted simple Probit, simple OLS, Tobit, and a two-step Probit models. The result shows that having access to credit and a long loan duration increases firm performance, while an increase in the annual interest rate reduces firm productivity.

Leroy (2012) investigates the impact of networking on access to finance and performance of SMEs in the Buffalo City Municipality in the Eastern Cape Province of South Africa. The results indicate that there is a positive relationship between networking and access to finance and performance of SMEs. Similarly, Mach and Wolken (2012) examine the effects of credit availability on small firm survivability over the period 2004 to 2008 for non-publicly traded small enterprises in the United States of America. They find that credit constrained firms were significantly more likely to go out of business than non-constrained firms. Moreover, credit constraint and credit access variables appear to be among the most important factors predicting which small US firms went out of business during the 2004–2008 period even though an extensive set of firm, owner and market characteristics were also included as explanatory factors. Ismael (2013) examines the empirical relationship between credit terms, credit accessibility and the performance of agricultural cooperatives in Rwanda. The result shows a positive and significant relationship between credit terms, credit accessibility and the performance of agricultural cooperatives. This is in agreement with the studies of Kaplan (2006) who argues that when credit terms are favourable they encourage borrowing and therefore the expansion of the capital base leading to increased business activity.

More empirical support of a link between credit access and SME performance comes from Boissay and Gropp (2007), who argue that firms that are confronted with a finance shortage try to overcome this situation by passing on one-fourth of the shock to their suppliers by taking more trade credit. Other authors such as Canepa and Stoneman (2008) equally emphasize that limited access to external finance negatively affect small firms' decision to invest in fixed capital and research and development, which subsequently limit their growth, innovativeness and performance. Aghion *et al.* (2007) further document that access to external financing promotes new entry of small firms to take advantage of growth opportunities in the expanding sectors and helps small firms to compete with large firms on a more levelled ground in business. Other studies that find a positive relationship between credit access and SME performance include Angelini *et al.* (1998), Bougheas *et al.* (2009), Ishengoma and Kappel (2011) and Adusei (2016), among others.

On the other hand, some studies have found a negative or weak link between credit access and SME performance. For example, Kang and Stulz's (2000) results for a sample of Japanese SMEs indicate better performance for SMEs not financed by banks compared to firms with high shares of bank debt. Li *et al.* (2013) examine the impact of credit on SME performance in China. Ordinary least squares estimations show that credit access is positively correlated with firm performance. However, after