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FACTORS AFFECTING SME'S BANK LOAN REPAYMENT IN TANZANIA: A CASE OF IRINGA MUNICIPALITY

Benson James

Author name is currently pursuing masters degree program in University of Iringa, Tanzaia,. E-mail: bensonjames01@outmail.com

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ABSTRACT

Study attempted to assess factors affecting SMEs bank loan repayments in Tanzania. Specifically it determined the effect of interest-rates, profitability and credit-period on SMEs bank loan repayments in Iringa municipality. 63 SMEs borrowers were studied. A case study was applied where purposive sampling technique was used to collect quantitative data. Data were analyzed using linear regression analysis. Study finds interest-rate had a negative relationship with SMEs bank loan repayments while profitability and credit-period had a positive relationship with the SMEs bank loan repayments. The regression and t-test show that interest-rates, profitability and credit-period have a significant impact on SMEs bank loan repayments since the p-values were less than 0.05. The co-efficient of determination, shows that the independent variables explain 51% of the variation in the dependent variable. Therefore, capital management by SMEs borrowers should be encouraged in order to make better use of the bank loans for business investments. Moreover, credit-period should be extended in order to give SMEs borrowers enough time to run their business and generate profits enough for loan repayments and business growth. In addition, interest-rates should be reduced for the purpose of increasing the chance for SMEs to earn more profits hence influencing bank loan repayments.

INTRODUCTION

Small business enterprises have been seen as the great source in income earning for the majority of people living in urban areas with no formal paid employment. In Tanzania the entry of small entrepreneurs is not a problem; one can start small business at any time and in any place [7]. Credit is the most common source of external finance for many SMEs and entrepreneurs, which are often heavily reliant on traditional debt to fulfill their start-up, cash flow and investment needs [12]. Potential sources of finance for the small scale enterprises include commercial banks, nonbank financial institutions, non-governmental organizations (NGOs), multilateral organizations, business associations, and rotating savings and credit associations [5].

However, even though the role of banks and other financial institutions is clear in the small business arena, lending to SMEs remains a laborious and daunting activity as many factors influence the sustainability of these ventures and their loan repayment behaviour [1]. The critical problem most public credit-lending agencies face is poor loan repayment from small and medium enterprises. Statistics show that loan default by SMEs has been a tragedy and loan repayment problem is an unsolved issue faced by the majority of financial institutions that offer credit to the small enterprises [12].

There are several cases which concern with the problem of failure of loan recovery as reported by [3]. The commercial court as court of choice for loan recovery and related disputes was established to deal specifically with commercial disputes in Dar es Salaam. Since its inception, over 85% of the cases filed were from financial institutions seeking recovery of their loans [3]. A study by [9] showed that there were both similarities and differences between the experiences of SMEs businesses from the developing world and developed world. Differences in reasons for starting a business and succeeding in it were also found. Some of these differences may be due to sociocultural differences between Tanzania and other nations.

In Tanzania, micro enterprises are those engaging up to four people and in most cases the family members under informal sector with capital investment of up to five million Tanzania shillings; while the small enterprises are mostly formalized businesses engaging five to forty nine employees or with the capital investment from five to two hundred million Tanzania Shillings [15]. The SMEs are categorized as shown in Table 1 according to Tanzanian perspective.

Table 1: Categories of SMEs in Tanzania

CATEGORY	EMPLOYEES	CAPITAL INVESTMENT (TShs)
Micro Enterprise	1 – 4	Up to 5 million
Small Enterprise	5 – 49	Above 5 million to 200 million
Medium Enterprise	50 – 99	Above 200 million to 800 million
Large Enterprise	100+	Above 800 million

Source: SMEs Policy, (2002).

Studies in Tanzania such of [6] and [8] come up with mixed results based on past literature on loan repayments problems among SMEs have found that higher interest rate and other loan associated costs as hindering factors resulted on failure of borrowers to repay back their loans and eventually result on loan recovery problem. The reasons for poor loan repayments/recovery may not be viewed to be caused only by borrowers weaknesses that may arises due to either inappropriate monitoring of their business activities, but it were also argued that, some are related to lenders inappropriate design features leading to incentive problems.

There are many factors affecting SMEs bank loan repayments not only in developing countries but also in the developed world. However, the environment differs from country to country and loan conditions and procedures cannot be equally used. Besides, while similar studies such of [6] and [8] on loan repayments among SMEs have been done in Tanzania and found that both borrower factors and creditor factors contribute significantly on loan repayments among SMEs, little had been known on the area of factors affecting SMEs bank loan repayments in Iringa Municipality. For that matter, this study assessed if the existing factors in other places might be the same in Iringa municipality or not. Therefore, this study assessed factors affecting SMEs bank loan repayments in Tanzania, the case of Iringa Municipality.

Literature Survey

The Effects of Interest Rates on SMEs Bank Loan Repayments

[14] studied on "Value at Risk and Bank Capital Management in USA". The study was a case study research design and 50 creditors were sampled. Data were analyzed using descriptive statistics and correlation analysis. The study found out that a loan is considered to be in default as soon as payment is missed; a loan default occurs when a borrower fails to meet a principal or interest payment of a loan, unless arrangements are made to pay at a later date than previously agreed upon. The undesirable trend of increasing rates of default proves costly to all parties concerned in the process of borrowing and lending. On the one hand, the lender loses the part of the principal loan disbursed and earnings in the form of interest. Also, the borrower faces a bleak future in obtaining credit due to lower credit rating and an unhealthy lifestyle primarily caused by high financial stress levels.

[6] studied on "Credit Rationing in Credit Markets in Semi-formal Financial Institutions in Tanzania". A case study research design was employed and 75 creditors were sampled. Data were analyzed using descriptive statistics and regression analysis. The study found out that, interest rates charged by a credit institution are seen as having a dual role of sorting potential borrowers (leading to adverse selection), and affecting the actions of borrowers. Interest charged and the amounts of debt positively affect repayment obligations. Some banks use the interest rates that an individual is willing to pay as a screening device to identify borrowers with a high probability of repayment. This may be dangerous since high risk-takers are the worst rate payers, in the process affecting default by borrowers on loans.

[10] conducted a study on "Relationship between Loan Default, Interest Charged and Repayment Schedule in Microfinance Institutions in Ghana". A case study research design was employed and 60 customers were involved. Data were analyzed using correlation analysis. The study found out that, there is a significant relationship between interest charged on loans, moral hazard and over-borrowing by customers. In addition, the inability of loan officers to visit borrowers regularly, loans not being backed by collateral were also found to have contributed significantly to loan default among customers.

The Effects of Profitability on SMEs Bank Loan Repayments

[4] studied on "Factors Affecting the Repayment of Business Loans in Canada". A descriptive research design was adopted whereby simple random sampling technique was used to select a sample of 60 respondents. Data were analyzed using descriptive statistics and regression analysis. The study found out that, the ability of business to repay their loans depended primarily on their future earnings rather than on the size of debt incurred. The amount of debt did not appear to have much of an effect, except when high loan amounts are combined with low incomes. There is significant relationship between loan default and business declining. Future earnings, as well as the probability of loan repayment, were found to be strongly correlated with the type of the business.

[2] studied on "Factors behind the Loan Default Problem of Small Enterprises in Dar es Salaam". The researcher used a descriptive survey design, where 50 SMEs were involved. Data were analyzed using descriptive and regression analysis by using Ordinary Least Square Estimator as a technique of analysis. Primary data were collected through questionnaire, while secondary data were collected through documentary review. The study found out that, the level of future profit determines the ability of the business on loan repayments. Moreover, the study found that there was a positive significant relationship between profitability rate and business loan repayments.

[8] conducted a study on "Factors affecting loan repayment behaviour in Tanzania". Descriptive survey design was employed and convenience sampling technique was used in the selection of 100 sample size. Data were analyzed using descriptive statistics. The study found that for the business firm to be able to repay its loan effectively, it requires an assured profit earnings. However, effective loan repayment is not the only function of profit margin because the business firm can make high profits as reflected on income statements, but still a large part of it could be coming from sales on credit. During the survey, the study observed that 30% of the respondents failed to adhere to loan repayment schedules as demanded by the financial institutions where these respondents obtained their loans due to low profits or total losses in other cases that the business enterprises obtained.

The Effects of Credit Period on SMEs Bank Loan Repayments

[13] conducted a study on "Improving the Competitiveness of Small Entrepreneurs in Developing Countries: The Role of Finance to Enhance Enterprise in Kenya". The study used a cross-sectional research design. A sample of 63 small entrepreneurs was included. Data was collected using structured questionnaire, and analyzed using descriptive and regression analysis by Ordinary Least Square Estimator as a technique of analysis. The study revealed that commercial bank loans extended to small entrepreneurs are often limited to a period far too short to pay off any sizeable investment. Moreover the study revealed that the majority of commercial bank loans offered to small entrepreneurs are often limited to a period far too short to pay off any sizeable investment. At times, loans received are less than requested and short periods are giving for the repayment of the loans. Therefore, there was significant relationship between loan repayments and credit period.

[17] conducted a study on "Factors Affecting Loan Repayment in Tanzania". A case study was employed and convenience sampling technique was used in the selection of 100 respondents. Descriptive statistic and content analysis was used in data analysis. The study found that commercial banks specifically provide a shorter time interval for the borrower to make the first installment. However, the study revealed that at least 8% of the respondents interviewed complained about the inadequacy of the time given for them to make their first installment. Most of the financial institutions tend to provide a grace period of one month only, which was seen not to be sufficient for the small business enterprise owners to start realizing enough revenue for them to start paying their loans.

[11] conducted a study on "Multiple Borrowing and Loan Repayment in Iringa". The study was a cross-sectional design and 140 microfinance clients were sampled. Data were analyzed using descriptive statistics and content analysis. The study revealed that more than 105 (75%) of borrowers interviewed across the four credit providers said that they pay their loans before they reach the end of paying back the loan. Instead some paid their total loan in five months, four months, three months, two months and one month before to an end. Therefore, the study revealed that multiple borrowing have no effect on loan repayments.

Methodology

The study included a sample of 63 observations from 235 registered SMEs borrowers from banks in Iringa Municipality. A case study was applied to get accurate data for the problem where purposive sampling technique was used to collect quantitative data. The data was analysed using linear regression estimation techniques on ordinary least squares estimator.

Results & Discussion

Multiple Regression Analysis

Multiple regression linear analysis was also conducted to examine how multiple independent variables (interest rates, profitability and credit period) are related to the dependent variable (SMEs bank loan repayments) whereby 63 observations were used. According to [16], a multiple regression analysis is an analysis that involves one dependent variable and two or more independent variables. In other words, it is an analysis of association in which the effects of two or more independent variables on a single, interval-scaled dependent variable are investigated simultaneously [18].

The Economic Theory Test Analysis

The model used, as shown from the conceptual model, was linear regression;

That is

SMEsBLR = f (IR, PR, CP)

Where,

SMEsBLR = SMEs Bank Loan Repayments; IR= Interest Rate; PR= Profitability; CP= Credit Period; U= Disturbance term.

And $\beta_1 < 0$, $\beta_2 > 0$, and $\beta_3 > 0$

The estimated linear model was

$$\text{SMEsBLR} = \underset{(-1.035)}{-0.519} - \underset{(-4.282)}{0.564}\text{IR} + \underset{(5.875)}{0.723}\text{PR} + \underset{(5.166)}{0.621}\text{CP}$$

From the economic theory test, all signs from parameters conform to the hypothesized signs from the economic theory.

$\bar{R}^2 = 0.510$, F = 22.534, and t values are in parentheses

Table 2: Coefficients

Model	Unstandardized Coefficients	Standardized Coefficients	T	Sig.

		B	Std. Error	Beta		
1	(Constant)	-.519	.501		-1.035	.000
	Interest Rate	-.564	.572	-.530	-4.282	.021
	Profitability	.723	.660	.540	5.875	.000
	Credit Period	.621	.597	.536	5.166	.043

a. Dependent Variable: SMEs Bank Loan Repayments

The estimated regression model indicates that a one percentage increase in interest rate leads to a change of -0.564 in SMEs Bank Loan Repayment. A one percentage change in profitability leads to a positive change of 0.723 in SMEs Bank Loan Repayments. A unit change in credit period leads to a positive change of 0.621 in SMEs Bank Loan Repayments. All three parameter estimates are statistically significant at 5% level. However, all algebraic signs of the parameter estimate for interest rate profitability and credit period conform to the hypothesized signs.

T-Statistical Test

This was used to test the significance of the parameter estimates of the model.

The estimated linear model was

SMEsBLR = -0.519 – 0.564IR + 0.723PR + 0.621CP
(-1.035) (-4.282) (5.875) (5.166)

The t-values are all greater than 2.0. Therefore, according to the rule of thumb, the parameter estimates are statistically significant. That is they affect SMEs Bank Loan Repayments in Iringa Municipality.

F- Test

Table 3: Analysis of Variance – ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
	Regression	36.729	3	12.243	22.533	.006[b]
1	Residual	32.057	59	.543		
	Total	68.787	62			

a. Dependent Variable: SMEs Bank Loan Repayments

b. Predictors: (Constant), Interest rate, Profitability, Credit Period

Interpretation

This was used to test the overall significance of the regression results.

The hypothesis is:

HO: $\beta_1 = \beta_2 = \beta_3 = 0$ (model insignificant)

HA: $\beta_1 \neq \beta_2 \neq \beta_3 \neq 0$ (model is significant)

The level of significance is 5% = 0.05 with 95% confidence interval.

The calculated 'F' as shown in Table 3 is 22.533 and the critical F-value (from tables) is 4.13

Since the calculated 'F' is greater than critical 'F', the researcher rejects null hypothesis in favor of the alternative hypothesis; that is, β_1, β_2 and β_3 are statistically different from zero implying that interest rate, profitability, credit period affects SMEs Bank Loan Repayments in Iringa Municipal.

Adjusted R2 test

Table 4: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.731[a]	.534	.510	.73712	.534	22.533	3	59	.000	2.043

a. Predictors: (Constant), Interest rate, Profitability, Credit Period

b. Dependent Variable: SMEs Bank Loan Repayments

Interpretation

This test was used to explain the total variations in the dependent variable i.e. SMEs Bank Loan Repayments caused by variations in the independent variables i.e. interest rate, profitability, credit period. In the case of the regression output the adjusted R2 = 0.510, implying that the model explains about 51% of variations in the SMEs bank loan repayments hence the model does half in explain variations in SMEs bank loan repayments.

Also, it indicates, R coefficient is 0.731 meaning that there is a correlation of 73.1% between the independent variables (interest rate, profitability, credit period) and dependent variable (SMEs bank loan repayments). This shows that the independent variables (interest rate, profitability, credit period) are significant predictors of the dependent variable (SMEs bank loan repayments) in Iringa Municipality.

Findings based on the Specific Objectives

The Effect of Interest Rates on SMEs Bank Loan Repayments in Iringa Municipality

From the study it was revealed that interest rate has a negative and significance effect on SMEs bank loan repayments since the p-value was less than 0.05. If interest rates are increased to SMEs borrowers, the rate of bank loan repayments will fall. The higher rate of cost of borrowing discourages SMEs borrowers to repay their bank loans immediately; therefore, lower interest charged to SMEs borrowers will increase the rate of SMEs bank loan repayments in Iringa Municipality.

The findings in this study are similar to the study done by [14] who studied on "Value at Risk and Bank Capital Management in USA". The study revealed that, a loan is considered to be in default as soon as payment is missed; a loan default occurs when a borrower fails to meet a principal or interest payment of a loan, unless arrangements are made to pay at a later date than previously agreed upon. The undesirable trend of increasing rates of default proves costly to all parties concerned in the process of borrowing and lending. On the one hand, the lender loses the part of the principal loan disbursed and earnings in the form of interest. On the other hand, the borrower faces a bleak future in obtaining credit due to lower credit rating and an unhealthy lifestyle primarily caused by high financial stress levels.

Therefore, findings of [14] conform to the study hypothesized results as the findings show that there is a negative relationship between interest rates and SMEs bank loan repayments and the p-value was less than 0.05.

The Effect of Profitability on SMEs Bank Loan Repayments in Iringa Municipality

The study revealed that profitability is positive significance related to the SMEs bank loan repayments since the p-value was less than 0.05. High profits encourage borrowers to pay back their bank loans, especially when SMEs gets higher profits from their business which enable them to pay back bank loans. If rates of profits are low from their business, this will discourage SMEs to pay back their bank loans hence it leads to business declining and bad loan debts from SMEs.

These findings are similar to the study done by [4] on his study "Factors Affecting the Repayment of Business Loans in Canada". The study revealed that, the ability of business to repay their loans depended primarily on their future earnings rather than on the size of debt incurred. The amount of debt did not appear to have much of an effect, except when high loan amounts are combined with low incomes. There is significant relationship between loan default and business decline. Future earnings, as well as the probability of loan repayment, were found to be strongly correlated with the type of the business.

Therefore, findings of [3] conform to the study hypothesized results as the findings show that there is a positive relationship between profitability and SMEs bank loan repayments and the p-value was less than 0.05.

The Effect of Credit Period on SMEs Bank Loan Repayments in Iringa Municipality

The study revealed that credit period has positive and statistically significance effect on the SMEs bank loan repayments since the p-value was less than 0.05. Enough credit periods for bank loan to mature gives high chances for SMEs borrowers to repay their loans. They will have enough time for generating profits and pay back their bank loans. But if the credit period is short for bank loan to mature, this gives SMEs borrowers hard time for running their business effectively while thinking on how to pay their bank loans and especially when they use that loan for other purpose rather than financing the business.

These findings are related with [13] on "Improving the Competitiveness of Small Entrepreneurs in Developing Countries: The Role of Finance to Enhance Enterprise in Kenya". The study revealed that commercial bank loans extended to small entrepreneurs are often limited to a period far too short to pay off any sizeable investment. At times, loans received are less than requested and they are given limited short periods for loans repayment. Therefore, there was significant relationship between loan repayments and credit period.

Therefore, findings of [13] conform to the study hypothesized results as the findings show that there is a positive relationship between credit period and SMEs bank loan repayments and the p-value was less than 0.05.

Summary of Hypothesis Testing

Findings of the study revealed that all three explanatory variables had significant effect on loan repayments as shown in Table 5.

Table 5: Summary of Hypothesis Testing

Hypothesis	Variable	Accept/reject	Significance
H_A	Interest Rate	H_A is accepted	0.021
H_A	Profitability	H_A is accepted	0.000
H_A	Credit Period	H_A is accepted	0.043

Conclusion

Interest rates, profitability and credit period have found to have significance influence on SMEs bank loan repayments as indicated from the regression results. In such sense, bank loan repayments depend on the level of interest rates, profitability and credit period in order for SMEs to pay their debts. There will be a need for microfinance institutions to set the affordable interests rates for bank loan depending on SMEs ability to pay and enhancing capital managements to SMEs in Iringa Municipality as to increase the level awareness on how to use bank loan for profit generation. Moreover, this would reduce the level of bad debts or loan defaults from SMEs in Iringa Municipality. Therefore, interest rates, profitability and credit period are the good predators of SMEs bank loan repayments in Iringa Municipality.

RECOMMENDATIONS

Recommendations for Action

Findings revealed that interest rate negatively and statistically significant affect SMEs bank loan repayments. This is line with the expectation of the study. On this basis of these findings, the researcher makes the following recommendations; interest rates should be reduced or maintained for the purpose of increasing the chance for SMEs to earn more profits. This will increase the rate of bank loan repayments form profit generated form the business.

The findings of this study have revealed that profitability and credit period have positive effect on SMEs bank loan repayments. This is similar to the hypothesized outcome. It is therefore recommended that, SMEs should unsure well capital management for the business purposes and not using bank loan for either personal matter or family matter, and only for business investments.

Microfinance institutions should continually impart capital management for all SMEs who take loan form their institutions as it will increase the rate of loan repayments. Moreover, Banks should extend the credit period for bank borrowers so as to give SMEs borrowers enough time for profit generation while using the loan to invest on the business. Such a move will very likely enlighten future SMEs borrowers on capital management and enhancing loan repayments while increasing the rate SMEs growth using bank loans.

Recommendations for Further Studies

The model (objectives) was only able to explain 51% of the total variation of SMEs bank loan repayments. This means that the model have missed out some important factors affecting SMEs bank loan repayments. To get a more explanation of SMEs bank loan repayments, other variables and SMEs bank loan repayments indices should be identified and included in future research. However, further studies should be done, using different models and estimation techniques, to determine whether interest rates could enhance SMEs bank loan repayments.

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