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Performance of women owned enterprises accessing credit from village credit and savings associations in Kenya

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Abstract

In the recent years there has been an influx of women venturing in the field of entrepreneurship in developing countries. This is attributed to advocacy on women empowerment programs and policies. Women owned small micro enterprises in Sub-Saharan Africa continue to record poor performances compared to their male counterparts. The purpose of this study was set to investigate selected factors perceived to influence the performance of women-owned small micro enterprises in Kenya. The factors studied included credit and dividends accessed from table banking groups, entrepreneur's experience, education levels of women entrepreneurs and income of women entrepreneurs. The study adopted cross-sectional survey design and a sample of 225 women entrepreneurs who participate in Village Saving and Credit Associations from Nakuru Town Kenya was used. The study found that all the women entrepreneurs had attained formal education with majority 43.6% having attained secondary education. Results also revealed that Ordinal logit regression model (OLR) had Pseudo R^2 of 60.2% and 49.3% which was above the statistical threshold of 20%. This implied that the selected factors income, credit and education level of the respondents influenced positive changes in the net profits and capital of Small Micro Enterprises (SMEs). Based on the study findings, Village Saving and Credit Associations were identified as one of the effective strategy that can enable more women entrepreneurs in the rural and urban areas to access affordable credit.

Keywords: Credit; Small micro enterprises; Women entrepreneurs; Informal banks

Background

Most of the developing countries have witnessed an influx of the number of women venturing in the field of entrepreneurship in recent years; this mainly being attributed to advocacy on women empowerment programs and policies advanced by both government and non-governmental organizations (Eyben et al. 2008). Studies have found that entrepreneurial development has been a panacea for poverty alleviation among the fastest growing economies of developing countries (United Nation 2006). A report by World Bank (2009) indicated that women entrepreneurs comprise about a half of human resources in developing economies. The report also identifies women entrepreneurs as key facilitators of micro economic development in their communities. Studies also indicate that majority of women entrepreneurs own SMEs in developing countries,

and their significant contribution to growth domestic production (GDP) and improving income of their households cannot be ignored (ILO 2008; Ghosh 2009).

In spite of the success stories recorded on the increase of women entrepreneurship in developing countries, the literature on women entrepreneurship in Africa literally depict women-owned micro and small enterprises as being under financed and thus continue to record poor performance compared to male owned SMEs (Richard and Adams 2004). Only 30% of the small firms in Sub-Saharan African countries have access to affordable and proper financial capital (World Bank 2005). Lack of collateral requirements, low income, problems in filing tax repayment reports and unsound business plans are some of the major reasons for the unwillingness of the formal banks lending credit, to majority of entrepreneurs who own micro and small enterprise (SMEs) (Sacerdoti 2005). Stevenson and St-Onge (2005) observed that women entrepreneurs in Sub-Saharan Africa are even more disadvantaged when accessing credit from commercial banks because they lack control of family resources like land which can be used as collateral to acquire loans for expanding of their micro enterprises.

The inability to acquire affordable credit to finance stock capital in the micro enterprises and the increasing cost of living at the households has forced women entrepreneurs in Sub-Saharan Africa to seek affordable credit and saving services from village saving and credit associations (Anderson et al. 2009). The village saving and credit associations is a community banking model that mobilizes low income earning women from within the same neighborhood. They raise funds to a credit kitty that offers affordable loans at low interest rates with flexible repayment period. Village Saving and Credit Associations (VSCAs) have become a common and popular way of banking among women in rural areas and urban slums of Sub Saharan African countries (Gugerty 2007; Allen 2006). Majority of women entrepreneurs have benefited from affordable, reliable and available credit services that they were unable to access from formal banks.

A cursory review on the characteristics of enterprises in Sub Saharan Africa shows that significant or dominant share of small micro enterprises are operated from informal sector (Stevenson and St-Onge 2005). Women entrepreneurs in particular prefer to start micro enterprises related to food vending, hair making, tailoring of garments and running merchandised shop in retail and wholesale. The informal sector is more lucrative to women because less intensive capital is needed to establish the enterprises and no special skills are required (Fuchs and Berg 2013). However, it is further observed that among Sub-Saharan African countries, women entrepreneurs not only face credit access challenge, but also have low education levels, lack entrepreneurial training and experience to effectively manage enterprises (ILO 2010). The purpose of this paper is to investigate the influence of credit accessed from village and credit associations and social economic factors on the performance of women owned small micro enterprises.

Accessibility and affordability of credit and saving services

The provision of affordable credit has increasingly been identified as an effective strategy that can raise the income of rural populations in African countries. In the last 20 years, policy makers and relevant financial institutions in Africa have developed diverse strategies to bridge the wide gap of credit inequality among entrepreneurs (Marti and Mair 2009). However, despite all the programs and initiatives rolled out to make credit

accessible to majority of the populations, policy makers are still grappling with questions of how they can formulate micro credit models that are more affordable, accessible and available to the increasing number of micro entrepreneurs in the rural areas and urban settlements.

Micro finance banking model is one of the popular approach advocated for as an effective strategy to affordability of credit in developing countries (Rugimbana and Spring 2009). Different case studies and empirical findings have been done to establish the efficacy of micro finance institutions (MFI) in delivering credit services affordable to the poor. The results establish that MFIs are of significant assistance in solving credit challenges in developing countries particularly in Asia countries (Rugimbana and Spring 2009). Nevertheless, in Sub-Saharan Africa there is a great deal of debate on the role of MFI in lifting people out of poverty. Sharief and Sharief (2008) and Sacerdoti (2005) argue that MFIs have not lived up to their expectations of providing affordable credit services to the majority of the poor. This is also demonstrated by World Bank (2005) study where only 30% of the small firms in Sub-Saharan African countries are considered to have an access to affordable financial capital. Rutherford (2000) and Hudon (2008) further note that there is belief that all MFI assist the poor to meet their credit needs, but that is not always the case. Commercial banks have also failed to cater for the needs of the micro entrepreneurs. This has been mainly attributed to stringent conditions attached when applying for loans (Karim 2008).

The failure of specialized financial institutions to meet the credit needs of the poor entrepreneurs and women in particular, has increased the popularity of informal banking groups in most of the developing countries (Marti and Mair 2009). Studies from informal finance sector in developing countries shows that the poor, especially women, are most likely to seek credit from informal banking groups than from formal financial sources (Atieno 2001). Allen (2006) observed that the number of women entrepreneurs' participating in the informal credit groups in most of African countries was much higher than that of male entrepreneurs. Survey of credit market in Kenya indicates that, 35% of the population depends on informal banks for credit, while only 19% of the population access credit from formal banks. Further, 8% access credit from microfinance institutions (Financial Sector Deepening FSD 2009). The survey noted that 38% of the Kenya's population does not have access to credit services. This clearly shows that credit access still remains a challenge to women entrepreneurs who own micro and small enterprises in Kenya.

Village saving and credit association banking model

Theoretical studies carried out on micro credit supply chain in developing countries demonstrate that it is not always obvious that the demand for credit will by far outweigh the supply of the credit services (Aryeetey et al. 1994). However there are market constraint and credit borrowing procedures that will always tend to derail the agency to meet the credit demand (Esperanca et al. 2003). Sacerdoti (2005) points out that in most of the Sub-Saharan African Countries, the absence of efficient credit market systems and high cost transactions when accessing credit can partially be attributed to lack of demand for credit by majority of entrepreneurs who own small firms. Hansmann (1999) and Wilburn (2009) deduced that low income entrepreneurs will tend to derive much more benefits from credit with low interest rates and flexible repayment period.

This explains the preference of women entrepreneurs' access to credit from informal banks (Marti and Mair 2009).

Village Saving and Credit Associations are believed to have developed in the early 1990s. When starting VSCAs, funds are collected from members of the group for a given period of time in reasonable amounts. The duration the funds have accumulated to the required lump sum amounts, the group disburses loans to members. However, members must repay the money with interest at an agreed time. The interest paid on the loans will accumulate in the group fund up to the end of the financial calendar. Members can decide to divide part of the profits as dividends (from interest payment) to the members, or they can start investments projects. However, Allen (2006) noted that running Village Saving and Credit Associations requires more skills on financial management because of record keeping on management of loans.

Case studies on informal banking in Africa indicate that women prefer to participate in informal banking groups such as VSCAs for both economic and social needs (Gugerty 2007). Credit and savings accessed from informal banking groups is mostly used to cater for social needs such as purchasing household goods, paying household bills or paying for education. Savings and credit are also used during emergencies such as illness or natural disasters since women cannot afford insurance premiums. Credit and savings received from VSCAs are mostly used finance stock capital in small micro enterprises (Wilburn 2009). Anderson and Baland (2000) observed that participation in informal banking groups was the only way for women to gain resources, which they can decide how to spend, without being forced by their spouses or other family members. This clearly highlights that VSCA provides the poor with a credit platform to improve their livelihoods income.

Performance of micro and small enterprises

Small and micro enterprises have widely been recognized as the major source of employment for many households in developing countries. Sonobe et al. (2012) note that small micro enterprises have the potential to expand and grow in size to the level of creating significant impact to the growth of economies and thus reducing poverty levels. Different case studies have carried analytical work that attempts explain the attributes and aspects that are required by small micro enterprises to improve their performance. The works by Shumpeter and Cole's theory of enterprise, Knights theory of risk, and theory of labour economics as cited by Smith-Hunter and L Boyd (2004) have over the years been used by different studies to explain the dynamics of entrepreneurship behavior. These entrepreneurial theories are based on the hypothesis that an entrepreneur is an investor who is always focused on maximizing better fortunes from the venture they invest in. Ab Aziz et al. (2005) argued that an entrepreneur is an investor who must come up with new ideas and innovations to facilitate growth of the enterprises.

Millions of women of all income levels in developing economies are venturing in the field of entrepreneurship. Some case studies indicate that the number of women entrepreneurs setting up micro enterprises is outnumbering men who have dominated the venture for many years (Gikonyo et al. 2006). Weber (1930) theory of labor attributes these observations to the fact that those who are excluded from the mainstream economy (mostly women) always tend to venture into entrepreneurial activities to fulfill

their social economic needs. However, ILO (International Labour Office) Seed Program and ADB (African Development Bank) (2004) noted that despite many women venturing into entrepreneurial activities in developing countries, majority of SMEs were not sustainable. Ojera et al. (2011) also established that in Sub-Saharan Africa, 50% of SMEs recorded deteriorating performance five months after they were started. Nevertheless, a study by Fafchamps et al. (2011) and Golla et al. (2011) observed that some women entrepreneurs had successfully operated enterprises and were able to create employment in their communities while increasing their income.

The Business Theory as cited by Fournier and Grey (1999) explains that there are business management skills that each entrepreneur must possess before ultimate success is achieved. Some of these skills include: management, production, marketing, financial management, risk management, human resource management, corporate communication and industrial relations skills. Still and Timms (2000) further argue that most of the women entrepreneurs in developing countries lack some of these personal attributes that can make their enterprises to be successful.

In developing countries, women entrepreneurs are always faced by social economic barriers that deter their economic success Inter-American Development Bank (2010). ILO (2010) shares similar observations that women's quest of having successful enterprises has been hindered by cultural, economic and political drawbacks. ILO (International Labour Office) Seed Program and ADB (African Development Bank) (2004) established that majority of the poor women entrepreneurs in Sub Saharan Africa operate their enterprises in harsh environments than their male counterparts. In most of the cases women entrepreneurs support the household needs of their families from the meager profits or capital of their underfinanced enterprises. Given this fact, women-owned small micro enterprises are most likely to operate with low investment capital, limited market opportunities and low profits (World Bank 2005). Ojera et al. (2011); Stevenson and St-Onge (2005) puts it right in their argument that due to inability to own resources such as land, low education levels and lack of business management skills, only three out of five enterprises are able to establish themselves three years after their inception.

While different approaches have been used to improve the performance of MSEs owned by women in developing countries, Gikonyo et al. (2006) strategy appeared to be more robust, it alleged that for women owned enterprises to be successful, the entrepreneurs required basic entrepreneurial training on management of enterprises, availability of affordable loans and support from their family members. However, empirical studies indicate that access to affordable credit was a critical determinant to growth and expansion of enterprises (Mano et al. 2012). The World Bank (2009) shared similar sentiments although it deduced that credit alone would not be the only determinant of better performance of SMEs; but other factors such as ability to create savings, better education levels for entrepreneurs could also be significant in determining better performance of SMEs in developing countries. The literature reviewed indicates that some of the outstanding factors that can be attributed to low performance enterprises owned by women in Sub-Saharan Africa included, lack of credit and savings, low levels of education and lack off entrepreneurship training. Thus the following hypotheses were formulated;

H₁: Total amount of credit and dividends accessed from VSCAs influenced changes in net profits and capital in women owned enterprises.

H₂: Selected social economic factors influenced positive changes in the net profits and capital of women owned enterprises.

Methods

Study area description

The study was conducted in Nakuru Town Kenya that had a population of 457,495 in 2010 with female gender comprising 51% the Town's population. The town is located in Great Rift Valley and covers an area of 290 square kilometers. The major economic sectors of the town are commerce, industry, tourism, agriculture and services (Mwangi 2011).

Target population

The study focused specifically on women entrepreneurs who participated in VSCAs within Nakuru Town. The study also purposively focused on women entrepreneurs who had applied for business credit from VSCAs between year 2010 and 2012 and keep records of their enterprise operation.

Population of the study and sample selection

The identified accessible population was 517 women entrepreneurs who participate in registered VSCAs within Nakuru Town and who keep enterprise operation records. The respondents were stratified according to the locations of their enterprises. Yamane (1967) formula was used to determine the sample size of 225 respondents who were proportionately drawn from four locations namely; Afraha, Kaptembwo, Central Business District and Lanet locations. Proportional allocation method was then used to identify the number of respondents to be picked from a particular strata used. Systematic random sampling was used to identify the actual respondents to participate in the study by picking the third case.

Yamane sampling formula

$$n = \frac{N}{1 + N(e)^2} = \frac{517}{1 + 517(0.05)^2} = 225$$

N = Population,

E^2 = Level of precision,

n = Sample.

Data collection instrument

A questionnaire was used to collect data from the location of the respondents' enterprises. The semi-literate respondents were assisted in filling in the questionnaires by the researchers. The questionnaire had 25 questions and was divided into five sections. It took an average of 30 minutes for well educated respondents to fill in the questionnaires. The semi literate respondents were assisted by the researchers to fill in the questionnaires which took an average of 40 minutes. The features of the questionnaires included, age of the respondents, their marital status, respondents amount incomes, source of credit between year 2010 and 2012, total amount of credit and dividends accessed from VSCAs in year 2010, 2011 and 2012. Further, uses of credit and dividends during period of year 2010 and 2012, education level of respondents, experience of entrepreneurship, and training on business management was captured. Other

features of the questionnaire included, information on total annual net profits in the SMEs which was calculated by data collected on the net income after tax and total annual sales in SMEs. The data on total amount of capital in the enterprises was collected by calculating the total amount of stock and other assets owned by enterprises.

Data analysis

Descriptive data on characteristics of SMEs and education levels were analyzed using percentages. Inferential statistics was analyzed using ordinal logit model. According to Hosmer and Lemeshew (1989) ordinal logit models are flexible and results can have meaning full interpretation form mathematical point of view hence ordinal logit model was selected for this study. Stata soft ware command (*rcheck*) was used to check for the robustness of the model.

Ordinal logit model specification

The Ordinal logit regression model was designed to test the study hypothesis. The studies predictor variables included, age of the respondents, total income, total amount of credit and dividends accessed from VSCAs in year 2010, 2011 and 2012, education level of respondents and experience of entrepreneurship. The dependent variables ncluded calculated total net profits in the enterprises and calculated total amount of capital in the enterprises.

The OLS model was;

$$\gamma_i = \alpha + \beta x_1(RA) + \beta x_2(EDLV) + \beta x_3(BEXP) + \beta x_4(TCR) + \beta x_5(TDR) + \beta x_6(\text{Incm}) \quad (1)$$

$$\gamma_{ii} = \alpha + \beta x_1(RA) + \beta x_2(EDLV) + \beta x_3(BEXP) + \beta x_4(TCR) + \beta x_5(TDR) + \beta x_6(\text{incm}) \quad (2)$$

Where:

γ_i = Calculated Total Net profits of the entrprises,

γ_{ii} = Calculated Total Amount of Capital in the enterprises,

$\beta x_1(RA)$ = Respondents age ,

$\beta x_2(EDLV)$ = Education level of the respondents,

$\beta x_3(BEXP)$ = Business Experience of the respondents,

$\beta x_4(TCR)$ = Total Credit Received From VSCAs in Year 2010, 2011, 2012,

$\beta x_5(TDR)$ = Total amount of Divideds Recived From VSCAs in Year 2010, 2011, 2012,

$\beta x_6(\text{incm})$ = Total Income.

Results

Social economic characteristics of the respondents

In terms of education levels, all the sampled respondents attained formal education and 43.6% had attained secondary school education. On the age of the respondents, most of the female entrepreneurs comprising 42% were of age 31 to 40 years, while 11% of those interviewed had between 51 to 60 years. On the entrepreneurial

experience of the respondents, majority of the women entrepreneurs had more than four years experience practicing entrepreneurship while only 2% of the respondents had less than three years (Table 1).

Changes in net profits

Ordinal logit regression model (OLR) was used to investigate whether the predictor variables; total credit, dividends accessed from VSCA, respondent's age, education level, entrepreneurial experience and total income influenced changes in net of the enterprises. The OLR model was estimated using maximum likelihood estimation method. The study used data collected on credit, dividends, income and net profits of the enterprises over a three year period (2010–2012).

Total amount of credit accessed from village saving and credit association (VSCAs) between year 2010 and 2012 ($\beta_{x_1}(TTCA)$) was significant at 1% confidence level, while total dividends received ($\beta_{x_2}(TTD)$), total income $\beta_{x_6}(\text{incm})$ and education level ($\beta_{x_3}(EDLV)$), were significant at 5% confidence respectively. Business experience of the entrepreneurs ($\beta_{x_3}(BEXP)$) was significant at confidence level 10%. The log likelihood estimation for the fitted model was -716.71 and log likelihood chi-squared value of 91.80 indicating that all the parameters were jointly significant at 10%. Pseudo R2 of 60.2% was also above the statistical threshold of 20% thus confirming that, total amount of credit, total dividends, total income, experience of practicing entrepreneurship and education levels of women entrepreneurs positively influenced the changes in net profits of the enterprises. The study observed that the age of the respondents ($\beta_{x_1}(RA)$) did not influence changes in the net profits of the SMEs within the given parameters (Table 2).

Changes in capital of the enterprises

The Table 3 below presented results of ordinal logit regression model on the selected factors that were hypothesized influenced changes in capital of the women owned

Table 1 Characteristics of the respondents

Variables		Percentage
Educational level	Illiterate	-
	Primary	30.2
	Secondary	43.6
	Tertiary University	26.2
Age	20-30 Years	17.8
	31-40 Years	42.2
	41-50 Years	26.7
	51-60 Years	11.1
	>60 Years	2.2
Entrepreneurial experience	0-3 Years	2
	4-6 Years	44
	7-10 Years	26
	11 > Years	28

Source: Field data (2013).

Table 2 Results of OLS analysis on net profits

Predictor variables	Coeff. estimates	Std. err.	Z	P > z	Estimated coefficient (log odd ratio)
Age $\beta_{x_1}(RA)$	-0.09660	0.1357	-0.71	0.477	0.9079
Education level $\beta_{x_3}(EDLV)$	0.2013	0.2183	1.13	0.0259 **	1.2231
Business experience ($\beta_{x_4}(BEXP)$)	-1.015	0.049	-0.24	0.0814*	0.9899
Total credit accessed from VACA ($\beta_{x_1}(TTCA)$)	9.300	1.520	3.37	0.000***	1.0
Total dividends received ($\beta_{x_2}(TTD)$)	5.420	5.500	.099	0.0324**	1.0
Total income $\beta_{x_6}(incm)$	5.880	7.290	0.81	0.0419**	1.0
Log likelihood = -716.710	Significant at 1%**			No of Obs =212	
log likelihood $\chi^2 = 91.80$	Significant at 5%**				
Pseudo R2 = 0.0602	Significant at 10%*				
Prob > Chi2 = 0.0000					

*, **, ***, show the significance level P>|z|value and is shown by values 1%, 5% and 10%.

enterprises. The study used data collected on credit, dividends, income and capital of the enterprises over a three year period (2010–2012).

The findings of study revealed that the log likelihood for the model fitted was -714.42 and log likelihood for chi- squared value of 74.02; this implied that all the parameters were jointly significant at 10% confidence level. The results in Table 3 further shows that among all the predictor variables, only total amount of credit accessed from VSCAs ($\beta_{x_1}(TTCA)$) and total income were significant at 1% confidence level. Predictor variables such as education level of the respondents, experience of practicing entrepreneurship and total amount of dividends received from village saving and credit associations were significant at 10%. The overall results in the OLR model shows that the Pseudo R² of 49.3% was above the statistical threshold of 20%, thus implying that the selected factors ($\beta_{x_1}(TTCA)$, ($\beta_{x_2}(TTD)$), ($\beta_{x_4}(BEXP)$, $\beta_{x_6}(incm)$ and $\beta_{x_3}(EDLV)$) positively influenced changes in capital of the enterprises at given parameters estimates. However, the study observed that the age of the respondents did not influence the changes in the net profits of the enterprises at given significant levels of 1%, 5%, and 10%.

Table 3 Results of OLS analysis on capital

Predictor variables	Coeff. estimates	Std. err.	Z	P > z	Estimated coefficient (log odd ratio)
Age $\beta_{x_1}(RA)$	-0.04860	-0.1311	-0.35	0.724	0.952
Education level $\beta_{x_3}(EDLV)$	0.7256	-0.2059	0.38	0.0705 **	1.075
Business experience ($\beta_{x_4}(BEXP)$)	-0.0095	-0.4259	-0.22	0.0824*	0.990
Total credit accessed from VACA ($\beta_{x_1}(TTCA)$)	4.820	2.840	1.70	0.009***	1.0
Total dividends received ($\beta_{x_2}(TTD)$)	2.710	4.950	0.55	0.0584**	1.0
Total income $\beta_{x_6}(incm)$	0.00016	7.570	2.14	0.033***	1.0
Log likelihood = -714.421	Significant at 1%**			No of Obs =212	
Log likelihood $\chi^2 = 74.02$	Significant at 5%**				
Pseudo R2 = 0.0493	Significant at 10%*				
Prob > Chi2 = 0.0000					

*, **, ***, show the significance level P>|z|value and is shown by values 1%, 5% and 10%.

Discussion

The discussions of the findings were done in reference to past empirical studies and theories conducted in Sub Saharan African countries and in other developing countries that shared similar social economic characteristics as those of the study location.

The results of the study showed that all the respondents had acquired basic education level, with most (43.6%) having attained secondary school education level. The results of OLR model also revealed that the education level of the respondents was a significant factor that influenced changes in the net profits and capital of the enterprises. This implied that for the smallest business (SMEs) to record better performance in net profits, and capital, it was necessary for entrepreneurs to have acquired standard education levels to manage the enterprise. Such observations were common among Sub-Saharan Africa countries Kenya included. A study by Wasihum and Paul (2010) carried out in Addis Ababa Ethiopia reported that to some extent, entrepreneurs with higher education levels are able to make wise and rational decisions on management of enterprises. Gikonyo et al. (2006) further pointed out that, entrepreneurs with a higher level of formal education are poised to have better chances of success. This is attributable to having visionary strategies, capacity to employ technical entrepreneurial skills, access to stock of information and willingness to take risk.

Our findings on the influence of entrepreneurial experience on the performance of SMEs, revealed that entrepreneurial experience was a significant factor that influenced positive changes in the net profits and capital of MSEs. This could be explained by the fact that 98% of the women entrepreneurs had more than four year experience of practicing entrepreneurial ship. The results support the findings of Carr and Sequeira (2007) who observed that work experience influenced entrepreneurial intentions that would in turn result to better managing of enterprises and better returns. Theoretically, Shane (2000) deduced that entrepreneurial opportunities recognition usually varies with individual experiences in a particular business environment. On the income of the entrepreneurs, the study revealed that the total income of women entrepreneurs significantly influenced positive changes in the net profits and capital of SMEs. International Labor Organization (2007) observed that, in Sub Saharan Africa, women entrepreneurs operated their enterprises in harsh environments than their male counterparts. However, women entrepreneurs were able to finance capital of their enterprises and overcome other challenges despite low profits they earned from SMEs.

Further, the study results showed that the total amount of credit accessed from VSCAs in years 2010, 2011 and 2012 influenced positive changes in the net profits and capital of the enterprises. These results suggest that women entrepreneurs were able to effectively use the credit from VSCAs in capital expansion purposes. The study finding on credit confirms the implicit assumptions that credit not only facilitates growth in large firms but also in small firms. However, an empirical study by ILO (International Labour Office) Seed Program and ADB (African Development Bank) (2004) found that lack of credit was a major hindrance to development of small business. Raheman and Nasr (2007), observed that there was a positive significance relationship between amount credit invested in an enterprise and the profit earned. Olarenwaju and Olabisi (2012) noted that, in Sub-Saharan Africa, for women owned small micro enterprises to prosper and realize growth, subsidized credit services were required. World Bank (2009) also reported that affordable and accessible credit was a factor that would influence growth of women owned enterprises in Africa.

The total amount of dividends received from Village Saving and Credit Associations was another factor that influenced changes in net profits and capital of the women owned enterprises. These results implied that a substantive amount of annual dividends shared from VSCAs were used by women entrepreneurs to finance capital of their enterprises. This is in contrary to Zeller and Sharma (2000) study that noted that most of the women in Sub-Saharan Africa preferred to invest their savings and dividends accessed from informal banks in buying assets, paying for their household bills and paying school fees. In terms of the age of the respondents, the study findings showed that majority 69% of the women entrepreneurs were between age 31 and 50 years. Similar results were shared by Abebe and Selassie (2009) who argued that in Sub-Saharan Africa, majority of the women who participated in informal banking groups such as VSCAs were within child bearing age group. They needed to support their small enterprises and households. However, further study results also revealed that age was not a factor that significantly influenced positive changes in the net profits and capital of SMEs.

Conclusions

The study investigated the credit accessed from village and credit associations and social economic factors that influenced on the performance of women owned enterprises. The study specifically focused on the financial data in SMEs of three year period (2010–2012). First, the results showed that total amount of business loan accessed from VSCAs positively influenced the net profits and capital of the SMEs. Second, the total annual dividends received from VSCAs by women entrepreneurs and invested in the SMEs had positively influenced net profits and capital of SMEs. Thirdly, social economic factors such as education level of entrepreneurs, amount of income earned by entrepreneurs' and entrepreneurial experience influenced positive changes in the net profits and capital of SMEs. Nevertheless, the age of entrepreneurs was not a factor that influenced positive changes of net profits and capital of SMEs. The empirical observations of this study suggest that credit accessed from informal banking groups can also facilitate better performance in women owned SMEs. However, it is imperative to note that affordability of credit services is an important aspect in facilitating better performance of SMEs. This can be attested to the fact that the women entrepreneurs accessed credit from VSCAs with interest rates of less than 10%.

This study major limitation was that the target population only included women entrepreneurs who owned small micro enterprises (SMEs). This are considered to be the smallest enterprises in size according to the definition provided by government of Kenya. However, it is imperative to note that the study did not focus on women entrepreneurs who owned medium sized and perhaps large sized enterprises and access credit and savings services from VSCAs.

The recommendation of this study included formulation of policies on community banking such as VSCAs that can enable more women entrepreneurs in the rural and urban areas to access affordable credit. In addition, micro entrepreneurs who cannot access credit at affordable rates can also be mobilized, encouraged and supported to start VSCAs. Finally it would be essential for further empirical studies to be carried on other the characteristics of capital structure of SMEs financed with credit from

informal banking groups. The results of this study have shed some light on the performance of women owned SMEs, which immensely contributes to the literature and theories of informal banking and small enterprise development.

Competing interests

Authors declare that they have no competing interest.

Authors' contributions

CNG, LNK and MMM designed the research, analyzed collected data, and wrote the research. All authors read and approved the final manuscript.

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