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Accounts Receivable Risk Management Practices and Growth of SMEs in Kakamega County, Kenya

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Accounts receivable risk management is a structured approach to managing uncertainties through risk assessment, developing strategies to manage it, and mitigation of risk using managerial resources (Gakure et al., 2012) Although there has been a considerable interest by government to promote SMEs by encouraging owners to take up government tenders, in Kenya the number of SMEs capable of sustaining themselves is still low. Studies show credit risk as an important variable affecting firms. Nonetheless, these risks' influence on SMEs has not received as much attention as it should. This study's main objective was to examine the influence of credit risk assessment practices on growth of SMEs. The objective of the study was to evaluate the effect of credit risk assessment practices on growth of SMEs in Kakamega County, in Kenya. Causal research design was applied to show the influence of credit risk assessment practice on growth. Using the sampling technique of purposive stratified random, a sample size of 359 out of 5401 SMEs was used from Kakamega Central Sub-County that had been in operation between 2013 and 2015. Secondary data was acquired from the Kakamega County Revenue Department, for the period under study. The hypotheses that form the premises for a regression model using analysis techniques like homoscedasticity and autocorrelation. Ordinary Least Square method was utilized to establish the relationship of cause-effect between variables while hypothesis was tested at 5% significance level. The overall model was discovered to be significant considering the F=14.918 and p-value (0.00 < 0.05). The findings revealed that good credit risk assessment practices when adopted by SMEs lead to growth. The study recommended that owners and managers should be trained and made to understand the various techniques risk management to well manage them so as to increase growth. The findings would form a basis for government and policy makers to formulate credit risk assessment strategies that would help minimize risk of bad and delinquent debt. The study also forms a basis for further research and adds to the existing body of knowledge.

Keywords: *Credit risk assessment, SME Growth, Accounts Receivable Management*

JEL Classification: *G23, G31*

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1. Introduction

Growth is considered as the second most important objective of an organization, as the most important aim is survival (Bunyasi et al., 2014). Small and medium enterprise growth has been studied by many researchers for several years, different authors using different to define the stages of an enterprise growth, but the events through which each enterprise passes remain more or less the same (Mian and Smith, 1992). Most of the researchers suggest that each enterprise has to start, and then grow while facing various challenges and crises. Namusonge (2010) identified several strategies used by businesses during the growth process, and further recognized barriers and incidents which facilitate or hinder the growth of Small and Micro Enterprises during the growth process.

Credit risk is one of the challenges SMEs face. Small enterprise baseline survey (Statistics Central Bureau of Statistics, 2004) indicated that there was a high rate of failure and stagnation among many SMEs businesses. This research sought to find out the reasons for such failure. The failure of most firms whether small, medium or large is as a result of limited finances and management of the available scarce resources. Pandey, (2010) postulates that Accounts receivable management is the management of credit sales (debtors) and is a very important aspect of corporate finance since it directly affects the liquidity and profitability of the firms and ultimately their growth. Accounts receivables are amounts owed to a firm by its customers, they are normally recorded on a firm's statement of financial position when sale of goods or services are on credit. A firm accrues accounts receivables when it sells its goods on credit. Depending on the payment terms, the company might receive cash in weeks or even months (Too et al., 2016). Today, accounts receivables play a very crucial role in the overall health of a firm, however one of the most common cash-traps is uncollected cash from sales, i.e. accounts receivables. A firm cannot invest its money tied in accounts receivables elsewhere until and unless it collects its receivables (Too et al., 2016). Investment in receivables clasps a big portion of a company's assets. These assets are highly vulnerable to bad debts and losses. Thus, it is imperative to control accounts receivables in an appropriate manner (Kungu et al., 2014).

Accounts receivable management is the process of controlling and collecting payments from customers (Fujo and Ali, 2016). It refers to all activities that an organization is engaged in, when dealing with issuance of service, recording of the transaction, analyzing and collecting payments for services rendered to debtors or customers Mukherjee (2014). Omondi (2014) further explains that Accounts Receivables Management means planning, organizing, directing and controlling of receivables. It deals with a shortened collection period, low levels of bad debts and a sound credit policy; that often improves the businesses financial growth. Wawire and Nafukho (2013), posits that, Accounts receivable management is a dynamic financial management process and its effectiveness is directly correlated with a firm's ability to realize its mission, goals and objectives and hence grow. Mukherjee, (2014) further stated that a good accounts receivable management practice will assist a firm reduce the amount of funds tied up in accounts receivables and decrease a firm's percentage of bad debts. Hence, it is imperative to ensure proper practices are instituted to achieve this.

The competitive nature and pressure of the global market place, has necessitated the practice of selling products on credit. However, it can only benefit a firm if the rate of return of the added accounts receivables exceeds its associated direct and indirect costs (Mutwiri, 2007) .This was what motivated this study to look at various practices that can be adopted to reduce the costs. The key practices of accounts receivable management that a firm should try to implement are: credit analysis practices, extension practices, and collection practices, credit risk assessment practices, financing practices on receivables. Salek (2005), demonstrates evidence that a well-managed portfolio of accounts receivable can boast cash flow and improve working capital.

Accounts receivable risk assessment involves identification of problem customers, monitoring and control of accounts receivable in order to maintain optimal cash flow. Most widely used Accounts receivable risk management practices are, setting up risk management teams, credit scoring, expert systems by third party and internal rating. When dealing with difficult customers' accounts are put on hold and future sales are stopped until the account is settled (Kungu, et al., 2014).

SMEs in Kakamega Central Sub County include Financial services, General trade (wholesale, retail), Accommodation and Catering, Agriculture, infrastructure and construction, Professional and Technical Services: Private Education, Health, Entertainment, Manufacturing (including pharmaceuticals), Transport usually known as bodaboda. Storage and Communication SMEs cut across all the demographics in Kakamega Central Sub County.

Several studies have analyzed the effect of credit risk management practices on profitability. Kithinji (2010) and Musyoki and Kadubo (2011) analyzed the impact of credit risk management on the financial performance of Banks in Kenya for the period 2000 – 2006, however, those that have studied credit risk management Karugu and Ntoiti (2015) looked at corporate firms and those listed on the stock exchange

markets, and thus did not addressed the effect of Accounts receivable risk management practices on growth in SMEs and it is for these reasons that this study sought to establish the effect of Accounts receivable risk management practices on growth.

SMEs still experience the impact of increased interest rates in the Market; their inability to shield themselves against high cost of credit is as result of their lack of strong bargaining power to negotiate for lower interest rates from financial institutions. The alternative still remains internal financing. Millions of SMEs go bankrupt every year; due to poor cash flow indeed one of the most common cash-traps is uncollected amount on cash sales, which are accounts receivables (Richard, 2008). Even large profitable firms can collapse if they fail to manage accounts receivables effectively (Njeru et al., 2015). Salek (2005) argues that management AR which is one of the largest tangible assets on a firm's balance sheet receives little or no attention, except when there is a serious problem Despite their significance, statistics however show that in Kenya, three out of five of the youth run small enterprises fail within the first three years of operations, and those that continue 80 percent fail before the fifth year (Linguli and Namusonge, 2015). The failure of an individual SME will never attract the media attention that may be associated with the collapse of bigger firms like Enron in USA, or Kicomi or Pan paper sugar millers in Kenya however the consequences of the failure of smaller firms are certainly a serious matter for those stakeholders who are directly involved.

Poor management of accounts receivable is disastrous for a firm and more often leads to liquidity problems to many firms (Njeru et al., 2015). This does not only affect the individual firms but their failure affects the entire nation. The literature survey strongly proved need for growth, development and contribution of SMEs for economic development. However present literature relating to SMEs in Kenya has not related receivables management to the net profit and hence growth, while the focus in previous researches was on financial management broadly, this research narrows on receivable management practices. It was evident no research had not been conducted on the effects of ARM practices on the growth of SMEs in Kakamega Central Sub County. This study fills this gap .This study sought answers to the question: do receivable management practices affect growth of SMEs? The general objective of this study was to determine the relationship between Accounts receivable management practices and growth of Small and Medium Enterprises (SMEs) with a special focus on SMEs in Kakamega County (Kakamega Central Sub County).

The specific objective was:

- To find out the effect of credit risk assessment practices on growth of SMEs.

The hypothesis tested was:

- H_{01}: There is no significant relationship between Accounts receivable risk assessment practices and growth of SMEs.

2. Literature Review

2.1. Theoretical Framework

This study was premised on the following three theories: Life Cycle Theory, Growth Theories, and Portfolio Theory.

2.1.1. The Life Cycle Theory

The life cycle theory has been found meaningful by SME owner managers (Massey et al., 2006). Several authors (McMahon, 2001) make a case for the existence of life cycle stages that showcase SMEs expansion. Small and Medium Enterprises gravitate to growth in organic ways, whereas larger companies tend to expand through acquisition (Davidsson et al., 2006). The theory that is implemented in this study is stochastic which means that an organization's expansion is influenced by many factors and there is no primary theory to explain growth.

2.1.2. The Growth Theories

Greiner (1998) proposed a growth model that explained the growth in business firms as a predetermined series of evolution and revolution. In order to grow a firm is supposed to pass through a series of identifiable phases or stages of development and crisis. These stages are; growth through creativity, growth through direction, growth through delegation, growth through collaboration and growth through coordination. This model suggests how organizations grow, however the processes and means by which firms achieve growth varied. Shimke (2011) suggests that this growth and the increase in resource acquisition capabilities provide a positive feedback loop, which continues until the organization matures. A firm will enjoy good profits thus giving positive feedback until limiting factors (e.g. an increase in competition, poor cash flow or the depletion of resources within the firm) take effect (Ansoff and McDonald, 2003).

Namusonge (2010) identified several strategies used by businesses during the growth process, and further recognized barriers and incidents which facilitate or hinder the growth of Small and Micro Enterprises during the growth process.

2.1.3. Portfolio Theory

A portfolio is a set of assets, for example accounts receivable (Jajuga, 2002). Michalski, (2008) suggests that a portfolio strategy is the act of categorizing debtors according to their behavior. A portfolio is Portfolio theory by Jajuja (1994) can be used in making decisions about selecting which customers should be given trade credit. Credit risk assessment is conducted through models that are generally based on a portfolio approach, in order to differentiate potential defaulters from non-defaulters. Overall, portfolio model is based on the assignment of a pre-established set of objects into predefined classes, according to Altman, Avery, Eisenbeis and Stinkey (1981) and Doumpos and Zopounidis (2002). Some customers, who were previously rejected as a results of a high operational risk, would be accepted back provided they show a possibility of a positive outcome that increases the creation of a higher firm value (Michalski, (2008). Extension of trade credit is achievable only if the organization categorizes customers from various sectors, branches, regions, status and classes, since various categories of customers may have different levels of default risk. The only way a firm reduces this risk and enhances its success is by performing a portfolio analysis with the outcome of a diversified portfolio of customers with a range of managed levels of operating risk, according to Michalski (2008). The portfolio approach to accounts receivable management can be used by manipulating the rate of profit (rate of advantage from assets) as one of the basic criterion that a organization that it is providing the trade credit should stimulate to extend credit.

2.2. Conceptual Framework

Njeru et al. (2015) defines conceptual framework as a group of concepts which are systematically organized to provide a focus, a tool and rational for interpretation and integration of information and is usually achieved in pictorial illustrations. Others authors suggest that the conceptual framework sums up behaviors and offers explanations and forecasts for a majority of the empirical observations (Mugenda, 2008). The accounts receivable risk assessment practices acquired are the independent factors that influence the expansion of small and medium enterprises and growth is the dependent variable as measured in terms of profitability and sales turnover obtained from the SMEs.

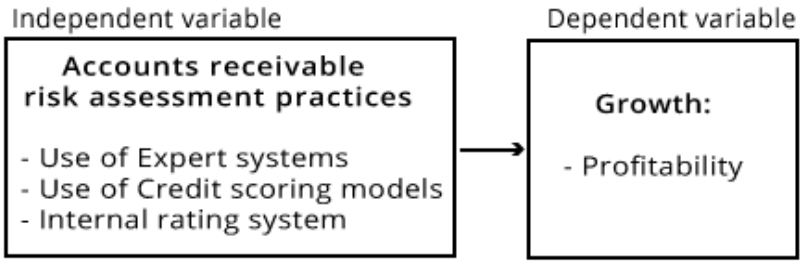

Figure 1. *Conceptual framework*

2.3. Accounts Receivable Management Practices

Njeru et al (2015) state that accounts receivable is an element of cash flow and has a direct effect on the growth of a business. Cash flow management refers to the management of movement of funds into and out of business and involves the management of accounts payable, accounts receivables, inventory as well as the cash flow planning (Joshi, 2007). Wildavsky and Caiden (2004) argue that organizations may experience cash flow problems as a direct result of inadequate accounts receivable management practices. Peel and Wilson (1996), argue that a good receivable management practice is essential to the health and performance of both small and large firms there are key practices involved: Credit analysis, credit collection, credit extension, and credit risk assessment.

From Figure 2, the diagrammatical illustration of credit management process, it is evident that Accounts receivable risk assessment practices are important and involve monitoring and risk reduction methods.

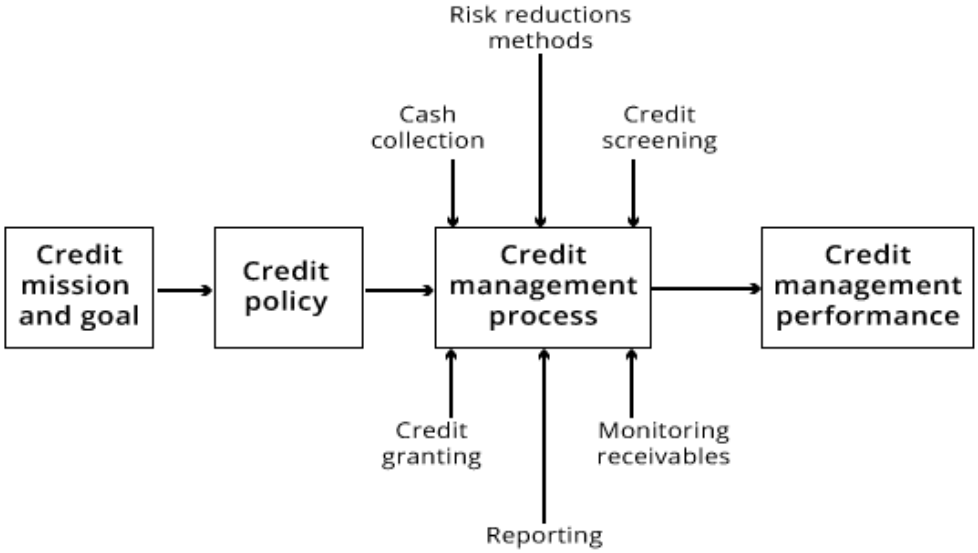

Figure 2. *Credit Management process*
Source: Pike and Neale (1999)

2.4. Accounts Receivable Risk Assessment Practices

Risk is the possibility of suffering economic and financial losses or physical material damages, as a result of an inherent uncertainty associated with the action taken (Cooper and Schindler, 2008). Credit (accounts receivable) risk is the oldest of all default risks. Accounts receivable risk management is a structured approach to managing uncertainties through risk assessment, developing strategies to manage it, and mitigation of risk using managerial resources (Gakure et al., 2012). The strategies include transferring to another party, avoiding the risk, reducing the negative effects of the risk, and accepting some or all of the consequences of a particular risk. Mwirigi (2006) stated that credit risk is the probability that the other party will fail to meet his/her obligations in accordance to agreed terms. The objective of Accounts receivable risk management is to maximize a firms' risk-adjusted rate of return by maintaining credit risk exposure within acceptable parameters (Pandey, 2010).

Fabozzi et al. (2002), argue that, accounts receivable risk assessment involves consideration three factors which are default probability, credit exposure and recovery rate. Many organizations give a great deal more attention to keeping and retaining existing customers and attracting new ones than they do tracking who is paying, who is lagging behind and who might default. However, as the current economic depression persists on and bankruptcy rates climb, effective Accounts receivable management becomes an increasingly critical factor in achieving success (Beranek, and Scherer, 1991). When the debtor does not pay on due date, the supplier is exposed to credit risk which may in turn lead to default and bad debts (Nyunja, 2011). Assessment of Accounts receivable risk, involves trying to find a way of accepting and controlling all businesses including high risk clients. There are three basic approaches to Accounts receivable risk measurement practices. They are: Expert Systems, Credit Rating, and Credit Scoring (Altman and Saunders, 1998). Mwirigi (2006) carried out a study to determine the credit risk management techniques applied by microfinance institutions. He established that despite having no stringent regulatory framework in relation to credit aspects for microfinance institutions in relative comparison to commercial banks, they all engage in credit management process. Mutwiri, (2007) ascertained that both agree that credit management policies form a basic objective for credit risk appraisal.

Credit risk management extends outside the organization through a process whereby credit control professionals carry out credit risk assessment for their trade partners (Mutwiri, 2007). It ensures firms remain on track. This is achieved through sourcing organizations" credit history and credit data through for example credit referencing and other data sources like financial statements (Moti et al., 2012). The Wikipedia describes credit referencing as a method whereby organizations obtain independent credit information from third party sources other than the customers themselves. This is mainly from credit reference agencies who are the custodian of credit information. In Kenya this is mainly done by the Credit Reference Bureau (CRB). Credit bureau collect and collate credit data for organizations which they have a relationship with, they then consolidate and aggregate this data to make it available on request to organizations for purposes of credit assessment and credit scoring (Mutwiri, 2007). Credit ratings are scores available from credit reporting agencies. Internationally recognized credit rating agencies are for example Dun and Bradstreet (DandB) or Standard and Poor (SandP) (Mutwiri, 2007). This sector is not well developed in Kenya and as such,

information is limited. Credit ratings give credit analysts an estimated net worth of a firm. Myers (2003) identifies factors which influence an organization's credit rating as ability to pay debt (capacity), outstanding amount of credit at any time, savings patterns and spending patterns. As credit scores are designed to indicate the likelihood that a debtor will default, a low credit score raises a red flag for an organization to adjust its lending decisions in regard to potential credit risk exposures (Mtwiri, 2007).

According to Horne and Wachowicz (1998), a credit scoring system is a quantitative approach to decide whether to grant credit by assigning numerical scores to various farm's characteristics related to creditworthiness. Horne and Wachowicz stress that the credit decision judgement during credit scoring lies with the credit analyst's ability and capability to evaluate available credit information. Rising interest rates and inflation presents a very big burden to organizations towards their financial obligations irrespective of the industry. According to the CBK Monetary Policy Statement (June, 2006), in the 90s the Kenyan economy was characterized by high inflation and interest rates well above 20% and borrowing was considered a last resort. Credit management was therefore very critical for timely cash collections to meet organizations" obligations. Internal rating can be done through portfolio strategy where customers are categorized on the their behavior and history of paying. Techniques such as Average-collection period (Days Sales Outstanding), Aging of accounts receivables and payment pattern monitoring.

Credit score is a number that reflects how likely an organization is to repay its debts. It is based on an organization's credit report which lists all its debts and their repayment history. The most efficient way to achieve a good score is keeping debts to minimal levels and ensuring their satisfaction to contractual obligations on debt servicing. Horne and Wachowicz (1998), states that a credit scoring system is a quantitative approach to decide whether to grant credit by assigning numerical scores to various firm's characteristics related to creditworthiness. Horne and Wachowicz stress that the credit decision judgement during credit scoring lies with the credit analyst's ability and capability to evaluate available credit information.

3. Research Methodology

The study adopted the mixed research design. Descriptive study was undertaken in order to ascertain reliability of data collected which made it possible to describe the characteristics of the study's variables and answer the research questions in chapter one. Best and Khan (2009) posit that descriptive research is aimed at describing the characteristics of variables in a situation and is concerned with conditions or relationships that exist, opinion that are held, processes that are going on, effects that are evident or trends that are developing. Cooper and Schindler (2008) further recommend descriptive survey design for its ability to produce statistical information about aspects of education that interest policy makers and researchers. A sample survey method was used to collect data from SME operators in Kakamega Central Sub County. The Population of this study was 5401 SMEs in (Kakamega Central Sub- County, which had been in operation as at 22nd April 2015 as per the Kakamega County Revenue Department Register. The finance officers in the SMEs were interviewed. This study used the geographical location (ward) as the key unit for sampling to categorize firms into twelve strata. Firms in other sub Counties were not included in the study. Mugenda and Mugenda (2003) and Kothari (2004) define the term sampling frame as a list that contains the names of all the elements in a universe. Sampling frame comprised 5401 small and medium enterprise which operated in Kakamega Central Sub- County.

The SMEs were first of all stratified according to the geographical location (Ward), and then samples were selected from each stratum using proportionate random sampling to ensure equal representation from every stratum. A sample of 359 SMEs was selected. Kriejcie and Morgan (1970) prescribes a model for a sample size determination of 359 subjects for a population of 5401. Purposive sampling for data collection was used to target financial officer from every SME dealing with accounts receivables .Wards were used as the unit of sampling. Both primary and secondary data was used. Questionnaires (both open and close ended) were administered to 359 respondents. Questionnaire with 5 point. Likert scale showed the respondents' level of agreement towards the statement in the questionnaire. The study employed both descriptive as well as inferential statistics for data analysis. Descriptive statistics technique is utilized to examine the normality of the data. Homoskedascity was implemented to initiate whether the error term's variance is constant and that it is similar for all the observations. The assumption was examined at a significance level of 5% using t-test and F-test.

The OLS technique was utilized to determine the relationship between cause and effect among the variables involved in the model. A linear regression model was conducted to determine the degree and magnitude of the existent relationship among variables. The assumption was examined at a significance

level of 5% using inferential statistics. Regression analysis is a statistical tool that examines the relationship between the variables by analyzing coefficients for the equation in a straight line (Faraway, 2002). Regression consists of R Square, which was used to test the overall significance of the model (Malhotra, 2007).

3.1. Model Specification

Linear regressions was used to establish and explain the relationship between Accounts receivable risk management practices and growth. Based on Aiken and West (1991), the relationship between ARMP and SMEs growth was developed into linear regression model as follows:

$$Y= \beta o+ \beta_1X_1+ \beta_2X_2+ \beta_3X_3+ \beta_4X_4+\beta_5X_5+ \beta_6X_6+\varepsilon$$

Where:

Y=The dependent variable. Referring to SMEs growth (proxy by sales growth and profitability)

β_0 Regression constant. It is the value of Y when $X_1=X_2= ....X_n=0$

β_1 Change in Y with respect to a unit change in X_1

X_1- Accounts Receivable risk assessment Practice (measured by internal rating system, Expert system, credit scoring model, and internal rating)

βi (i = 0, 1) are the coefficients

ε is the error term.

The inclusion of a random error, ε, is necessary because other unidentified variables may also affect SMEs growth The multiple regression is based on the assumption that for any specific value of the independent variable, the value of the Y variable are normally distributed (normality assumption) and that the variances for the Y variables are the same for each of the independent variable (equal –variance assumption). Based on the model above the researcher hypothesizes that;

H0:$\beta 1 =0$ (Xi is not significantly related to Y)

H1:$\beta 1 \neq 0$ (Xi is significantly related to Y)

The study applied one hypothesis generated from the model as follows;

Ho_1: Accounts Receivable risk assessment Practice has no significant effect on growth of Small and Medium Enterprises in Kakamega Central Sub-County in Kenya. Growth of SMEs = *f* (Accounts receivable analysis practices, random error).

$$Y= \beta o+\beta_1X_1+\varepsilon$$

4. Research Findings and Discussions

4.1. Response Rate

The number of questionnaires that were administered was 359. A total of 276 questionnaires were properly filled and returned. This represented an overall successful response rate of 77% as shown on Table 4.1. According to Gall et al. (1996) response rate of 80 % is considered excellent in quantitative research in social sciences, and according to Fincham (2008), a response rate of 60% is considered appropriate in research, while according to Mangione (1995) a response rate of over 85% is considered excellent for self-filled questionnaires. The response rate was considered appropriate for further analysis since it was 77%.

Table 1. *Response Rate*

Response	Frequency	Percent
Returned	276	77
Unreturned	83	33
Total	359	100

4.2. Entrepreneurs Background Information

This section analyzes the entrepreneurs' background information of the respondents. This section presents the descriptions of the respondents in terms of their gender, level of education, number of years in current firm and the job title. Results are as presented in Table 2.

Table 2. *Showing respondents' Gender*

Sex	Frequency	Percentage
Female	117	57.6
Male	159	42.4
Total	276	100

Results reveal that 57.6% of the respondents were male while 42.4% of the respondents were female. This is an indicator that most of the people who operate SMEs are male. This can be explained by culture of the residents of Kakamega whereby men are viewed as providers and while women stay at home to take care of the children. However, small margin can be seen as a good representation of the study population

4.3. Descriptive Analysis

Descriptive statistics were used to check for normality of the data. Normality test was used to establish the normal distribution of the sampled data for the purpose of accurately and reliably making conclusions; the mean is a measure of central tendencies and in this study it was used to generalize the findings. While the standard deviation was used to measure dispersion from the mean. Below is a summary of the descriptive statistics shown in table 3.

Table 3. *Descriptive analysis*

Variable	Mean	Standard Deviation
Growth	43.762	39.90
Use of Credit scoring	3.05	1.232
Use of Expert system	2.92	1.165
Internal rating systems	3.33	1.153

The standard deviation is a summary measure of the differences of each observation from the mean, while the mean is the average for all the variables, growth had a mean of was 43.762 which represents the mean amount of growth originated by all SMEs in Kakamega Kenya. Use of Expert systems had a mean of 2.92 which showcases the average modifications in the use of expert systems in the timeframe of the study. Use of Credit scoring models had a mean of 3.05 which indicates the mean changes in use of credit score model for the period under study for all lenders. Internal rating systems had a mean of 3.33 which indicates the average changes in the use of scoring model for the period under study. The standard deviation for Expert systems was 1.165, Credit scoring models had 1.232 and Internal rating systems had 1.153. The standard deviations for the variables are closer to zero which implies that the values are concentrated around the mean. Internal rating systems had the highest deviation from its mean this could imply that it would have a higher effect on the dependent variable.

4.4. Homoscedasticity

The assumption of homoscedasticity is essential to linear regression models. Homoscedasticity explains a situation where the error term is the same across all of the independent variables' values. On the other hand, heteroscedasticity appears when the size of the error term is different across all of the independent variables' values. The effect of violating the assumption of homoscedasticity is a matter of degree, increasing as heteroscedasticity increases (Andrean, 2007). In regression analysis, heteroscedasticity means a condition in which the variance of dependent variable varies across the data. On the other hand homoscedasticity means a situation which the variance of the dependent variable is the same for all the data. According to Deloof (2009), homoscedasticity describes the consistency of variance of the error term (e, residual) at different levels of the predictor variable. Smith (2010) explains homoscedasticity in terms of the standard error estimate (of the regression line). The standard error of estimate is an index of the variance of measured values around each predicted value. The homoscedasticity assumption more formally stated as VAR (ej) = c that, is, the variance of the error of residual term of each point j is equal to the variance for all residuals. The Gauss-Markov theorem states that when all the methodological assumptions are met, the least squares estimator regression parameters are unbiased and efficient, that is, the least square estimators said to be BUE: Best linear Unbiased Estimators (Horne and Wachowicz, 2010).

4.5. Multicollinearity

Multicollinearity was applied to examine the correlation between the independent variables used in this study. The presence of multicollinearity encumbers the opportunity to isolate the effect of each independent variable on the dependent variable and also the standard errors for each independent variable become magnified (Landau and Everitt, 2004). Multicollinearity can be adjusted by eliminating one or more of the correlated independent variables from the regression model (Lind, Marchal and Wathen, 2008). To check for multicollinearity Variance inflation Factor and Tolerance level were used. A VIF of less than 10 or a tolerance level of greater than 0.1 is acceptable. A summary of multicollinearity statistics is shown in Table 4.

Table 4. *Collinearity Diagnostics*

Independent variable	Tolerance	VIF
Credit Scoring Model	0.517	1.933
Expert system	0.527	1.896
Internal rating	0.487	2.048

In Table 4, internal rating had the most reduced tolerance level of 0.487 and Expert system had the highest tolerance level of 0.527. The tolerance level for all the independent variables was higher than 0.1 which reflects the absence of problem of multicollinearity. Internal rating had the greatest VIF value of 2.048 and Expert system had the lowest VIF value of 1.896. The VIF for all the variables was less than 10, therefore this implies there does not exist any multicollinearity among the independent variables.

Multicollinearity was also examined using eigenvalues and the condition index. The condition index is calculated as a square root of the ratio of the highest eigenvalue to each subsequent eigenvalue. A condition index is less than 10 which suggests that there is no multicollinearity for this range of variables and data. A summary of eigenvalues, condition index, and variance proportions is provided in Table 5

Table 5*. Collinearity Diagnostics*

Dimension	Eigenvalue	Condition index	Constant	Credit Scoring	Expert system	Internal rating
1	3.829	1.000	0.00	0.00	0.00	0.00
2	0.077	7.044	0.48	0.43	0.04	0.03
3	0.054	8.339	0.45	0.45	0.27	0.38
4	0.039	9.736	0.06	0.11	0.69	0.58

In Table 5 of the three practices, the one that was found to have a highest condition index was Internal rating, which had an index of 9.736 while the lowest index was associated with Expert system which was 7.044. There was the absence of multicollinearity as all the independent variables had an index of less than 10. Expert system had highest variation in the independent variables that can be explained by other independent variable at 69%, while credit scoring exhibited the lowest variation at 11% however all of them were at less than 70%.This was enough proof that there was absence of multicollinearity among the independent, which means that it was possible to separate the effect of each independent variable on the dependent variable.

4.6. Test of Significance of Regression Coefficients

In determining the cause effect relationship between the dependent variable and the explanatory variables the regression coefficients were tested at the 5% level of significance using t-test. The regression is presented in Table 6.

Table 6. *Regression analysis results*

Model	Unstandardized coefficients		Standardized coefficients		
	B	Std. error	Beta	t	Sig
Constant	34.530	1.446		23.881	0.000
Credit scoring	-0.111	0.465	0.018	-0.239	0.811
Expert system	1.306	0.478	0.214	2.733	0.007
Internal rating	1.479	0.458	0.230	3.229	0.001

4.6.1. The Effect of Credit Scoring on Growth

The study aimed to discover the influence of credit scoring on growth of SMEs. In Table 6, the coefficient obtained from the regression analysis was -0.111 with p-value 0.018 < 0.05, which leads us to affirm that the null hypothesis, according to which the use of credit scoring has no significant effect on growth, was rejected which leads to the conclusion that there exists a statistically significant relationship between use of credit scoring and growth. In this case credit scoring has a negative effect on growth such that a unit increase in use of expert system will lead to a significant decrease in profits by 1.306 units. This may be attributed to the boost in the cost of engaging in an external source of information which may result to owners selling on credit to only creditworthy customers. This finding is consistent with finding of a study by Mutwiri (2007) who noted that credit scoring is not a very common practice in Kenya and that could explain why it has a p value higher than 0.05.

4.6.2. The Effect of Expert systems on growth

The study sought to find out the effect of Expert on growth of SMEs. In Table 6, the coefficient obtained from regression was 1.306 with p-value 0.007 < 0.05, thus the null hypothesis, according to which

the use of expert system has no significant effect on growth, was rejected which means that the alternative hypothesis is accepted and there is a statistically significant relationship between use of expert systems and profits. In this case use Expert system has an effect on growth such that a unit gain in use of credit scoring model will result to an increase in profits by 1.479 units. This may be attributed to the increase in. The finding are consistent with Ojeka (2012) who studied on firms in Nigeria and agreed that monitoring customers is important.

4.6.3. The Effect of Internal Rating on Growth

The study sought to find out the effect of internal rating on growth of SMEs. In Table 6, the coefficient obtained from regression was 1.479 with p-value 0.001 < 0.05, thus the null hypothesis that use of internal rating has no significant effect on growth was rejected which leads to the conclusion that there is a statistically significant relationship between use of use of internal rating and growth. In this case use internal rating systems have an effect on growth such that a unit increase in use of internal rating system will result to an increase in profits by 1.479 units. This may be attributed to the increase in the tracking methods to owners selling on credit to only creditworthy customers. This finding is consistent with finding of Mutwiri (2007) who agrees on the importance of categorizing and analyzing debtors. This study also agrees with Mutungi (2010) who established that there was a significant positive relationship between monitoring and control of accounts receivables and performance of a firm.

4.7. Relationship between Credit Risk Assessment Practices and SME Growth

Regression analysis was used to find out if there is a relationship between credit risk assessment practices and SMEs growth by evaluating the contribution of the credit risk assessment practices in explaining SMEs growth, when the other variables are controlled; the R Square value was obtained in this case. From the results in Table 7.

Credit risk assessment practices were found to have an R Square value of 0.725 or to contribute to 38.6% of SME growth. The R square value is an important indicator of the predictive accuracy of the equation. The remaining 61.4% can be explained by other factors. The implication of these finding is that credit risk assessment practices plays a significant role enhancing a SME growth. Ojeka (2011) studied four manufacturing companies in Nigeria. He used annual reports and accounts of selected companies as well as questionnaire. His findings revealed that when a company's credit policy is favorable, liquidity is at a desirable level. He further found that the companies that monitor and regularly review their credit policy and reduce cash discount allowances perform quite well in terms liquidity position and profitability. This study agrees with Mutungi (2010) who established that there was a significant positive relationship between monitoring and control of accounts receivables and performance of a firm.

Table 7. *Model Fitness*

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.726	0.528	0.526	0.4122

Table 8 provides the results on the analysis of the variance (ANOVA). The results indicate that the overall model was statistically significant. Further, the results imply that Accounts receivable risk assessment practices are good predictors of SMEs growth. This was supported by an F statistic of 14.918 and the reported p value (0.000) which was less than the conventional probability of 0.05 significance level.

Table 8. *Analysis of Variance*

Indicator	Sum of Squares	df	Mean Square	F	Sig.
Regression	1917.013	3	639.004	14.918	0.000
Residual	1135.787	284	42.833		
Total	13257.799	285			

Regression of coefficients results in Table 9 shows that there is a positive and significant relationship between credit risk assessment practices and SMEs growth as supported by a P value of 0.000 and a beta coefficient of 0.277. This was also supported by the t values whereby t_{cal} =49.249 > $t_{critical}$ =12.706 at a 95 percent confidence level which depicts that we reject the null hypothesis and accept the alternative. This implies that an increase in credit risk assessment practices by 1 unit would results to increase in SMEs growth by 0.277 units.

Table 9. *Regression of Coefficients*

Variable	B	Std. Error	t	Sig.	
(Constant)	2.736	0.056	49.249	0.000	
Credit Risk Assessment Practice	0.277	0.016	17.492	0.000	

4.4. Discussion of the Findings

The objective of the study was to assess the influence of credit risk assessment practices on growth of SMEs in Kakamega County (Central Sub County), Kenya. Results revealed that the SME owners practice various credit risk assessment practices. These practices include; using internal rating systems, monitoring the volume of bad debts, ensuring high profit margin, identifying incorrectly priced invoices and putting on hold difficult customers' accounts. Results also revealed that the SME owners did not use expert systems as well as credit scoring models**.**

5. Summary of Findings, Conclusions and Recommendations

5.1. Summary

This section summarizes the findings obtained in chapter four in line with the study objectives.

The main objective of this study was to find out the role of Accounts receivable management practices on growth of Small and Medium enterprises in Kakamega County. The objective of the study was to examine the influence of Accounts receivable risks assessment practices on growth of SMEs in Kakamega County (Central Sub County), Kenya. Results revealed that the SME owners practice various accounts receivables practices. These practices include; defining the scoring models, expert systems and internal rating. The owners did not often use Credit scoring models. The bivariate regression results revealed that there is a positive and significant relationship between Accounts receivable risk practices and SMEs growth as supported by a p value of 0.000 and a beta coefficient of 0.277. This was also supported by the t values whereby $t_{cal}=49.249 > t_{critical} =12.706$ at a 95 percent confidence level which depicts that we reject the null hypothesis and accept the alternative. This implies that an increase in credit collection practices by 1 unit would results to increase in SMEs growth by 0.277 units.

5.2. Conclusion

The study showed that proper Accounts receivable risk assessment practice enhances growth of SMEs, and that if finance officers and owners are encouraged to go for workshops in this area then the SMEs would be self-sustaining and able to grow and employee many people.

5.3. Recommendations

The study findings reveal that Accounts receivable assessment practices play a key role in the growth of SMEs in Kakamega County, Kenya. The study therefore recommends that SMEs owners should continue in the practice of credit risk assessment practice for consistent growth. Additionally, the SMEs owners should endeavor to use other credit risk assessment practices that are not outlined in this study. The Government should increase funding to facilitate workshops and training of SMEs owners and employees. A good firm policy on accounts receivable risk assessment and management should be formulated and applied all the time and not only when circumstances dictates, otherwise bad clients would be approved while good wants are turned away without notice. Communication is very key to identifying key issues that require urgent attention before they get out of hand; these can be done through proper documentation.

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