# **Original** Paper

# Influence of Internal Business Environment on the Growth of Microfinance Institutions in Rwanda (Case Study Musanze

# District)

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# Abstract

The objectives of this study is to examine the influence of internal business environment on the growth of microfinance institutions in Musanze district particularly the three internal factors employee satisfaction internal controls and technologies. This objectives aims to get the results that will invite MFIs to change their mind and adopt new technologies, ensuring good internal controls as well as satisfying their employees so that they can get more profits. The objectives also aim to link employee satisfaction internal controls and technology on the growth of Microfinance institutions in the country which have been left back in the market industry. Probability sampling method was used whereby Stratified sampling technique was applied. Data were collected from 121 employees of 18 microfinance institutions; a researcher used quantitative method for data collection whereby questionnaire instrument of data collection was applied. Descriptive and inferential statistics were used for data analysis. Multinomial regression model and SPSS 24 SOFTWARE were also used for Data analysis. The Findings of the study indicates that there is a significant relationship and positive contribution of Employee satisfaction and technology on the growth of Microfinance institutions. This study recommends that Microfinance institutions should ensure that, they adopt technologies, good internal controls and satisfying their workers to ensure the daily MFIs tasks are well achieved.

# Keywords

internal business environment, microfinance institutions, growth, technology, internal controls, employee satisfaction

#### **1. Introduction**

Internal environment factors refers to everything inside the organization, which are controlled within the organization without considering either they are tangible or intangible (Vanessa, 2022). Internal environment is dealing with various factors inside an organization that can contribute the organizations decision and operations (Surbhi, 2020). Nevertheless, microfinance Institutions have continued to be among the best ways to reduce global poverty especially in developing countries, In today's world the internal business environment has been a major source of success for microfinance institutions, this indicates that there is a need to conduct a research on the internal business environment of microfinance institution as it will help an organization to make realistic plans and ensure the effective implementations. Microfinance institutions are affected by internal factors such as the finance managing capacity, competent personnel, employee trainings, following up of loans, technology, origin of capital, and risk management Danga and Yusuph (2019). Factors contributing the probability of Microfinance crisis are internal and external factors (Fernandez et al., 2015).

This study examined the influence of internal business environment on the growth of Microfinance institutions, particularly three factors which are employee satisfaction, internal controls and Technology. This study related to how each mentioned internal factor of the business environment supports the growth of microfinance institutions. In recent years, different scholars have done research and demonstrate in different ways how microfinance institutions can improve different factors of internal business environment and achieve success. According to Kanyurhi et al. (2016) carried out a research to measure the relation between the organization internal factors and Microfinance institutions. According to Usman et al. (2018) did a research on how technology influences the development of Microfinance institutions. Microfinance banks can succeed once the employees will be satisfied; it's of great importance to do a research on what are the impacts of satisfying the employees and how that satisfaction will change their performance (Laosebikan et al., 2018). Most microfinance institutes have devised some novel banking systems which includes SMEs, Internet Banking, Mobile applications, School fees loans, Business account, trainings, workshops and partnerships. Other microfinance has expanded their business, launches new products and opened new offices across the cities (Mugo, 2010). Many Microfinance institutions are falling or almost falling if they cannot configure the internal controls (COSO, 2004). From the above findings, it is therefore very important for this study to examine in details on how internal business environment particularly, employee satisfaction and technology influences the growth of microfinance institutions in terms of deposits, loan disbursement, assets and interests income.

1.3 billion People in 107 developing countries especially South Asia and Sub-Saharan African countries live under poverty, which account for 22% of the world's population. Despite of poverty, different international organizations such as United Nations, Oxfam and NGOs have been trying to fight against poverty by establishing different poverty reduction strategies (GPR, 2021). By 2030 all men and

women in the world should have the equal rights to economic resources, access to basic services, ownership of properties, inheritance, natural resources, appropriate new technology and financial services, including microfinance" (UN SDGs, 2022).

Despite of Microfinance institutions to be among the strategies of poverty reduction in developing countries, Many Microfinance institutions especially in developing countries have been continued to operate within multiple challenges within and outside its operations that does not support its growth and expansion, his has been recognized by different scholars. The overturn of employees in Microfinance institutions are caused by job dissatisfaction reasons such as financial issues like salaries, overworking conditions, long distance working environment and lack of motivation (Mahmud, 2015). Dangal and Yusuph (2019) carried out a research to investigate the factors that impact the development of Microfinance institutions. They found that factors such as managing capacity, financial policies and guidelines, qualified employees, employee's trainings, following up of loans, corruption, technology, origin of capital, and risk management are affecting the growth of Microfinance institutions; This gave a researcher the interest of investigating in details that to what extent does internal business environment factors Particularly Employee satisfaction, internal controls and technology influence the growth of microfinance institutions in terms of of deposits, loan disbursement, assets and interests income.

#### 2. Research Methodology

#### 2.1 Research Design

This study used both descriptive research design and co-relational research design. Under descriptive research design. According to Siedlecki (2021), Descriptive research design is a type of research design whereby a research is done by following a set of data collection guidelines. This study adopted descriptive research design because the study wanted to examine the influence of internal business environment on the growth of MFIs in Rwanda. According to Hassan (2022), Co-relational research design is a non-experimental research design that deals with measuring how two or more variables are related. This study adopted the correlation research design because it tested the statistical relationship between variables.

#### 2.2 Study Population and Sampling

Population refers to a group of people who have similar attributes (Creswell, 2012). The targeted populations of this study were 170 Staffs of 25 Microfinance institutions in Sectors of Musanze district in Rwanda. The 15 sectors a researcher targeted for the study population included, Kimonyi, Busogo, Gacaca, Nkotsi, Musanze, Muhoza, Cyuve, Muko, Remera, Shingiro, Gataraga, Nyange, Rwaza, Gashaki and Kinigi.

This study used a Probability sampling whereby stratified sampling technique used to get the sample from each sector of Musanze district. A researcher subdivided Musanze district into 15 sectors and randomly selected one Microfinance institutions from each sector and 4 Microfinance from one sector, where by all staffs from those MFIs were required to respond the questionnaires. After getting the sample Microfinance institutions a total number of sample respondents were 121 out of 170 from 18 out of 25 Microfinance institutions of 15 sectors.

Stratified sampling is a probability sampling method that is implemented in sample surveys; the target population elements are divided into distinct groups or strata where within each stratum the elements are similar to each other with respect to select characteristics of importance to the research (Parsons, 2017). This study used a Stratified random sampling technique whereby a study population was divided into subgroups which are sectors and Microfinance institutions within those sectors were randomly selected to get a sample. A researcher selected one Microfinance institutions from each sector and 4 Microfinance institutions from one sector.

#### 2.3 Data Collection

A primary source of data provides raw information and first hand evidence such as interviews, and questionnaires Streefkerk (2018). This study used primary source of data collection whereby a researcher collected data by visiting directly the selected Microfinance institutions found in sectors of Musanze district.

This study used Questionnaires to collect primary data from the research field; a researcher prepared the written questionnaires to be filled by respondents which featured a series of open ended questions that used to collect useful information from respondents. Questions were supplied within Microfinance institutions according to their total number of workers.

### 2.4 Data Analysis

This study used both descriptive and inferential statistics method to analyze the quantitative data, a researcher used descriptive method for describing the profile of respondents such as describing the age, gender, marital status, education level and finding the mean. This method helped a researcher to get a conclusion of the distribution of the data, by helping to detect typos and outliers, and enabled a researcher to identify similarities among variables. This study also used inferential statistics whereby multinomial regression equation was applied for data analysis. Inferential statistics used to make inferences for forecasting the future behavior. Inferential statistic method used in different ways such as to test the model fitting, and parameters estimates. Statistical package for the social sciences (SPSS 24) Software was applied for the data analysis. SPSS24 Software provided analysis for descriptive statistics, numeral outcome predictions and predictions for identifying groups. This software helped a researcher in transforming the data and graphing.

#### 3. Results and Discussion

# 3.1 Effect of Technology on the MFI Growth

The table below explains the effect of technology on the growth of Microfinance institutions by using

the mean and standard deviation. A researcher used the likert scale of Likely, unlikely, most likely and most unlikely whereby From 1 to 1.75, it means most unlikely, From 1.75 to 2.50, it means Unlikely. From 2.50 to 3.25, it means likely and from 3.25 to 4.0, it means most likely. *Note*: 4: Most likely, 3: Likely, 2: Unlikely, 1: Most Unlikely

	Table 1. Descriptive	Statistics on the Us	e Technology in M	icrofinance Institutions
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	Ν	Range	Sum	Mean	Std. Deviation
T influences the MFIs growth(A)	93	1	135	3.45	.500
The use of paper work is better than					
the use of modern technology tools	93	3	262	2.32	.966
(B)					
Technology is fastening the MFIs	02	2	125	2.15	5.40
services to customers(C)	93	2	135	3.15	.542
The implementation of digitalization	ı				
in banks increases the performance	93	2	138	3.48	.583
of MFIs(D)					
Most of your customers are digital	0.2	2	0.40	2 60	011
customers.(E)	93	3	242	2.60	.911
Digital technologies increase		2		2.25	0.40
competition between Banks.(F)	93	3	165	3.27	.849
Digital Microfinance institutions do	0.2	2	240	1.60	001
not attract customers.(G)	93	3	249	1.68	.991
The Government contributes to the					
importation of technology in	93	3	168	3.81	.824
Bank(H)					
Most of staffs are digital in this	0.2	2	10.4	2 00	<b>7</b> .(1
MFI.(I)	93	3	194	2.09	.761
. Technology available in this MFI is		2	0.45	2.62	1.0.10
high(J)	93	3	245	2.63	1.040
The level of technology is improving	g	2	221	2 20	051
the performance in this MFI(K)	93	3	221	2.38	.871
There is a poor service delivery due					
to poor technology within this	93	3	204	1.15	.888
MFI(L)					
Valid N (list wise)	93				

From the table it shows that the mean is very significant because the information about the rating of variables according to the mean of importance, the variables like **A**, **D**, **F**, and **H** are falling in the interval of 3.25-4 which means that the majority of respondent replied "Strong Likely", the variable **E**, **C**, and **J** are in the interval of 2.5-3.25 meaning that the responses were "Likely" and the variables **B**, **I** and **K** fall in the interval of 1.75-2.5 which stands for "Unlikely" and finally, the variables **G** and **L** lie in the interval of 1-1.75 that means that the majority of respondents replied "Strongly Unlikely" for those variables. Therefore, based on the mean value, this concluded that the variables that contribute to the MFI growth are A, D, F, H, E, C and J.

Model	Model Fitting Criteria Likelil		atio Tes	ts	
	-2 Log Likelihood	Chi-Square	Df	Sig.	
Intercept Only	115.269				
Final	103.539	111.729	6	.018	

 Table 2. Model Fitting Information

Table 6 tests whether the model is fit to predict the relationship between the study variables. The table further indicates the parameters of the model for which the model fit is calculated. "Intercept Only" describes a model that does not control for any predictor variables and simply fits an intercept to predict the outcome variable. "Final" describes a model that includes the specified predictor variables and has been arrived at through an iterative process that maximizes the log likelihood of the outcomes seen in the outcome variable, therefore, the model fits well the data as the p-value of 0.018 is less than 0.05.

#### Table 3. Pseudo R-Square

Pseudo R-Squar	e	
Cox and Snell	.823	
Nagelkerke	.979	
McFadden	.988	

Table 7 tests the relationship between the study variables. The findings indicated a Cox and Snell R-Square of 0.823 based on the R-square the researcher concluded that the model is good enough to be used since it is good at 82.3%. In multinomial logistic regression you can also consider measures that are similar to  $R^2$  in ordinary least-squares linear regression, which is the proportion of variance that can be explained by the model. In multinomial logistic regression, however, these are pseudo  $R^2$  measures and there is more than one, although none are easily interpretable. This implies that there is a strong relationship between the study variables. Thus, technological innovation influences the growth of MFI

# Table 4. Goodness of Fit

Goodness-of-Fit						
	Chi-Square	Df	Sig.			
Pearson	107.193	50	.000			
Deviance	69.713	50	.634			

The first row, labeled "**Pearson**", presents the Pearson chi-square statistic. Large chi-square values (found under the "**Chi-Square**" column) indicate a poor fit for the model. A statistically significant result (i.e., p < .05) indicates that the model does fit the data well. You can see from the table above that the p-value is .000 (i.e., p = .000) (from the "**Sig.**" column) and is, therefore, statistically significant. Based on Deviance p-value this measure, the model does not fit the data well. The other row of the table (i.e., the "**Deviance**" row) presents the Deviance chi-square statistic. These two measures of goodness-of-fit might not always give the same result.

Overall <sup>a</sup>	r Estimates	В	Std.	Wald	df	Sig.	Exp(B)	95% C	onfidence
			Error			U	1 < 7	Interva	
								Exp(B)	
								Lower	Upper
								Bound	Bound
1%-30%	Intercept	2.234	1.167	3.664	1	.006			
	Mostofyourcustomersaredigitalcustomers(A)	).023	.531	.002	1	.015	1.023	.361	2.899
	Most of staffs are digital in this MFI(B)	1.114	.584	.035	1	.047	3.047	.969	9.575
	TechnologyavailableinthisMFIishigh(C)	.317	.393	.549	1	.020	1.372	.636	2.964
	Intercept	764	1.026	.050	1	.456			
30%-50%	Mostofyourcustomersaredigitalcustomers	081	.498	.027	1	.030	.922	.348	2.445
	MostofstaffsaredigitalinthisMFI	.451	.559	.051	1	.020	1.570	.525	4.695
	TechnologyavailableinthisMFIishigh	.534	.363	0.016	1	.141	1.706	.838	3.473

# Table 5. Parameter Estimates of Technology and Growth of MFI

Y=2.234+0.23(A)+1.114(B)+0.34(C) for Overall 1%-30% to Overall 50%-70%

Y=-0.764-0.081(A)+0.451(B) for Overall 30%-50% to Overall 50%-70%

**Intercept**—This is the multinomial logit estimate for overall 1%-30% relative to overall 50%-70% when the predictor variables in the model are evaluated at zero.

(A)—This is the multinomial logit estimate for a one-unit increase in (A) for overall 1%-30% relative to overall 50%-70% given the other variables in the model are held constant. If a subject were to increase his (A) by one point, the multinomial log-odds of preferring overall 1%-30% to overall 50%-70% would be expected to increase by 0.023 unit while holding all other variables in the model constant.

(**B**)—This is the multinomial logit estimate for a one-unit increase in (**B**) for overall 30%-50% relative to overall 50%-70% given the other variables in the model are held constant. If a subject were to increase his (**B**) by one point, the multinomial log-odds of preferring overall 1%-30% to overall 50%-70% would be expected to increase by1.114 while holding all other variables in the model constant.

(C)—This is the multinomial logit estimate for a one-unit increase in (C) for overall 1%-30% relative to overall 50%-70% given the other variables in the model are held constant. If a subject were to increase his (C) by one point, the multinomial log-odds of preferring overall 1%-30% to overall 50%-70% would be expected to increase by 0.317 while holding all other variables in the model constant. But it was not statistically significant for second category since its p-value of .141 is greater than 0.05.

Effect	Model Fitting	atio Tests	5				
	Criteria						
	-2 Log	Chi-Square	df	Sig.			
	Likelihood of						
	Reduced Model						
Intercept	164.926	9.269	2	.010			
Mostofyourcustomersaredigitalcustomers (A)	155.802	.144	2	.030			
MostofstaffsaredigitalinthisMFI (B)	160.744	5.087	2	.009			
TechnologyavailableinthisMFIishigh(C)	156.426	.768	2	.041			
Theuseofpaperworkisbetterthantheuseofmoder ntechnology(D)	160.618	4.960	2	.084			
TechnologyisfasteningtheMFIsservicestocusto mers(E)	160.007	4.350	2	.114			
Digitaltechnologiesincreasecompetitionbetwee nBanks(F)	159.266	3.609	2	.165			

#### Table 6. Likelihood Ratio Tests

The chi-square statistic is the difference in -2 log-likelihoods between the final model and a reduced model. The reduced model is formed by omitting an effect from the final model. The null hypothesis is that all parameters of that effect are 0.

The likelihood ratio test proves that the independent or predictor variables like A,B and C were significant, which proves that these predictors contribute significantly to the final model. This table

shows which of the independent variables are statistically significant. You can see that A (the "A" row) was statistically significant because p = .30 (the "**Sig.**" column). The variable "**B**" is also statistically significant with p=0.009 and "C" is significant because p=0.041. On the other hand, the **D**, **E**, **F** variable were not statistically significant because their p = .084, p=.114 and p=.165 are all greater than 0.05. There is not usually any interest in the model intercept (i.e., the "**Intercept**" row). This table is mostly useful for nominal independent variables because it is the only table that considers the overall effect of a nominal variable.

3.2 Influence of Employment Satisfaction on the Growth of MFI

The above table explains the influence of employee satisfaction on the growth of Microfinance institutions by using mean.

Descriptive Statistics						
	Ν	Mean	Std. Deviation			
The working environment is good for this	02	2 (7	((5			
MFI(A)	93	2.67	.665			
You get work motivations sometimes(B)	93	2.89	.561			
The current salary satisfies you(C)	93	2.03	.794			
The working environment of this MFI is	02	2 70	5 4 7			
supporting the performance of employees(D)	93	3.70	.547			
Valid N (list wise)	93					

Table 7. Effect of Employment Satisfaction on the Growth of Microfinance Institution

From the table it shows that the mean is very significant. Whereby from 1 to 1.75, it means most unlikely, From 1.75 to 2.50, it means Unlikely. From 2.50 to 3.25, it means likely and from 3.25 to 4.0, it means most likely. The table above provides information about the rating of variables according to the mean of importance, the variable **D** is falling in the interval of 3.25-4 which means that the majority of respondent replied "Strong Likely", the variables **A** and **B** are in the interval of 2.5-3.25 meaning that the responses were "Likely" and the variable **C** falls in the interval of 1.75-2.5 which stands for "Unlikely. Therefore, based on the mean value, this concluded that the variables that contribute to the MFI growth are A, B and D.

# Table 8. Pseudo R-Square

Pseudo R-Square	e	
Cox and Snell	.872	
Nagelkerke	.989	
McFadden	.997	

This R-Square is 0.872 and we can conclude that the model is good enough to be used since it is good at 87.2%. This R-Square is 0.872 and we can conclude that the model is good enough to be used since it is good at 87.2%. In multinomial logistic regression you can also consider measures that are similar to  $R^2$  in ordinary least-squares linear regression, which is the proportion of variance that can be explained by the model. In multinomial logistic regression, however, these are pseudo  $R^2$  measures and there is more than one, although none are easily interpretable.

Pseudo I	R-Square								
Overall <sup>a</sup>		В	Std.	Wald	df	Sig.	Exp(B)	95% Co	nfidence
			Error					Interval	for Exp(B)
								Lower	Upper
								Bound	Bound
	Intercept	2.066	1.515	1.860	1	.0073			
1%-30%	TheworkingenvironmentisgoodforthisMF	1.044	.637	2.685	1	.001	2.840	.815	9.899
	Yougetworkmotivationssometimes(E)	.528	.661	.638	1	.024	1.696	.464	6.195
	Thecurrentsalarysatisfiesyou(F)	.158	.437	.130	1	.018	1.171	.497	2.756
	Intercept	1.935	1.490	1.686	1	.004			
30%-50	TheworkingenvironmentisgoodforthisMF I	1.438	.631	5.193	1	.023	4.214	1.223	14.520
%	Yougetworkmotivationssometimes	.689	.657	1.101	1	.034	.502	.139	1.819
	Thecurrentsalarysatisfiesyou	.863	.437	3.906	1	.048	2.371	1.007	5.579

**Table 9. Pseudo R-Square** 

Y=2.066+1.044(D)+0.528(E)+ 0.158(F) for Overall 1%-30% to Overall 50%-70%

Y=1.935+1.438(D)+0.689(E)+0.863(F) for Overall 30%-50% to Overall 50%-70%

**Intercept**—This is the multinomial logit estimate for overall 1%-30% relative to overall 50%-70% when the predictor variables in the model are evaluated at zero.

(**D**)—This is the multinomial logit estimate for a one-unit increase in (**D**) for overall 1%-30% relative to overall 50%-70% given the other variables in the model are held constant. If a subject were to increase his (**D**) by one point, the multinomial log-odds of preferring overall 1%-30% to overall 50%-70% would be expected to increase by **1.044** while holding all other variables in the model constant.

(E)—This is the multinomial logit estimate for a one-unit increase in (E) for overall 1%-30% relative to overall 50%-70% given the other variables in the model are held constant. If a subject were to increase

his (**E**) by one point, the multinomial log-odds of preferring overall 1%-30% to overall 50%-70% would be expected to increase by **0.528** while holding all other variables in the model constant.

(**F**)—This is the multinomial logit estimate for a one-unit increase in (**F**) for overall 1%-30% relative to overall 50%-70% given the other variables in the model are held constant. If a subject were to increase his (**F**) by one point, the multinomial log-odds of preferring overall 1%-30% to overall 50%-70% would be expected to decrease by **0.158** while holding all other variables in the model constant.

3.3 Influence of Internal Controls on the Growth of MFI in Rwanda

Descriptive Statistics							
	Ν	Mean	Std. Deviation				
Internal controls influence the increase of profitability to MFIs	93	1.55	.599				
Internal controls in this MFI are very good	93	3.60	.592				
. Internal controls is supporting the good performance of this MFI	93	1.58	.596				
Valid N (listwise)	93						

Table 10. Effect of Internal Controls on the Growth of Microfinance Institutions

The table above shows that the majority of respondents said "strongly likely" on statement two which states that Internal controls in this MFI are very good with the mean of 3.60. For the first and the last statements with means (1.55 and 1.58), the majority said "Strong disagree" since the means is falling in the range of (1-1.75).

# Table 11. Pseudo R-Square

Pseudo R-Squar	e	
Cox and Snell	.873	
Nagelkerke	.999	
McFadden	.998	

This R-Square is 0.873 and we can conclude that the model is good enough to be used since it is good at 87.3%. This R-Square is 0.873 and we can conclude that the model is good enough to be used since it is good at 82.3%. In multinomial logistic regression you can also consider measures that are similar to  $R^2$  in ordinary least-squares linear regression, which is the proportion of variance that can be explained by the model. In multinomial logistic regression, however, these are pseudo  $R^2$  measures and there is more than one, although none are easily interpretable.

Parame	ter Estimates								
Overall <sup>a</sup>		В	Std. Wal		df	Sig.	Exp(B)	95% Confidence	
			Error					Interval	for Exp(B)
								Lower	Upper
								Bound	Bound
	Intercept	1.661	1.505	1.219	1	.270			
	Poor internal controls result to collapse of MFIs(A)	3.476	1.172	8.797	1	.003	32.340	3.251	321.666
%-30%	Internal controls influence the increase of profitability to MFIs(B)	1.404	.663	4.487	1	.034	.246	.067	.900
	Internal controls in this MFI are very good(C)	.099	.590	.028	1	.087	1.104	.348	3.507
	Intercept	1.354	1.471	.848	1	.037			
30%-50	Poor internal controls result to collapse of MFIs	3.788	1.155	10.749	€1	.001	44.154	4.588	424.948
6	Internal controls influence the increase of profitability to MFIs	.486	.520	.875	1	.030	.615	.222	1.704
	Internal controls in this MFI are very good	11.086	.583	3.467	1	.093	.338	.108	1.059

# Table 12. Parameter Estimates

Y=1.661<sub>+</sub>3.476(A)+1.404(B) for Overall 1%-30% to Overall 50%-70%

Y=1.354<sub>+</sub>3.788(A)+0.486(B)+1.086(C) for Overall 30%-50% to Overall 50%-70%

**Intercept**—This is the multinomial logit estimate for overall 1%-30% relative to overall 50%-70% when the predictor variables in the model are evaluated at zero.

(G)—This is the multinomial logit estimate for a one-unit increase in (G) for overall 1%-30% relative to overall 50%-70% given the other variables in the model are held constant. If a subject were to increase his (G) by one point, the multinomial log-odds of preferring overall 1%-30% to overall 50%-70% would be expected to increase by **3.476** while holding all other variables in the model constant.

(H)—This is the multinomial logit estimate for a one-unit increase in (H) for overall 1%-30% relative to overall 50%-70% given the other variables in the model are held constant. If a subject were to increase his (H) by one point, the multinomial log-odds of preferring overall 1%-30% to overall 50%-70% would be expected to decrease by **1.404** while holding all other variables in the model constant.

Model Fitting Information							
Model	Model Fitting Criteria	ting Criteria Likelihood Ratio Tests					
	-2 Log Likelihood	Chi-Square	df	Sig.			
Intercept Only	168.708						
Final	16.972	151.736	34	.000			

# **Table 13. Model Fitting Information**

The model fitness was assessed using the Chi-square statistic. The Chi-square was 151.736 and the P value was less than 0.05. This proves that there is a significant relationship between dependent variable and independent variables.

#### Table 14. Pseudo R-Square

Pseudo R-Square						
Cox and Snell	.864					
Nagelkerke	.999					
McFadden	.998					

This R-Square is 0.864 and we can conclude that the model is good enough to be used since it is good at 86.4%. This R-Square is 0.864 and we can conclude that the model is good enough to be used since it is good at 86.4%. In multinomial logistic regression you can also consider measures that are similar to  $R^2$  in ordinary least-squares linear regression, which is the proportion of variance that can be explained by the model. In multinomial logistic regression, however, these are pseudo  $R^2$  measures and there is more than one, although none are easily interpretable.

Paramet	er Estimates							
Overall <sup>a</sup>		В	Std.	Walddf	Sig.	Exp(B)	95% Co	onfidence
			Error				Interval	for Exp(B)
							Lower	Upper
							Bound	Bound
1%-30%	Intercept	7.530	2.485	9.18 1 5	.002			
	Mostofyourcustomersaredigitalcustomers(A	.311	.638	.238 1	.026	.733	.210	2.557

#### **Table 15. Parameter Estimates**

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$ \frac{\text{TheworkingenvironmentisgoodforthisMFI}}{\text{D}} \\ \frac{\text{TheworkingenvironmentisgoodforthisMFI}}{\text{D}} \\ \frac{1.485}{\text{D}} & .874 & \frac{2.88}{7} & 1 & .089 & 4.417 & .796 & 24.507 \\ \frac{1.19}{\text{D}} & 1 & .274 & 2.749 & .448 & 16.852 \\ \frac{1.19}{5} & 1 & .736 & .787 & .196 & 3.162 \\ \frac{1.19}{\text{Poorinternalcontrols sometimes}} \\ \frac{1.19}{\text{Poorinternalcontrols influence the increase of profit}}{3.742} & .3742 & 1.515 & \frac{6.10}{2} & 1 & .014 & 42.175 & 2.166 & 821.235 \\ \frac{1.19}{\text{O}} & .3742 & 1.515 & \frac{7.79}{7} & 1 & .005 & .074 & .012 & .460 \\ \frac{1.19}{\text{Internalcontrols influence the increase of profit}}{3 & .2608 & .378 & .288 & 1 & .017 & \\ \frac{1.19}{\text{Internalcontrols influence the increase of profit}{3 & .2618 & .2638 & .268 & 1 & .017 & \\ \frac{1.19}{\text{Internalcontrols influence the increase of profit}}{3 & .028 & 1 & .088 & .900 & .260 & 3.114 \\ \frac{1.19}{5} & .16 & .074 & .217 & \\ \frac{1.19}{5} & .216 & .233 & \\ \frac{1.19}{5} & .216 & .218 & \\ \frac{1.19}{5} & .216 & \\ \frac{1.19}{5} & \\ \frac{1.19}{5}$		MostofstaffsaredigitalinthisMFI(B)	2.435	.853		1	.004	11.419	2.145	60.799
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$		Technologyavailableinthis MFI ishigh (C)	.018	.657	.001	1	.978	1.018	.281	3.693
Yougetworkmotivationssometimes(E) 1.011 .925 ${5 \atop 1}$ 1.274 2.749 .448 16.852 The currents alarysatisfiesyou(F)239 .710 .114 1 .736 .787 .196 3.162 Poorinternal controls result to collapse of MFIs(-3.742 1.515 ${6 \atop 2}$ 1 .014 42.175 2.166 821.235 G) Internal controls influence the increase of profit ability to MFIs(H) 2.608 .934 ${7.79 \atop 7}$ 1 .005 .074 .012 .460 Intercept 5.333 2.225 ${5.74 \atop 5}$ 1 .017 Most of your customers are digital customers(A ) Most of staffs are digital in this MFI(B) 1.543 .802 ${3.69 \atop 8}$ 1 .044 4.680 .971 22.557 Technology available in this MFI(B) 1.543 .802 ${3.69 \atop 8}$ 1 .008 4.407 .836 23.228 Yougetwork motivations sometimes(E)757 .848 .798 1 .372 .469 .089 2.469 The currents alarysatis fiesyou(F) .694 .707 .962 1 .027 2.001 .500 8.007 Poorinternal controls result collapse of MFIs( G) Poorinternal controls result collapse of MFIs( G) Internal controls result collapse of MFIs( Hitemal controls result collapse of MFIs( Hi			1.485	.874		1	.089	4.417	.796	24.507
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$		Yougetworkmotivationssometimes(E)	1.011	.925		1	.274	2.749	.448	16.852
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$		Thecurrentsalarysatisfiesyou(F)	239	.710	.114	1	.736	.787	.196	3.162
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$		-	(-3.742	1.515		1	.014	42.175	2.166	821.235
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		•	2.608	.934		1	.005	.074	.012	.460
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$		Intercept	5.333	2.225		1	.017			
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$			.106	.633	.028	1	.088	.900	.260	3.114
$\begin{array}{cccccccccccccccccccccccccccccccccccc$		MostofstaffsaredigitalinthisMFI(B)	1.543	.802		1	.044	4.680	.971	22.557
$\begin{tabular}{ c c c c c c c c c c c c c c c c c c c$	30% 50	Technology available in this MFI is high (C)	485	.644	.568	1	.451	.616	.174	2.173
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$		e e	1.483	.848		1	.008	4.407	.836	23.228
$\begin{array}{cccc} Poor internal controls result to collapse of MFIs( & 7.93 \\ G) & -4.211 & 1.495 & 2 \\ Internal controls influence the increase of profit \\ ability to MFIs(H) & 1.906 & .927 & 4.23 \\ \end{array}  1  .040  .149  .024  .914 \\ \end{array}$		Yougetworkmotivationssometimes(E)	757	.848	.798	1	.372	.469	.089	2.469
$\begin{array}{c} -4.211 & 1.495 & 1 & .005 & 67.417 & 3.598 & 1263.142 \\ 2 & & & & & \\ \hline \\ Internal controls influence the increase of profit \\ ability to MFIs(H) & & & & & \\ \hline \\ 1.906 & .927 & & & & \\ 3 & & & & & \\ \hline \\ 1.906 & .927 & & & & \\ 3 & & & & & \\ \hline \\ 1.906 & .927 & & & & \\ 1 & .040 & .149 & .024 & .914 \\ \hline \\ \end{array}$		Thecurrentsalarysatisfiesyou(F)	.694	.707	.962	1	.027	2.001	.500	8.007
abilitytoMFIs(H) 1.906 .927 1 .040 .149 .024 .914		_	( -4.211	1.495		1	.005	67.417	3.598	1263.142
a. The reference category is: 50%-70%.		-	1.906	.927		1	.040	.149	.024	.914
	a. The re	ference category is: 50%-70%.								

NB: For the first category some variables have been removed from the modal because they are not statistically significant such as C, D, E and F, their p-values (0.088, 0.451 and 0.372) are greater than 0.05.

# Overall 1%-30% relative to Overall 50%-70%

**Ntercept**—This is the multinomial logit estimate for overall 1%-30% relative to overall 50%-70% when the predictor variables in the model are evaluated at zero.

(A)—This is the multinomial logit estimate for a one-unit increase in (A) for overall 1%-30% relative to overall 50%-70% given the other variables in the model are held constant. If a subject were to increase his (A) by one point, the multinomial log-odds of preferring overall 1%-30% to overall 50%-70% would be expected to increase by 0.0311 unit while holding all other variables in the model constant.

(**B**)—This is the multinomial logit estimate for a one-unit increase in (**B**) for overall 30%-50% relative to overall 50%-70% given the other variables in the model are held constant. If a subject were to increase his (**B**) by one point, the multinomial log-odds of preferring overall 1%-30% to overall 50%-70% would be expected to increase by while holding all other variables in the model constant.

(G)—This is the multinomial logit estimate for a one-unit increase in (G) for overall 1%-30% relative to overall 50%-70% given the other variables in the model are held constant. If a subject were to increase his (G) by one point, the multinomial log-odds of preferring overall 1%-30% to overall 50%-70% would be expected to increase by 3.742 while holding all other variables in the model constant.

(H)—This is the multinomial logit estimate for a one-unit increase in (H) for overall 1%-30% relative to overall 50%-70% given the other variables in the model are held constant. If a subject were to increase his (H) by one point, the multinomial log-odds of preferring overall 1%-30% to overall 50%-70% would be expected to decrease by 2.608 while holding all other variables in the model constant.

# Overall 30%-50% to Overall 50%-70%

(**B**)—This is the multinomial logit estimate for a one-unit increase in (**B**) for overall 1%-30% relative to overall 50%-70% given the other variables in the model are held constant. If a subject were to increase his (**B**) by one point, the multinomial log-odds of preferring overall 1%-30% to overall 50%-70% would be expected to increase by 1.543 while holding all other variables in the model constant.

(**D**)—This is the multinomial logit estimate for a one-unit increase in (**D**) for overall 1%-30% relative to overall 50%-70% given the other variables in the model are held constant. If a subject were to increase his (**D**) by one point, the multinomial log-odds of preferring overall 30%-50% to overall 50%-70% would be expected to increase by 1.483 while holding all other variables in the model constant.

(**F**)—This is the multinomial logit estimate for a one-unit increase in (**F**) for overall 30%-50% relative to overall 50%-70% given the other variables in the model are held constant. If a subject were to increase his (**F**) by one point, the multinomial log-odds of preferring overall 30%-50% to overall 50%-70% would be expected to increase by 0.694 while holding all other variables in the model constant.

(G)—This is the multinomial logit estimate for a one-unit increase in (E) for overall 1%-30% relative to overall 50%-70% given the other variables in the model are held constant. If a subject were to increase his (E) by one point, the multinomial log-odds of preferring overall 1%-30% to overall 50%-70% would be expected to increase by 4.211 while holding all other variables in the model constant.

(H)—This is the multinomial logit estimate for a one-unit increase in (H) for overall 30%-50% relative to overall 50%-70% given the other variables in the model are held constant. If a subject were to increase

his (**H**) by one point, the multinomial log-odds of preferring overall 30%-50% to overall 50%-70% would be expected to decrease by 1.906 while holding all other variables in the model constant.

**Std. Error**—These are the standard errors of the individual regression coefficients for the two respective models estimated.

Wald—This is the Wald chi-square test that tests the null hypothesis that the estimate equals0.

**Df**—This column lists the degrees of freedom for each of the variables included in the model. For each of these variables, the degree of freedom is 1.

**Sig.**—These are the p-values of the coefficients or the probability that, within a given model, the null hypothesis that a particular predictor's regression coefficient is zero given that the rest of the predictors are in the model. They are based on the **Wald** test statistics of the predictors, which can be calculated by dividing the square of the predictor's estimate by the square of its standard error. The probability that a particular **Wald** test statistic is as extreme as, or more so, than what has been observed under the null hypothesis is defined by the p-value and presented here. In multinomial logistic regression, the interpretation of a parameter estimate's significance is limited to the model in which the parameter estimate was calculated. For example, the significance of a parameter estimates in overall 1%-30% relative to overall 50%-70% model cannot be assumed to hold in the overall 30%-50% relative to overall 50%-70% model.

 $Y=7.530_{+}0.311(A) +2.435(B) +3.742(G)-2.608(H) \text{ for Overall 1\%-30\% to Overall 50\%-70\%}$  $Y=5.333_{+}1.543(B)+1.483(D)+0.694(G)-1.906(H) \text{ for Overall 30\%-50\% to Overall 50\%-70\%}$ Where Y= dependent variable

A, B, D, G and H are independent variables

#### 4. Conclusion

This study concludes that there is a positive relationship between technology and the growth of Microfinance institutions. This has been proved from the study whereby a researcher found that there is a positive relationship between digital customers and MFIs growth in deposits, loan disbursement and Microfinance institutions assets. As digital customers one of the indicators of technology it indicates that technology is important to Microfinance institutions as it will boost the performance and profitability. Also a researcher found that when Microfinance institutions have digital workers, adoption of new technology, training and development it will boost the performance and profitability.

Furthermore, this study concludes that good internal controls such as fraud prevention, integrity of financial and accounting information as well as risk assessment have a positive influence on the growth of Microfinance institutions in terms of deposits, loan disbursement and Microfinance assets. This has been proved by a researcher where by a researcher found that if the internal controls will continue to be poor within a Microfinance institution the performance and profitability will decrease but If

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Microfinance institutions will put much efforts to ensure good internal control it will stimulate the increase in performance and profitability of the organization.

Additionally, this study concluded that there is a positive relationship between employee satisfaction and the growth of Microfinance institutions in terms of deposits, loan disbursement and organizational assets. This has been proved by the researcher whereby a researcher found that the good working environment for workers, employee motivation and good salary to workers within Microfinance institutions will stimulate the growth of Microfinance institutions in terms of profitability and performance. This study concludes that there is a positive contribution and significance relationship between internal business environment particularly Employee satisfaction, internal controls and Technology on the growth of Microfinance Institutions.

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