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## EFFECT OF CREDIT AND EDUCATION ON PERFORMANCE OF MICRO AND SMALL ENTERPRISES IN KENYA

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## **EFFECT OF CREDIT AND EDUCATION ON PERFORMANCE OF MICRO AND SMALL ENTERPRISES IN KENYA**

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### **Abstract**

**Purpose:** The purpose of this study was to establish the effect of credit and owner/manager educational qualification on performance of micro and small enterprises in Kenya and their joint effect using the 2016 MSMEs survey data.

**Methodology:** This is cross-sectional data collected from a population of 50,043 enterprises. A sample of 384 enterprises was used in the analysis as obtained using Fisher's (2003) formula for computing sample size from a large population. Inferential statistics was used to interrogate the relationship between the variables.

**Results:** Regression results indicated that both access to credit services and educational qualification had a positive and significant effect on performance of the sampled enterprises. Further analysis indicated that the joint effect of the two variables was greater than their individual effect.

**Unique contribution to theory, practice and policy:** Recommendations of this study are that the central Bank of Kenya should focus more on lending and credit facilitation programs in order to encourage greater bank-led financing to the sector to help bridge the unmet demand for credit and that micro and small enterprises should be encouraged to establish good credit history with various lending institutions to enable them access credit facilities from financial institutions. In addition, owners/managers of the enterprises should be provided with training on managerial and technical skills to complement their educational qualifications in running the enterprises.

**Keywords:** *credit access, educational qualification, performance, MSEs*

## **1.0 INTRODUCTION**

### **1.1 Background of the Study**

Over the years, the Micro and Small Enterprises (MSEs) sector has attracted attention from diverse fields in business and economics given its important role towards delivery of essential goods and services, enhancing competition, employment generation and nurturing modernization towards the economic prosperity of various economies around the world. In Kenya, Vision 2030 blue print highlights the all-important feature of elevating the country to become an independent middle income entity to ensure quality for all inhabitants by the Financial Year 2030. Vision 2030 identifies and prioritizes the MSE sector as crucial towards the achievement of the objective of transforming Kenya towards becoming a Middle income Status (KNBS, 2016).

A study by Kongolo (2010) established that small business owners globally have the same characteristics, face the same obstacles but differ in their understanding of how small businesses assist in economic growth. SMEs have ability to fuel economic growth because they create new jobs, expand the tax base, and are drivers of innovation. SMEs enhance competition and entrepreneurship hence has external benefits on economy wide efficiency, innovation and aggregate productivity (Beck & Levin, 2005). Globally there is an agreement that MSEs hold the key to economic growth based on the fast growth of enterprises and the role of SMEs in generation of employment.

According to Normah (2007) the concentration of SMEs has a close relationship with the dominant economic activities. SMEs dominate the world economies in terms of employment and number of companies, yet their full potential remains remarkably untapped (Schlogl, 2004; Omar, Arokiasamy & Ismail, 2009). This is due to a number of reasons including legal, institutional, cultural, societal and economic factors which makes the role of SMEs on economic development different across countries.

There were about 2.4 million small and medium-sized enterprises at the end of 2001 in China, accounting for 99 per cent of all registered corporations (Information Office of the State Council, 2004). If those SMEs such as self-employed businesses, leasehold farm households and individual partnerships that are not legal persons are also included, the number is far larger. Chinese SMEs have played an important role in stimulating economic growth, increasing employment, expanding exports and promoting science and technology innovations.

Chen (2006) conducted a study on the historical development and current status of Chinese small and medium-sized enterprises (SMEs) and examined major political initiatives contributing to SMEs' development. The researcher argues that the fundamental role of the market in allocating resources and the self-operation status of SMEs should be respected. It is imperative to encourage SMEs to optimize industrial structure. Further, it is important to properly handle the government-enterprise relations and bring the role of the government in macro control into full play so as to create a fair competitive environment for SMEs.

### **1.2 Statement of the problem**

Over the years, the Micro and Small Enterprises (MSEs) sector has attracted attention from diverse fields in business and economics given its important role towards delivery of essential goods and services, enhancing competition, employment generation and nurturing modernization towards the economic prosperity of various economies around the world (Kongolo, 2010).

However, over time the Kenyan entrepreneurs have reported challenges in their attempts to raise startup finances and access to financial services to support their entrepreneurial activities. Access to loans from commercial banks by MSEs has proved difficult as compared to accessing the services from other small financial institutions. This is mainly attributed to high interest rates or lack of collateral on the side of entrepreneurs to complement their application for the loans. Some of the other reasons for the low uptake of loans by owners of the enterprises include risk averse nature of entrepreneurs who do not desire to be indebted and the idea that loans are a source of unnecessary trouble that is not worth them going through (KNBS, 2016).

Numerous studies have been undertaken previously on the effect of business development services like access to education and managerial training on performance of Kenyan MSEs. Of interest though is that there have been limited or outdated findings to inform MSEs' policy formulation and implementation. Based on premise, the current study sought to bridge the gap by determining the effect of credit and education on financial performance of Kenyan MSEs.

### 1.3 Research objectives

- i. To establish the effect of credit on performance of MSEs in Kenya.
- ii. To establish the effect of educational qualification on performance of MSEs in Kenya.
- iii. Determine the joint effect of credit and educational qualification on performance of MSEs in Kenya.

## 2.0 LITERATURE REVIEW

### 2.1 Theoretical Framework

#### 2.1.1 Classical Theory of Output Growth

A rational entrepreneur is motivated by the objective of profit maximization just like other big firms operating in any market. The objective of the entrepreneur is therefore to increase profitability of the enterprise given the available technology, stocks of labor and other resources available in the enterprise.

Various studies on the subject have measured entrepreneur performance using neo –classical model of growth with performance used as proxy of economic growth. Since the producer (business owner) has various inputs; that is capital stock from borrowed sources and own savings, stocks of labor from himself and other family members, skills acquired from schools, they are combined to ensure the best outcome for the entrepreneur (Akingunola, 2011; Ihua, 2009).

There are various ways in which resources can be combined in an organization to produce output. In this study, capital stock from credit received and skills acquired through schooling and business training were combined to determine their effect on financial performance of the sampled enterprises.

Using a Cobb-Douglas function to represent the relationship between output and inputs, it is assumed that the entrepreneur has two resources; capital and labor that are combined to produce output as shown in equation 2.1.

$$Y = AK_i^\alpha L_i^{1-\alpha} \dots\dots\dots 2.1$$

Where  $Y$  is the output produced

$K$  and  $L$  are units of labor and capital used in production

$\alpha$  and  $1-\alpha$  are output elasticities with respect to capital and labor inputs respectively

$A$  is a measure of technical progress in the firm.

The capital, labor and stock of skills in the business are financed through own savings and borrowing from various sources in the economy. In this study, the major sources of credit considered were banks and other institutions such as women enterprise fund and youth enterprise fund that were introduced in 2007 to help MSEs easily access start-up capital. Depending on the relative cost of labor and capital, the entrepreneur allocates the available resources between the two inputs to achieve the best performance.

It is important for firms to select performance indicators that reflect the true situation of the business enterprise (Murphy et al., 1996). Although this is the case, there is no universally accepted standard measure of performance. As a result business organizations have had the liberty to determine their own measure of business performance which might not be a true reflection of business performance. In this study, financial performance of the enterprises was measured in terms of total sales turnover.

### **2.1.2 Pecking Order Theory**

The Pecking order theory was initially proposed by Donaldson in 1961 and later improved by Stewart et al. (1984). According to this theory, firms prioritize their sources from Internal Financing to Equity depending on the cost of Financing. Raising Equity is taken up as a last resort; after all available sources of income have been exhausted.

This theory has been used in areas of finance to help a firm choose its capital structure. The pecking order theory simply points at the order in which a company can finance itself. According to this theory, the first preference for a company source of financing is internal financing through retained earnings. In the event that this option is inadequate, the company will opt to borrow from a financial institution and as a last resort, if debt is not adequate, a company should finance itself through the issuing of new equity.

Pecking order theory has been considered important in that it informs the public on how the firm is performing. If a company finances itself internally, this is taken to mean that the company is liquid enough, can meet obligations when they fall due and therefore not facing the threat of liquidation. If the company chooses to finance itself through debt acquisition, the assumption is that the company is in a position to meet the monthly loan repayments. If a company finances itself through issuing new stock, it is normally a negative signal, as the company thinks its stock is overvalued and it seeks to make money prior to its share price falling. According to the theory, from the point of view of an outsider investor, equity is strictly riskier than debt. Both have an adverse selection risk premium but that premium is large on equity. Therefore, an outside investor will demand a higher rate of return on equity than on the debt.

From the perspective of those inside the firm, retained earnings are a better source of funds for the firm than the debt while debt is a better source than equity financing. This argument therefore points to the fact that a firm will finance all its projects through retained earnings if possible. The most common motivation for the pecking order is adverse selection developed by Myers and Majluf (1984). The basic idea behind the pecking order theory is the idea that the owner or the manager of the firm knows the true value of the firm's assets and growth capabilities of the firm. Outside investors cannot tell the true value even where financial

documents are available as there is certain information known only to the business owners. In a case where the firm decides to sell equity, then the outside investor must raise speculations and must be interested to know why the management is willing to do so.

In summary, the manager of an overvalued firm will be happy to sell equity, while the managers of an undervalued firm will not (Cadsby et al., 1990).

The pecking order theory has been used to explain the performance of many firms and specifically the capital budgeting decisions facing the firm. Although this theory relates to big companies and decisions they make when going through financial problems, it can also be used to describe the behavior of micro and small enterprises. In most cases, owners of micro and small enterprises face shortage of resources needed to start and operate a business. They rely on personal savings, donations from friends and relatives and in rare cases loans from banks and other financial institutions. The owner evaluates these sources and makes a decision based on the perceived risk of each source. In many instances, own savings and donations from friends are most preferred as they don't involve monthly payments which has been identified as the greatest fear of most business operators.

### **2.1.3 Human Capital Theory**

The influence of highest levels of education possessed by the owner-managers on the success of their enterprises can best be explained by the human capital theory. According to this theory, training and education are paramount as they improve on the efficiency and productivity of the owner-manager by instilling knowledge and skills which are implemented in running the business operations and as a result raising productivity of the enterprise (Fairlie & Robb, 2007; Chilya & Robert, 2012).

Over the past decade, hundreds of studies have been conducted to estimate success of businesses in terms of Rates of Return to Education (RORE). Most of such studies have shown that formal, proper and precise academics is vital in determining the success in performance of businesses owned by different owner/managers in well developed countries (Cohn & Addison, 1998).

Comparative studies have been conducted in some less developed countries, focusing on the investment in formal education While some studies (Fairlie & Robb, 2007) suggest that education or training raises productivity of owner/managers and the success of their enterprises, others provide different explanations on how education is related to owner/managers' productivity and, hence, success of their businesses (Psacharopoulos, 1994).

The human capital theory informs the educational qualification variable in the current study since it explains the importance of training and education in enhancing efficiency and productivity in an organization. In the case of MSEs, the level of educational qualification of the managers/owners and employees is critical in their success. MSEs with highly qualified and skilled managers and employees are expected to be more profitability compared to those with unqualified and unskilled personnel. Therefore, the human capital theory helps to advance the educational qualification variable in the current study.

## **2.2 Empirical Review**

Kibet and Omwono (2015) conducted a study to figure out the effect of credit on performance of micro and small enterprises in Uasin Gishu County. The study employed primary data targeting a population of 5000 entrepreneurs in the county with a sample size of

45 MSEs. The study found that credit has a positive effect that accelerates the Micro and Small Enterprises towards achieving their Business objectives.

The study also concluded that financial institutions, especially the micro finance were concerned with financial inclusion by availing financial services to people who are economically marginalized and who therefore experience financial exclusion in that they do not have ready access to mainstream commercial and financial service providers.

However, the study by Kibet and Omwono presented a methodological gap since it used primary data while the current study used secondary data. The use of different data types may give varying results. Further, Kibet and Omwono study was confined to MSEs in Uasin Gishu County whereas the current study focused on all MSEs in the currently. This ensured that the results were more comprehensive and conclusive.

Muiruri (2014) conducted a study to investigate the role of microfinance institutions on growth of micro and small enterprise (MSE) in Thika municipality, Kenya. The study used both primary and secondary data on 285 MSEs and sixteen financial institutions. Data collection was done using questionnaires and interview schedules to the different respondents. This data then was analyzed using the statistical packages for social sciences software (SPSS windows version 13.0). The study concluded that there was a positive contribution of credit on performance of micro and small enterprises. Nonetheless, Muiruri's study was limited to MSEs in Thika and did not focus on MSEs in other parts of the Country.

Chibole (2014) conducted a study to investigate how capital microfinance loans, liquidity and ownership affect growth of MSEs in Kenya. The study targeted a total of 311 respondents drawn from micro and small enterprises located in Nairobi Central Business District (NCBD). The study used stratified random sampling and took 20% of the target population giving a respondent base of 62 respondents. Data for the study was collected using the questionnaires and analyzed using descriptive and regression statistics with the aid of Statistical Package for Social Sciences (SPSS). Findings of the study indicated that capital structure, financial liquidity and ownership structure affect growth of medium enterprises in Kenya. The study recommended that enterprises need to avoid high microfinance loans which may results in high transaction costs resulting in a weakened position to pay higher dividends. The main findings here was credit did not significantly contribute to growth especially due to the high interest payment. The study by Chibole presented contradicting results from the ones obtained in the study. While the current study found a significant effect of credit on performance of MSEs, Chibole's study did not find significant contribution of credit to MSEs growth.

Radipere and Dhliwayo (2014) examined the extent to which demographic factors influence business performance. This study examined the effect demographic variables: gender and education of owner have on business performance. Business performance is measured by income, profit, market share, return on income or investment, number of employees and product line. A structured research instrument was used to collect data from 500 SMEs in retail industry through interviewer administrated and self-administrated survey and 93% of questionnaires were returned. It was found that there is a significant difference between mean values of business performance and the demographic variables, gender and education. The results show that there is a significant difference in performance, among the different educational levels.

Those with higher levels of education, such as diplomas and degrees should be encouraged to take up entrepreneurship as career options since the businesses they would run will perform

better and this would be good for the economy. However, the study did not focus on MSEs thus presenting a contextual gap.

Mothibi (2015) study sought to analyze the effects of entrepreneur and firm characteristics on performance of small and medium enterprises (SMEs) in Pretoria. A structured questionnaire was used to collect data on entrepreneur and firm characteristics affecting performance of SMEs. The data were sought and analysed using SPSS statistical package.

Based on the findings derived from multiple regression analysis using the ordinary least squares regression; managerial competence, educational qualifications, work experience, location, size of the firm, period the enterprise has operated and business sector all have significant positive effects on performance of SMEs. However, the study was done in Pretoria, thus presenting contextual gap.

Chiliya and Roberts-Lombard (2012) study investigated the impact of level of experience and education on the profitability of the small grocery shops in the Mdatsane area in East London Metropole area in South Africa. The primary objective was to identify whether experience of the business owner affects the performance of the businesses. The secondary objectives were to determine whether age of the owner/manager, level of education, and the age of the business are significant variables that affect the financial performance of small business operations. Quantitative data was coded into SPSS for graphs and descriptive statistics. One way ANOVA analyses were carried out. The findings indicated that previous work experiences, education levels, age of the owner and the length of business operation have a significant impact on the profitability of the business. However, the study was done in London, thus presenting contextual gap.

### 3.0 RESEARCH METHODOLOGY

In order to achieve the first objective of the study; effect of credit on performance of MSEs, the study used an ordinary least square approach as shown in equation 1

$$y = \alpha + \beta Cre + \varepsilon \dots\dots\dots (1)$$

Where *y* is the total output of an enterprise measured in terms of total sales turnover.

Cre represents the amount of credit received by an enterprise

$\alpha$  and  $\beta$  are regression coefficients to be estimated in the equation

$\varepsilon$  is the error term and it captures all other factors that affect output level but are not captured in the equation.

To achieve the second objective, the study estimated a normal ordinary least squares regression model as used by previous studies (e.g. Aliero, 2015; Atandi and Obwoba, 2013; Kibet and Omwono, 2013) to estimate similar relationship on the effect of education on level of output. The OLS equation that was estimated on the output produced by the enterprise as a function of the parameters was given as in equation 2.

$$y = \alpha + \beta_1 Pri + \beta_2 Sec + \beta_3 Tert + \beta_4 Uni + \varepsilon \dots\dots\dots (2)$$

Where *y* is total output measured by total sales turnover of an enterprise.

Pri represents those enterprises owned/managed by primary school certificate holders.

Sec represents enterprises owned/managed by secondary school certificate holders.

Tert represents enterprises owned/managed by people with middle-level college educational attainment.



Uni represents those enterprises owned/managed by university degree holders

$\varepsilon$  is the error term capturing all other factors that affect output level but are not captured in the equation.

It was justifiable to use different levels of education since different business owners have different educational qualifications. There are those who have primary level education, secondary level education, tertiary education and university education. As such, the business owners are expected to have varying entrepreneurial skills and therefore their business would perform differently.

Objective three was achieved by jointly regressing both education and credit on total sales turnover of the sampled enterprises. This is as shown in 3.

$$y = \alpha + \beta_1 Cre + \beta_2 Edu + \varepsilon \dots\dots\dots (3)$$

Where  $y$  is the total output of an enterprise measured in terms of total sales turnover.

Cre represents the amount of credit received by an enterprise

Edu represents the level of educational attainment by the owner/manager of the enterprise

$\alpha$  and  $\beta_i$ s are regression coefficients to be estimated in the equation

$\varepsilon$  is the error term and it captures all other factors that affect output level but are not captured in the equation.

**Definition and Measurement of Variables**

**Table 1: Definition and measurement of variables**

Type of variable	Specific variable	Description	Measure
Dependent	Sales turnover	The total amount of revenue generated by a business during the calculation period	In Kenyan shillings
Independent variables	Credit	Provision of money, goods, or services with the expectation of future payment	In Kenya shillings
	Education	Level of formal training of an enterprise owner/manager	Primary level Secondary level Tertiary level University level

**4.0 EMPIRICAL RESULTS AND DISCUSSION**

**4.1 Diagnostic Tests**

**4.1.1 Multi-Collinearity Test**

The study used variance inflation factors (VIF) to test for Multicollinearity. According to Field (2009) VIF values in excess of 10 is an indication of the presence of Multicollinearity. The results in Table 4.1 present variance inflation factor results and were found to be 3.254 which is less than 10 and thus according to Field (2009), there is no Multicollinearity.

**Table 2: Multicollinearity Results using VIF**

Variables	VIF
Credit Services	2.631
Educational Qualification	3.451
<b>Average VIF</b>	<b>3.041</b>

#### 4.1.2 Heteroscedasticity Test

The Ordinary Least Squares (OLS) assumption states that the residuals should be Homoscedastic. The Modified Wald test was used in the study where the null hypothesis was that error terms have a constant variance (i.e. should be Homoscedastic).

The results in the Table 3 indicate that the error terms are homoscedastic, given that the probability value is more than the 0.05.

**Table 3: Modified Wald Test for Heteroscedasticity**

Modified Wald Test for Heteroscedasticity
H <sub>0</sub> : Constant Variance (Homoscedasticity)
chi <sup>2</sup> (79) = 3.68
Prob>chi <sup>2</sup> = 0.0549

#### 4.2 Descriptive Statistics

Before performing any analysis, descriptive statistics was undertaken to provide an insight on the composition of micro and small enterprises, access to credit services, educational qualifications of owners/operators of the enterprises and performance. Table 4 provides the percentage composition of micro and small enterprises in the data sheet used.

**Table 4: Descriptive Statistics**

Composition of Micro and Small Enterprises

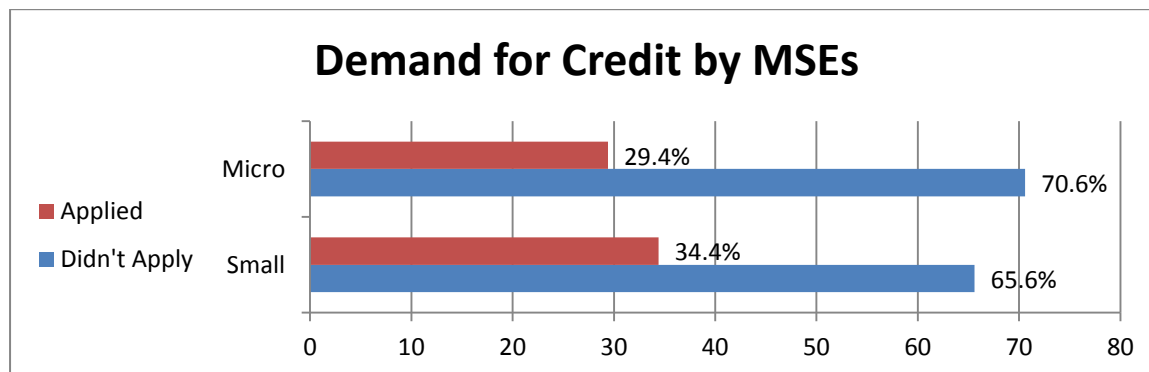
	Frequency	Percent
Micro (1-9 employees)	345	89.4
Valid Small (10-49 employees)	39	10.6
Total	384	100.0

Source: Author's computation (2017)

Micro enterprises form the bulk of sampled enterprises at 89.4 percent while small enterprises comprise 10.6 percent of the sample. This indicates that majority of the enterprises are in their infant stage and hence the need to provide them with the necessary support such as access to credit services to enable them grow to the next stage.

#### 4.2.1 Access to Credit Services by MSEs

A large number of the enterprises did not apply for credit due to various constraints such as requirement for collateral by various financial institutions. Figure 4.1 provides the number of micro and small enterprises that applied for and those that did not apply for credit.



**Figure 1: Demand for Credit by MSEs**

Source: Author's computation using KNBS (2016) data

Majority (85.8 percent of unlicensed and 70.6 percent of licensed) micro enterprises did not apply for credit. Only 14.2 and 29.4 percent of unlicensed and licensed micro enterprises respectively applied for credit. On the other hand, 65.6 percent of small enterprises did not apply for credit. Those who applied were only 29.4 percent of the total. Table 5 further shows the percentage of enterprises who received credit out of the total number of those that applied for the same.

**Table 5: Percentage of Enterprises that Received Credit and Those that Did Not**

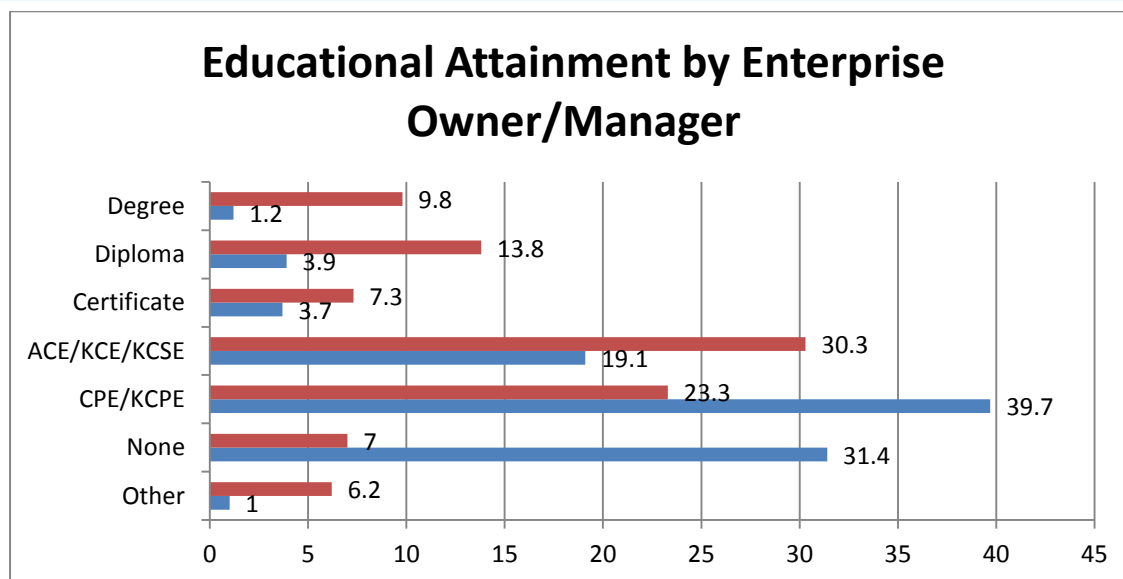
		Frequency	Percent
Valid	Received credit	12	3.1
	Did not receive	372	96.9
	Total	384	100.0

Source: Author's computation (2017)

Out of the total number of enterprises that applied for credit, only 3.1 percent received. The other 96.9 percent did not receive credit applied for. This therefore shows the unmet demand for credit by micro and small enterprises in Kenya.

#### 4.2.2 Educational Qualification of Owner/Manager

The level of educational qualification of owners/operators of micro and small enterprises are provided in figure 2.



**Figure 2: Educational qualification of MSE owner/operator**

Source: Author’s computation using KNBS (2016) data

It can be shown from figure 2 that 39.7 percent of micro enterprise operators have attained primary qualification (KCPE/CPE). On the other hand, 30.3 percent of small enterprise operators have secondary school qualification (KCSE/KCE). Only 1.2 and 9.8 percent of micro and small enterprise operators respectively are degree holders.

### 4.3 Inferential Results

#### 4.3.1 Effect of Credit Services on Performance

The first objective of the study was to establish the effect of credit on financial performance of MSEs in Kenya. This was achieved using Ordinary Least Squares technique. The independent variable was represented by Credit Services while the dependent variable was represented by total revenue accrues by the MSEs.

Results in Table 6 indicate that credit services have a significant effect on performance of the enterprises at a 0.05 level of significance as supported by a calculated t value of 4.147, which is greater than the critical t-value of 1.96. Beta value of 0.471 implies that credit has a positive effect on an enterprise’s financial performance. A unit increase in the amount of credit an enterprise receives will increase its output by 0.471 units. This is in agreement with Kibet and Omwono, 2015; Muiruri, 2014; Mmari, 2014, all who established that credit services have a positive effect on performance of an enterprise.

According to the pecking order theory, an enterprise will opt for debt (credit) in an attempt to improve its performance in the case whereby its internal sources of financing are inadequate. Majority of MSEs owners borrow from friends, close family members and financial institutions to obtain capital for starting and sustaining their enterprises.

Adjusted  $R^2 = .582$  means that the model accounts for 58.2 percent of variations in financial performance of the enterprises while the other 41.8 percent is explained by other factors that affect performance but are not captured in the model. Overall, the f-statistic of 17.198 indicates that the model is of good fit for the data.

### 4.3.2 Effect of Educational Qualifications on Performance

The second objective of the study was to establish the effect of educational qualification on financial performance of MSEs in Kenya. In this case Ordinary Least Square technique was also employed with educational qualifications being the independent variable and Revenue representing the Dependent Variable.

Results in Table 6 showed that education qualification has a significant effect on performance of micro and small enterprises at a 0.05 level of significance as supported by a calculated t value of 3.721, which is greater than the critical t-value of 1.96. The beta value of 0.396 is positive meaning that both educational qualification and business performance of an enterprise move in the same direction. An increase in the manager's level of education and training will increase the level of output by 0.396 units.

This is in agreement with the human capital theory which argues that education that is accompanied with training helps raise productivity of owner/manager through imparted knowledge and skills and by thus enhances growth and performance of an enterprise.

Adjusted R<sup>2</sup> of 0.514 indicates that the model accounts for 51.4 percent of the variations in financial performance while the remaining 48.6 percent is explained by other factors affecting performance not captured in the model. The F-statistic is at 13.846. This is significant at 5% level of significance which means that the model is a good fit for the data.

**Table 6: Individual Effect of Education Qualification and Access to Credit Services on Performance**

Statistical Tests	Access to Credit Services	Educational Qualification
Adjusted R <sup>2</sup>	0.582	0.514
C	0.634	0.597
$\beta$	0.471	0.396
t	4.147*	3.721*
f	17.198*	13.846*
n	384	384

The values marked with an asterisk are significant at 5% level of significance. The adjusted R<sup>2</sup> shows the explanatory power of the model for each of the regressors,  $\beta$  is the beta-coefficient for the individual effect of the independent variables; t is the t-statistic which shows the significance of each of the independent variables, f is the f-statistic which also shows the overall significance of the model; n is the number of observations. The dependent variable which is performance is measured using revenue.

### 4.3.3 Joint Effect of Access to Credit and Educational Qualification on Performance

The third objective of the study was to establish the joint effect of credit and educational qualification on the performance of MSEs in Kenya.

**Table 7: Joint Effect of Access to credit services and Education on Performance of MSEs**

Variable	$\beta$	t-Statistic
Credit Services	0.386	3.292**
Education Qualification	0.274	2.326**
C	0.716	
Adjusted R-squared	0.608	
F-statistic	18.736	
n	384	

Table 7 provides the joint effect of credit services and educational qualification on performance. When both credit and education qualification variables are jointly analyzed, the adjusted  $R^2$  becomes 0.608, which is greater than when the variables are analyzed individually. This therefore implies that both credit services and educational qualification explain 60.8% of the total variations in the performance of MSEs in Kenya. The remaining 39.2% is explained by other factors that are not part of this study.

According to findings both credit services and educational qualification have a significant effect on performance of micro and small enterprises at a 0.05 level of significance as supported by calculated t values of 3.292 and 2.326 respectively, which are greater than the critical t-value of 1.96. The beta value of 0.386 and 0.274 are positive meaning that credit services, educational qualification and financial performance of MSEs move in the same direction. An increase in credit by 1 unit will increase business performance of MSEs by 0.386. Further, an increase in educational qualification by 1 unit will increase business performance of MSEs by 0.274 units. The F-statistic is at 18.736. This is significant at 5% level of significance which means that the overall model is a good fit for the data.

According to the contingency theory, holding all other factors constant, the joint effect of two or more variables is often greater than their individual effects. This is testament of the increased joint significance of education and credit services as compared to their individual effect on business performance of the sampled enterprises.

## 5.0 SUMMARY OF FINDINGS, CONCLUSION AND POLICY IMPLICATIONS

### 5.1 Summary of the Findings

The overall objective of this study was to determine the effect of education and credit services on performance of micro and small enterprises in Kenya. Research findings indicate that 39.7 percent of the owners/operators of unlicensed enterprises had attained primary school education while 30.3 percent of operators of licensed enterprises had attained secondary school education. On the other hand, those who applied for credit (14.2 percent unlicensed micro and 34.4 and 29.4 percent licensed micro and small enterprises respectively) were less compared to those that did not apply (85.8 percent unlicensed micro and 70.6 and 65.6 percent licensed micro and small enterprises respectively).

The first objective of the study was to determine the effect of credit services on business performance of micro and small enterprises in Kenya. This objective was achieved using ordinary least squares technique with the independent variable in this case being access to

credit. The dependent variable which was used to measure business performance of the sampled enterprises was total revenue.

Empirical findings indicated that access to credit has a positive and significant effect ( $\beta=0.471$ ,  $t=-4.147$ ,  $R^2=.582$ ) on performance of sampled MSEs.

Similar findings had been reported by various researchers such as Kibet and Omwono (2015), Muiruri (2014). Madole (2013) had also established that credit services lead to increased business profits and increased sales turnover. However, these findings differed from those of Chibole (2014) who had indicated that credit services did not significantly contribute to growth of enterprises.

The second objective was to establish the effect of education of Owners/Managers on business performance of micro and small enterprises. This was also achieved using ordinary least squares technique whereby total revenue of the enterprises was used as the dependent variable and educational qualification as the independent variable. Research findings indicated that educational attainment of the owner/manager of an enterprise has a significant and positive effect on its performance ( $\beta=0.396$ ,  $t=3.721$ ,  $R^2=.514$ ). These findings concur with recommendations recorded by Mmari (2014) which stated that enterprises that were owned/managed by people with low education registered slow growth compared to those run by people who had relatively higher educational qualification. The findings differed from those by Njoroge (2013) who had argued that despite the importance of education in helping owners do proper book keeping, on its own, education was not important in determining performance.

The third objective was to determine the joint effect of educational qualification and access to credit on performance of the enterprises. Results of the study indicated that the joint effect of credit and education was greater (adjusted  $R^2=0.608$ ) than the individual effect. Njoroge (2013) had also established that the effect of education becomes significant when combined with other factors such as training. This is in line with both the classical theory of output growth and the contingency theory which argue that the combined variable effect is greater than the effect of each variable individually.

According to the human capital theory, education and training raise productivity of the owner/manager by imparting knowledge and skills; hence, raising the future success of an enterprises. This explains why enterprises that were owned/managed by people with higher academic qualifications and who had attended business training recorded higher input levels compared to those managed by people with just basic education.

## **5.2 Conclusion**

From the findings, the study concluded that credit services have a positive and significant effect on the performance of MSEs in Kenya. This means that MSEs that have access to credit perform better than those that cannot access credit. Further, the study concluded that educational qualification has a positive and significant effect on the performance of MSEs in Kenya. This means that MSEs run by educated individuals were more likely to perform compared to those managed by less-educated individuals.

## **5.3 Policy Recommendations**

The economic pillar of Kenya vision 2030 aims at achieving an average economic growth rate of 10 percent per annum, and sustaining the same until 2030. The micro, small and medium sized enterprises have been identified to play a key role in propagating economic

growth. It is therefore incumbent upon the government to put proper policies (access to finances and training) in place for growth and development of this sector.

Adequate business development services such as provision of affordable business loans and training entrepreneurs on relevant business skills should be advocated for in order to help improve on performance of micro and small enterprises.

Various governmental institutions that offer business development services such as KIBT, KIRD, among others, should consider offering their services to micro and small enterprises since they form the bulky of the entire sector and are underserved. This has seen majority of the enterprises failing to grow from micro to small, and the large enterprises.

This study recommends on the following actions by the various stakeholder to micro and small enterprise sector in Kenya. To begin with, the Central Bank of Kenya should focus more on lending and credit facilitation programs in order to encourage greater bank-led financing that can help bridge the unmet demand for credit by MSEs. Secondly, micro and small enterprises should be encouraged by lenders to establish good credit history with various lending institutions to enable them access credit facilities from financial institutions.

The central bank, in collaboration with commercial banks, should consider coming up with special lending rates for micro and small enterprises to help them easily access credit services from main stream banks unlike it is the case at present.

To bridge the training Gap, Non-Government Organizations, Like World Vision and Other Business Partners, Like Strathmore Business School should continue providing training on Record Keeping, Sourcing of Funds, Marketing, and Human Resource Management.

Government should come up with appropriate incentives to the institutions that provide support to the MSEs. These institutions include commercial banks, micro finance institutions, SACCOs, business development service providers, insurance firms among others.

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