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Abstract

Most women-owned enterprises (WoEs) experience financial sustainability challenges mostly manifested by failure of these enterprises before their third year of operation. This research examined influence of selected factors on financial sustainability of women-owned manufacturing SMEs in Westlands Sub County, Nairobi, Kenya. Access to credit, level of education, competition, and technology were conceived as the independent variables while financial sustainability was the dependent variable. The underpinning theory is the Pecking Order Theory and the Resource-Based View of the firm. A descriptive research design utilizing a quantitative approach was adopted for this study. The target population was 195 WoEs from which a sample size of 131 was reached. Using simple random sampling, the final sample size was 111 respondents indicating a response rate of 84.7%. A structured questionnaire was used to gather information for this research and these was analyzed using SPSS. The study found that access to credit, competition, technology and level of education significantly affected the financial sustainability of these firms. These findings have implications for WoEs management, the government, and development partners.

Keywords: *Women-Owned Enterprises, Financial Sustainability, Access to Credit, Technology, Competition and Manufacturing*

1.0 Introduction

Globally, the economic crises have affected SME's financial sustainability by creating a reduced demand for services and goods across the board. This has led to a strain on bank finance accessibility by restricting credit terms (Coetzee & Buys, 2017). In Europe, Zabolotnyy and Wasilewski (2019) found that financial sustainability of SMEs was indicated by profitability, productive efficiency, and market capitalization increases. On the other hand, an increase in retained earnings and liquidity as well as a reduction in debt and interest expenses also improved financial sustainability of SMEs. In Switzerland, Schwab, Gold, and Reiner (2019) reported that significant challenges for growing SMEs financial sustainability are risk of bankruptcy. In Zimbabwe for instance, a large number of SMEs (75%) tend to operate with insufficient finances that are present to operate the firm with no need for external financing such as loans (Wadesango, Tinarwo, Sitcha, & Machingambi, 2018). In Ethiopia, Meher and Ajibie (2018) found that firms with less than five workers were experiencing financial sustainability challenges. SMEs have a major function in Kenya's national economy as they account for 78% of formal businesses and contribute to 33 % of Gross Domestic Product (GDP), providing employment to more than 30% of youth and contributing 83.6 % of new jobs (Kenya National Bureau of Statistics (KNBS, 2019). Women owned enterprises are the majority of firms operating in Kenya's micro small and medium enterprises (MSME).

1.1 Statement of the problem

There is evidence of limited financial support and credit facilities to women enterprises. The state has attempted to alleviate this predicament by providing support for women enterprises using the Women enterprise fund (WEF), the Uwezo fund, and grants from government partners. However, a sizeable number of women-owned enterprises (WoEs) financial sustainability continues to be at stake as manifested by failure of these enterprises before their third year since starting (KNBS, 2019). The issues of Financial sustainability have received academic attention in Kenya with studies being conducted in NGO sector (Ali & Kilika, 2011; Chepkemoi & Njeru, 2015), Microfinance Industry (Wambua, 2018), Education sector (Ng'ang'a & Kibati, 2016), and SMEs (Muthoka, 2012). In the Kenyan context however, few academic studies focused on women specifically in the manufacturing sector. This is a gap that the study aims to focus on by examining selected factors influencing financial sustainability of women-owned manufacturing SMEs in Westlands Sub County, Nairobi, Kenya.

1.2 Research objectives

- i. The influence of access to credit on financial sustainability of women-owned manufacturing SMEs in Westlands Sub-County
- ii. The influence of level of education on financial sustainability of women-owned manufacturing SMEs in Westlands Sub-County
- iii. The influence of competition on financial sustainability of women-owned manufacturing SMEs in Westlands Sub-County
- iv. The influence of technology on financial sustainability of women-owned manufacturing SMEs in Westlands Sub-County

2.1 Theoretical framework

2.1.1 Pecking order theory

Thorleif Schjelderup-Ebbe was credited with introducing Pecking order theory which was further developed by Myers and Mailuf (1984). The theory assumes that financing is based on hierarchy; it states that organizations prefer internal over external financing and prefer debt over equity. The lowest level of financing is having more asymmetry which is the high cost of sources of financing and the other way around (Brounen, De Jong & Koedijk, 2004). Pecking order theory is an important theory for this research as it explores the ability of the firm to make a choice from acquiring external or internal sources of funding. Women entrepreneurs are perceived to adopt a pecking order strategy when it comes to selecting whether to have external or internal sources or funding. For some firms, especially at the early life stages of the business, external funding is completely out of reach due to limitations set by lending firms and institutions. The sometimes justified perception that external funding is completely out of reach for these women entrepreneurs leads them to only rely on personal funds and savings. They in effect create entry barriers to capital intensive businesses such as manufacturing.

2.1.2 Resource-Based View of the Firm

The Resource Based View (RBV) is a strategic management theory that has its roots from the eighties and nineties (Foss, 2011). The RBV provides an understanding of the importance of various resources to the performance and competitiveness of firms' (Roxas & Chadee, 2011). The RBV was used as it espouses the importance of a firm's resources to its competitiveness and ultimately, its financial sustainability. The RBV is significant as the study considers the technology and access to credit as important resources for a firm.

2.2 Empirical literature

In Europe, Zabolotnyy and Wasilewski (2019) assessed financial sustainability in a sample of food companies using fuzzy logic to determine relationships between different factors and firms based on their financial sustainability. Financial sustainability was measured using two dimensions: continuity and value among a sample of 12 firms and using company data from 2005-2015. The study found increase in profitability, market capitalization; productive efficiency resulted to an improvement in financial sustainability. In Tanzania, Njiku and Nyamsogoro (2019) did an investigation into determinants of financial sustainability among a sample of small-scale sunflower processing enterprises from 219 firms randomly selected from Singida and Dodoma. The research established that age of entrepreneur, location of enterprise, and employee education had a significant effect on financial sustainability.

In Kenya, Muthoka (2012) examined the influence of Savings, credit, and entrepreneurial development as independent variables whilst financial sustainability was measured by income diversification, sound administration and finance, and self- income generation. The population consisted of 1,327 SMEs selected using purposive sampling to recruit 132 SMEs managers into the sample. Credit, savings, and entrepreneurial development contributed to financial sustainability of SMEs. Mbuva (2014) investigated determinants of financial sustainability among WOE in Machakos County using government loans accessibility, financial innovation, and financial management, and capital structure on financial sustainability. Using a descriptive research design, the study sample consisted of 383 respondents recruited from 5,311 to whom a

structured questionnaire was administered. The findings showed all independent variables had a positive and significant effect on financial sustainability.

3.0 Research methodology

The study adopted a descriptive research design which was suitable for the study as it aims to include a relatively large number of respondents to give their answers on a predefined data collection instrument. The target population was 191 women-owned SMEs registered in Westlands Sub- County-Nairobi which were stratified as per Kenya association of manufacturers (KAM) groupings: Food and Beverages, Floriculture, Textile and Apparel, Leather and Footwear, Paper, Plastics and Rubber, Building, Mining, and Construction. A sample size of 131 enterprises was determined using the Yamane (1967) sampling formula as summarized in Table 1.

Table 1: Sample size

Manufacturing sector	Population	Sample size
Food and beverages	48	33
Floriculture	23	16
Textile and apparel sector	43	29
Leather and footwear	39	27
Paper	17	12
Plastics and rubber	12	8
Building, mining and Construction	9	6
Total	191	131

A structured questionnaire was designed for each of the research variables access to credit (Mbuva, 2014; Njogu, 2016), level of education (Njiku & Nyamsogoro, 2019), competition (Kikaya, 2018), technology (Gituma, 2016), and financial sustainability (Myšková & Hájek, 2017; Ssendagi & Mabonga, 2019). The reliability of an instrument was measured using the Cronbach alpha coefficient after conducting a pilot study among 10 WoEs from Kiambu County; the Cronbach alpha coefficients achieved were all above 0.6 levels for each set of items indicating internal consistency of these items. The data was analyzed using multiple linear regression analysis.

4.0 Findings

The model summary where the coefficient of determination ($R^2 = 0.712$) statistic indicates that the model explained 71.2% of change in financial sustainability and this was statistically significant as shown by a The F statistics is positive ($F = 11.367$) and p-value level of less than 0.05 at the 95% confidence level. The regression coefficients indicated that technology ($\beta = 0.308$; $p = 0.007$), competition ($\beta = 0.255$; $p = 0.001$), access to credit ($\beta = 0.249$; $p = 0.000$), and education level ($\beta = 0.175$; $p = 0.031$) all had positive and significant effect on financial sustainability implying an increase in each factor would result in financial sustainability of WoEs as shown in Table 2.

Table 2: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.844 ^a	.712	.682	.52144

ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	11.185	4	2.796	11.367	.000 ^b
Residual	20.911	85	0.246		
Total	32.096	89			

Regression Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	2.450	.369		6.637	.000
Access to Credit	.249	.067	.352	3.705	.000
Competition	.255	.073	.345	3.494	.001
Technology	.308	.160	.180	1.932	.007
Education level	.175	.115	.137	1.524	.031

The first objective of this study was to determine influence of access to credit on financial sustainability of women-owned manufacturing SMEs in Westlands Sub- County. The findings indicated a positive and significant correlation and also a positive and significant effect of access to credit on financial sustainability. The second objective was to establish influence of level of education on financial sustainability of women-owned manufacturing SMEs in Westland’s Sub-County. There existed an association between financial sustainability of WoEs and their levels of education. The third objective was to examine influence of competition on financial sustainability of women-owned manufacturing SMEs in Westland’s Sub-County. The outcome showed a positive correlation between competition and financial sustainability and this relationship was confirmed by the regression analysis. This means that an increase in intensity of industry competition for manufacturing companies resulted in an increase in financial sustainability. The fourth objective was to establish the influence of technology on financial sustainability of women-owned manufacturing SMEs in Westland’s Sub-County. The final output of the study indicated that technology had a role to play in financial sustainability of women enterprises as the correlation showed significant associations as well as the linear regression analysis.

5.0 Conclusion

In terms of access to credit and financial sustainability of women enterprises it is this study's conclusion that access to credit has an effect on financial sustainability of women-owned manufacturing SMEs in Westlands Sub County. The level of education of managers had an effect on financial sustainability and thus the study concludes that higher education levels had a positive effect on financial sustainability of women-owned manufacturing SMEs in Westlands Sub County. The study found that competition had the greatest effect on financial sustainability; the study therefore concludes that intensity of competition had an effect on financial sustainability of women-owned manufacturing SMEs in Westlands Sub County. The outcome of the study indicated that technology had an effect on financial sustainability and thus the study concludes that financial sustainability of women-owned manufacturing SMEs in Westlands Sub County.

6.0 Recommendations

Firstly, it is this study's recommendation that financial institutions should tailor credit facilities for women enterprises. This will enable these firms find an entry point to the financial institutions wealth of financial management expertise, as well actual funding for their businesses. There are demonstrable benefits to the women-owned firms in the employment they create, and their contribution to the country's GDP. Second, the findings showed that level of education had an effect on financial sustainability and it is this study's recommendation that central and county governments should provide capacity building in terms of free secondary education, subsidized tertiary education, complemented by financial literacy programs, basic business management skills, and business development programs to enhance women entrepreneur's performance.

Third, it is this study's recommendation that government should create a conducive environment for manufacturing firms to compete in. Support can include limiting importation of manufactured goods that can be produced in country which will intensify competitiveness of local firms. The government must contribute to technological and innovation practices with funding and training, which will enhance competition in the sector. Lastly, the government, development partners, and stakeholders such as Kenya Association of Manufacturers (KAM) should organize seminars, exhibitions, and international, regional, and local conferences that focus on technology application in manufacturing sub-sectors where women entrepreneurs operate so as to enhance their performance and overall financial sustainability.

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