

Interest Rates and Microfinance Performance in Eastern Africa

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Abstract

The contribution of microfinance industry to poverty alleviation has been overwhelmingly positive in many countries and regions. However, the most controversial dimensions which spark debate has often been interest rate charge by most microfinance institutions which seemingly miss the link towards the social mission for which the institutions were expected to perform. This has caused great concern about potential exploitations of poor borrowers by institutional lenders. This study therefore investigates to understand the possible effects of interest rates on microfinance performance. The research took sample of 73 microfinance institutions in 7 Eastern African countries using 2SLS model to examine the key variables. In so doing, nonlinear term and square of yield were added into the model as independent variables and portfolio at risk (PAR) was used as dependent variable in addition to other financial performance indicators to see whether high yield rate leads to default issues or otherwise among Eastern Africa microfinance institutions. The results demonstrate surprisingly otherwise as increase in yield rate reduced the level of portfolio at risk and the quadratic term was also insignificance though statistically positive. The research therefore confirmed that high interest rates do not lead to loans default but instead, it increased the financial performance through greater profitability in the region. We attribute these positive results to stable macroeconomics environments in the Eastern African region and the support given by government towards the development of small-scale businesses in the region.



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1.0 Introduction

Microfinance Institutions were originally founded to alleviate poverty by offering inexpensive financial services to the poorest members of society. However, one of the industry's most compelling issues is its high lending rate. Microfinance institutions, according to the World Bank, participate in fairly modest financial transactions using diverse approaches to assist low-income people, micro companies, small-scale farmers, and others who lack access to traditional banking services. Microfinance is the banking of unconventional bankers who provide loans, savings, and other critical financial services to impoverished individuals who are unable to be supplied by conventional banks, usually due to a lack of sufficient credit guarantees. According to Copestake (2007), efforts to increase financial performance result in higher interest rates on loans, but this has the opposite effect on social performance. Despite national and international development organizations' promises to microfinance engagement as a tool of poverty reduction, MFIs' financial viability, outreach, and competency are increasingly being questioned. Buckley (1997), in a survey of micro-enterprises in Ghana, Kenya, and Malawi, wonders if MFIs are similar to rural and credit cooperatives in the 1970s, implying that they may be unsustainable, whereas Ledgerwood and White (2006) argue that, despite their scale of outreach, MFIs only reach a small percentage of their likely market and ask, "What can be done?" Aside from the various issues stated, increasing interest rates imposed by certain MFIs is a major difficulty in the microfinance literature, with some advocates arguing for the industry's complete commercialization.

Armendàriz et al. (2010) note that commercialization is one of the most controversial factors in the microfinance field today due to the trade-off deliberation of poverty reduction and long-term sustainability. Interest rates have also been mentioned as a factor that might severely impact borrowers' surpluses, leaving them with little net benefit. There's also concern that high interest rates may limit demand for the adoption of financial services. Where these specific impacts are achieved, high interest rates assure the profitability and sustainability of the sector, and hence the capability of lenders to reach out to poor and distant customers, as Dehejia, Montgomery, and Morduch (2012) point out. According to some academics, the impact of high rates must be balanced against the comparative harm suffered by impoverished individuals who do not have access to microcredit at all. Mr. Roodman (2011) While access to financial services through MFIs may assist the poor escape poverty and improve their living standards, there are also worries about excessive debt burdens, which may result in high loan interest rates in the microfinance industry Liv (2013). Both affluent and developing nations, such as Armenia, Bangladesh, Bolivia, Chile, Kenya, India, South Africa, and the United States, have attempted to safeguard borrowers by policy restriction of the maximum permissible loan interest rate (Ferrari and his colleagues, 2018).

2.0 Review of Literature

2.1. Interest Rates and Microfinance Performance

The goal of global microfinance initiatives has been to achieve a higher degree of outreach, particularly among disadvantaged women borrowers. However, it appears that efforts and dedication to commercializing the microfinance industry are continuing to move. This is accomplished by increasing loan interest rates to levels that are frequently far higher than those paid to well-off customers of traditional banks (Helms 2006; Rosenberg 2009). Although the narrative contradicts conventional reasoning and study findings Morduch (2000), policymakers and academics have adopted the narrative, demanding a strong social defense of microfinance commercialization. The profitability of a microfinance organization is dependent on high interest rates. It is theorized that this is the only method to persuade investors to enable portfolio expansion to reach considerably greater heights. It also relieves funders of the need

to assist the industry on an ongoing basis. Some microfinance experts have proposed imposing an interest rate cap because financial institutions may be able to use their monopolistic market power to charge interest rates that are higher than market rates, according to Miller (2013). This implies greater borrowing costs, which will have a negative impact on borrower welfare. However, there are concerns. For example, Alper et al. (2019) found that the imposition of the interest rate ceiling resulted in a significant decrease in credit supplied to micro and medium-sized enterprises, as well as a negative impact on financial intermediation, in an analysis of the case of Kenya. Madeira (2019) demonstrated that the imposition of the interest rate ceiling in Chile in 2013 could have led to the exclusion of borrowing households from bank credit. In practice and principle, moral hazard and adverse selection in financial industry provide constraints and limitations on the ability to raise interest rates, since increasing fees makes it difficult and chances of repayment becomes very hard. Even though, everything remains the same, increase in interest rates generate revenues by means of loan advances and increase in prices can thwart repayment ability to such to a great extent that falls the profit-making motive. In specific scenarios, it is challenging to get interest rate which result to profit generation especially when it trade off with high prices. The incentive was that new credit agreements specifically group lending and installment lending could weaken the incentive instruments, allowing microfinance industry to continue and exploit on a commercial premise as they continue serving the poor (Ghatak and Guinnane 1999). This can increase microfinance sustainability through high profitability. A greater percentage of generated finance by MFIs emanated from interest revenue on loan, which means MFIs with quality loan advances portfolios seem to have a significant revenue growth. Many institutional investors choose investing in MFIs with a positive growth because of the assurance of return on their investment Fernando, (2006). According to Saunder (1995), lending interest rates have an impact on overall economic performance, including the flow of commodities, services, and financial instruments within the economy and throughout the world.

He shows that interest rates are linked to the present value of money and the true future worth of money. Meanwhile Roodman (2011) demonstrate that a general microfinance interest rates are competitive looking at it from rich point of view, once increase in cost of lending to the underprivileged section of the society increase, the worth of covering those costs in order to grow and infant nature of the sector are majorly put into consideration, in actual sense, most rates do not appear to be generally exploitative. He goes on to say that determining if lending is fair and convincing is best done by knowing the borrower's and lender's capabilities in agreement, rather than looking at a snapshot of the interest rate at one moment. For example, in a monopoly business, an MFI charging 50% on loans may elicit greater concern than one charging the same rate in a competitive market. Roodman emphasized the need of borrowers and lenders being able to alter their minds as a crucial stance, as well as three other significant components of lender attitude that impact the subject of fairness: transparency, dependability, and some feeling of flexibility. The creation of an emergency fund to offer a buffer against the risk of loan defaults is frequently a regulatory necessity for bank-led Microfinance Institutions, but other forms of Microfinance Institutions recognize the need of doing so. As a result, portfolio losses account for around 6% of the interest rates charged by successful microfinance firms. (Microfinance Information Exchange, 2007). In addition, Nobel Laureate Muhammed Yunus advocated that MFIs' maximum interest rate not exceed the cost of the fund, which is defined as the bank's cost of getting the money to lend plus 15% of the fund. Furthermore, Gonzalez (2010) stated that, while Yunus' technique is appealing in nature, the expenses vary, particularly across loan levels and with impoverished customers or those who live far away in sparsely populated areas. According to some experts, substantial interest rates are essential to maintain the long-term viability and future coverage of microcredit services for the poor.

Despite this, Dehejia, Montgomery, and Morduch (2012) argue that in some instances, a strong moral and confidence to maintain prices as low as feasible for poor people gives way to a strong moral and confidence to keep costs as low as possible for poor people. For example, many microfinance lenders in South Asia keep real interest rates around 40%, despite the fact that this requires them to rely on subsidized resources to meet their costs.

Rosenberg, Gonzalez, and Narain (2009) show that, while interest rates have been the subject of heated debate in the microfinance price debate, they are not the only cost that the poor bear in the process of receiving credit. They stressed the need of keeping in account additional transaction costs experienced by borrowers, such as expenses away from their enterprises, transportation costs, and the major negative impact of delays in collecting loan cash. These fees are easy to measure in the real world, but they may impact borrowers' judgments about where they want to accept their loan. Interest rates, in general, are not the primary factor influencing credit demand and availability. The bulk of the 62 percent interest rate paid by sustainable microfinance providers is made up of personnel and administrative expenditures. These high expenses are associated with disbursing and retrieving a huge number of small loans, many of which are made to clients in distant locations with poor infrastructure and security. Administrative costs are the single largest contributor to interest rates, despite the fact that they are a consequence of multiple factors (Gonzalez et al, 2007).

3. Microfinance Outreach

Several studies in East Africa have found that, despite the number of women served by MFIs is significantly higher than the number of males, women are often smaller borrowers than men and have more difficulty qualifying for larger MFIs that demand guarantees. This is significantly clear in the table below for instance Centenary Bank and Equity Bank which require sophisticated collateral have no women borrowers while Brac Uganda scores up to 99% of female borrowers. There are still challenges which require greater attention, if significant levels of outreach have to be achieved, more have to be done. Microfinance has risen rapidly in the previous two decades, yet the majority of East Africa's population still lacks access to credit and savings services.

Table 1: Number of women borrowers at Uganda's top MFIs

Name	Gross loan portfolio (US\$ millions rounded)	Number of active borrower	Total women borrowers	Women borrowers of total
BRAC - Uganda	13.0	103 489	102 409	99%
Centenary Bank	186.6	109 277	NA	-
Equity Uganda	46.6	58 011	NA	-
Finance Trust	14.8	20 175	14 122	70%
FINCA - Uganda	12.7	45 135	29 802	66%
Micro Enterprise Development Network (MED-Net)	1.6	7 833	2 240	29%
Micro Uganda Ltd (MUL)	1.4	1 515	561	37%
Opportunity Uganda	8.1	19 761	11 066	56%
PRIDE - Uganda	25.4	60 276	24 919	41%
Uganda Agency for Development Ltd (UGAFODE)	3.4	5 967	2 308	39%

Source: mixmarket.org for 2009.

The answers lay in expanding the official and regulated institution's branch network in rural regions, which involves improving basic infrastructure in remote rural areas and establishing critical mass to ensure service delivery. Other barriers to microfinance outreach include the

time and transportation expenditures that rural borrowers must bear in order to receive financial services, which are considered disincentives to such initiatives. In Uganda and Kenya, Opportunity International and Equity Bank have deployed vehicle-mounted bank tellers to provide financial services closer to rural people. These vans cycle between communities on a regular basis, allowing institutions to reach a larger number of people at a lower cost.

4. Fastest Financial Service Providers

The number of borrowers in Eastern Africa grew steadily due to a rise in the number of borrowers in major financial service providers. Among NBFIs and NGOs, there were eight financial service providers with a large number of borrowers. NBFIs and banks are seeing the quickest growth; banks are the charter type that has had the most rapid expansion in the number of borrowers. Kenya and Ethiopia saw the strongest growth for NBFIs, respectively; nevertheless, the rapid development of a few major players contrasted with slower growth for many institutions; even within NBFIs, around one-third of providers observed a reduction in the number of borrowers. The trend was most visible among credit unions/financial cooperatives, which showed a fall in the number of borrowers. Nearly half of NGOs saw a decrease in the number of borrowers; but, like with other charter types, a few NGOs stood out and saw significant increase. This also implies that most traditional banks need loan guarantees, which most borrowers cannot pay.

Table 2: Fastest Financial Service Providers

Ran k	Financial service provider	Countr y	Chart er	2009 Borrow ers	Absolute growth	Percentage growth
1	Equity Bank	Kenya	Bank	715,969	173,720	32%
2	KWFT	Kenya	NBFI	334,188	126,178	61%
3	OCSSCO	Ethiopia	NBFI	458,762	94,178	26%
4	OMO	Ethiopia	NBFI	280,232	61,628	28%
5	SMEP	Kenya	NBFI	85,678	49,029	134%
6	BRAC—UGA	Uganda	NGO	103,489	40,880	65%
7	DECSI	Ethiopia	NBFI	488,922	24,300	5%
8	BRAC—TZA	Tanzania	NGO	89,818	20,316	29%

Source: Mix and CGAP 2009/ 2011

5. MIX Indicators and Data Methodology

MIX is a Washington, DC-based non-profit with regional offices in Peru, Senegal, India, and Indonesia it was established in June of 2002. MIX was founded by CGAP (Consultative Group to Assist the Poor), with assistance from City Foundation, Deutsche Bank Americas Foundation, IFAD, and the Bill and Melinda Gates Foundation. Microfinance institutions (MFIs) provide financial and social performance data, as well as business data from market facilitators, important donor organizations, and microfinance investors. As a result, the following metrics were derived from the Mix website, which includes detailed financial data for microfinance institutions that is both standard and audited internationally. It is the most reputable source for most microfinance scholars, since it contains publicly available data. Mix Market receives copies of the MFIs' financial statements on sustainability and outreach reports. Some of the researchers that have employed Mix Market data approach are (Ayayi and Sene, 2010; Cull et al., 2007). The data spans a ten-year period, from 2009 to 2019, and comes from 73 microfinance institutions across seven Eastern African nations. The indicators were chosen based on data availability, however this does not rule out the possibility of missing data in any manner. Some of the microfinance indicators utilized in this study are listed below.

Financial Performance indicators: (for measuring microfinance sustainability)

Financial Revenue / (Financial Expense + Impairment Losses on Loans + Operating Expense) = Operational Self-Sufficiency (OSS).

Adjusted Financial Revenue / Adjusted (Financial Expense + Impairment Losses on Loans + Operating Expense) = Financial Self-Sufficiency (FSS).

(Adjusted Net Operating Income - Taxes) / Adjusted Average Total Assets = Return on Assets (ROA).

Efficiency indicators:

OE (Adjusted Operating Expense/Adjusted Average Gross Loan Portfolio): Adjusted Operating Expense/Adjusted Average Gross Loan Portfolio.

Deposit Mobilization (DEM) is the percentage of a deposit's value in a loan portfolio's total value.

Risk and Liquidity Indicators:

Portfolio at Risk > 30 Days (PAR): Outstanding balance, portfolio overdue > 30 days + renegotiated portfolio / Adjusted Gross Loan Portfolio.

Write-Off Ratio (WOR): Adjusted value of loans written off / Adjusted Average Gross Loan Portfolio.

Outreach indicators: (For measuring microfinance outreach)

Number of active women borrowers/Adjusted Number of Active Borrowers (PWB): Number of active women borrowers/Adjusted Number of Active Borrowers.

Borrower's Average Loan Balance:

Gross Loan Portfolio Adjusted/Number of Active Borrowers Adjusted

Revenue and Expenses indicators:

Yield on Gross Portfolio (YGLP): Adjusted Financial Revenue from Loan Portfolio / Adjusted Average Gross Loan Portfolio.

Yield squared (YSQ): Square on all gross portfolios.

Institutional Characteristics indicators

Age of MFI: Years functioning as an MFI and Number of offices

Dummy variables:

Dummy variable, mature MFIs =1, new and young MFIs =0

New MFI: dummy variable with New MFIs = 1 and mature and young MFIs = 0.

MFIs that are not for profit: dummy variable, not for profit MFIs =1, profit MFIs =0

5.1. Sampling Distribution**Table 3: Microfinance Institutions: Eastern Africa**

Countries	Number of MFIs	% of the sample
Tanzania	10	14
Kenya	12	16
Ethiopia	15	21
Uganda	12	16
Somalia	8	11
Sudan	8	11
Djibouti	8	11
Total	73	100

5.2 Theoretical Model

This research used Two-Stage least square (2SLS) for analysis, the technique is an extension of OLS method. This estimation method is important when feedback loops are expected in the model and when dependent variables' error term is correlated with independent variables. It can also be significant alternative in Structural Equation Modeling (SEM). The theory was developed together with 3SLS developed by Zellner & Theil in their 1962

$$Y_{it} = \alpha_0 + \alpha_1 X_{it} + \alpha_2 P_{it} + \varepsilon_{1it} \dots \dots \dots (1)$$

The issue is that P_{it} is associated with the error term ε_{1it} , i.e., $\text{corr}(P_{it}, \varepsilon_{1it}) \neq 0$. We will receive a biased and inconsistent program effect estimate if we utilize basic OLS in equation (1), that is, α_2 will be skewed and inconsistent. When unobserved variables influence both program participation (P_{it}) and the result of interest (Y_{it}), this scenario emerges. P_{it} is said to be endogenous in this scenario.

Stage 1:

Specify a model for P_{it} : $P_{it} = \beta_0 + \beta_1 X_{1it} + \beta_2 Z_{it} + \varepsilon_{2it} \dots \dots \dots (2)$

Run equation (2) using OLS to acquire the estimated coefficients and generate expected program participation, where Z_{it} is the instrumental variable.

Stage 2:

Remember that: $P_{it} = \hat{P}_{it} + \varepsilon_{2it} \dots \dots \dots (3)$

Substitute P_{it} , using (3) in the main equation (1):

$$Y_{it} = \alpha_0 + \alpha_1 X_{1it} + \alpha_2 P_{it} + \varepsilon_{1it}$$

$$Y_{it} = \alpha_0 + \alpha_1 X_{1it} + \alpha_2 (\hat{P}_{it} + \varepsilon_{2it}) + \varepsilon_{1it}$$

$$Y_{it} = \alpha_0 + \alpha_1 X_{1it} + \alpha_2 \hat{P}_{it} + (\alpha_2 \varepsilon_{2it} + \varepsilon_{1it})$$

$$Y_{it} = \alpha_0 + \alpha_1 X_{1it} + \alpha_2 \hat{P}_{it} + \varepsilon_{1it}^*$$

5.3 Endogeneity Procedure

Now, because endogeneity is caused by unobservables that impact both participation and outcome, one option would be to quantify and include those unobservables in the model. We can't always measure the unobservable, therefore we have to make educated guesses. Remember that the unobservable variables are also in ε_{2it} , the equation's error term (2). The projected residuals from equation (2) may be obtained and then included as an extra variable in equation (1); if they are statistically significant, it signifies that there are unobservable (s) impacting program participation as well as the result, and you have endogeneity. That is to say, there is endogeneity if the estimated parameter of the residuals is significant, and there is no endogeneity if the estimated parameter of the residuals is not significant.

5.4 Econometric Specification

$$SUS_{it} = \alpha_1 + YOUT_{it} + \beta_1 WOR_{it} + \beta_2 OE_{it} + \beta_3 YR_{it} + \beta_4 DEM_{it} + \beta_5 AGE_{it} + \beta_6 FSS_{it} \dots \dots (4)$$

$$PAR_{it} = \alpha_1 + YSUS_{it} + \beta_1 OE_{it} + \beta_2 YR_{it} + \beta_3 DEM_{it} + \beta_4 YSQ_{it} + \beta_5 AGE_{it} + \beta_6 FSS_{it} \dots \dots (5)$$

OSS > 1 indicates that the particular MFI is paying expenses from operating revenues, whereas OSS values below 1 indicate that the relevant MFI is not covering costs from operating revenues. Since lower loans imply better outreach, we created a technique that used 1 to the lowest figure and 0 to the greatest figure, then averaged the two parts to produce the index.

The estimators in this work are built on instruments or instrumental variables to overcome this unpredictability (IVs). Legitimate IVs are expected to be uncorrelated with the error term, and they are used in a first stage regression estimation to get predicted values of the endogenous determinants; these predicted standards are then used in a second stage regression estimation to get predicted values of the endogenous determinants. Because we have two endogenous components, sustainability and outreach, an appropriate instrument should have no direct relationship with the dependent variable but should have a correlation with the endogenous variables while being uncorrelated with the error term. We used two different IV settings in this instance.

6. Descriptive Statistics

Table 4 shows descriptive analyses that were performed primarily for the years under research, 2009-2019, and in which means, minimums, and maximums were utilized to assess descriptive statistics data. The results show that MFIs in Eastern Africa are highly sustainable and hence capable of producing profits for self-sufficiency, as evidenced by the fact that all sustainability indicators have a mean value of 1 or above.

Table 4: Descriptive Statistics

Variables	Mean	Std Dev.	Min	Max
SUST	0.728	0.074	0.266	0.812
OUT	0.468	0.185	0.022	0.944
ROA	1.004	1.076	-4.402	3.944
FSS	2.296	1.035	-2.596	3.801
OSS	3.575	0.344	3.467	5.296
WOR	0.388	1.464	-4.608	7.202
OE	146.434	215.642	5	2156
YR	23.081	1.512	6.454	18.508
PAR	5.265	6.823	0	69.56
YSQ	1108.622	1956.542	0.002	35000.12
DEM	8.553	44.345	0	402.335
M.MFIs	0.506	0.5122	0	1
N.MFIs	0.168	0.354	0	1
NFP. MFIs	0.494	0.411	0	1

Mature microfinance institutions have a dummy variable of =1, new and young microfinance institutions have a dummy variable of =0, and new microfinance institutions have a dummy variable of =1. Furthermore, the dummy variable for not-for-profit microfinance organizations is = 1, whereas the dummy variable for profit microfinance institutions is =0.

7. Discussion of the Result

In this case, portfolio at risk (PAR) was used as dependent variable together with other measures of sustainability such as operation self-sufficiency (OSS), return on asset (ROA) and financial self-sufficiency (FSS). In so doing 2SLS was adopted to examine the results by looking into highly emphasized postulation that higher yield rates lead to higher profitability and therefore sustainability and at the same high rate of default in the specific regards of microfinance institutions in Eastern Africa. To review this argument, non-linear term and square of yield were included into our regression model. The whole intention of adding portfolio at risk (PAR) as dependent variable is to see whether high yield rate leads to default issues or otherwise in the context of microfinance institutions in Eastern Africa. The regression results tell otherwise surprisingly as an increase in yield rate reduced level of portfolio at risk, something which was not predicted. The quadratic term as demonstrated is insignificant though statistically positive; this is inconsistent with expectation because the prediction was

that high interest rate will lead to high default rate among microfinance institutions in Eastern Africa. This is an indication that high interest rate do not have immediate impact on loan default among microfinance institutions in Eastern Africa. We therefor believe that increment in interest will lead to increase financial performance through high profitability instead of leading to financial losses through loan default among microfinance institutions in Eastern Africa.

Table 5: Yield rate and profitability

VARIABLES	1	2	3	4	5
	PAR	ROA	FSS	OSS	SUSTAIN
Outreach Index	2.0749	-1.4508*	-1.8957***	- 1.3910***	-0.3495***
	(4.1679)	(0.6889)	(0.6540)	(0.2057)	(0.0484)
Yield rate	-0.1480**	0.0305**	-0.0020	0.0079***	0.0025**
	(0.0644)	(0.0140)	(0.0122)	(0.0034)	(0.0007)
Yield Sq.	0.0008	-0.0004	0.0004	-0.0000	-0.0000
	(0.0005)	(0.0001)	(0.0001)	(0.0000)	(0.0000)
Write-off ratio	1.0658***	-0.0818*	-0.1085**	- 0.0556***	-0.0157***
	(0.2065)	(0.0486)	(0.0492)	(0.0110)	(0.0031)
Operating Expense	0.0043**	-0.0005*	-0.0006*	- 0.0009***	-0.0004***
	(0.0021)	(0.0003)	(0.0003)	(0.0004)	(0.0000)
Deposit Mobilization	-0.0256	0.0029	0.0028	-0.0000	0.0000
	(0.0225)	(0.0048)	(0.0050)	(0.0020)	(0.0005)
Mature MFI	1.0145	0.0506	0.1013	-0.0032	-0.0014
	(0.7527)	(0.1620)	(0.1470)	(0.0360)	(0.0085)
New MFI	-0.2418	0.1309	0.2171	-0.1273**	-0.0342**
	(1.0869)	(0.3033)	(0.3001)	(0.0511)	(0.0130)
Not-for-Profit	-0.0522	0.0255	-0.0458	-0.0029	-0.0040
	(0.6935)	(0.1540)	(0.1562)	(0.0339)	(0.0095)
Constant	5.4484***	0.8569*	3.4042***	5.0581***	0.7502***
	(2.1501)	(0.3902)	(0.4125)	(0.0876)	(0.0294)
Time Dummies	Yes	Ye s	Yes	Yes	Yes
Observations	14 5	157	154	200	224
<i>Diagnostic Tests for IV Estimations</i>					
First Stage F-Stat	62.62***	30.47***	33.24***	61.38***	55.45***
Partial R-squared	0.6023	0.6131	0.5962	0.6230	0.6624

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Even after adding a nonlinear factor to our regression model, the financial self-sufficiency (FSS), operational self-sufficiency (OSS), and return on asset (ROA) appear to have favorable connections with these financial performance measures, as shown in the findings. This signal that microfinance institutions in Eastern Africa actually become more sustainable with introduction of high interest rate, the explanation to which high interest rate do not lead to high default rate in Easter Africa is directly associated with high economic growth rate in the region and so most borrowers are able to meet their financial obligations as cited by Ahlin at

el (2011). These nations' governments have also implemented step-up measures to boost finance availability to small firms. Furthermore, Hermes et al. (2018) argued that interactions between country-level macroeconomic factors and microfinance financial indicators were important in determining the success of microfinance organizations in various nations. High economic development may boost micro-enterprise profits and demand for microcredit, allowing MFIs to raise interest rates while also providing borrowers a better chance to satisfy their commitments even when rates are high. High growth, on the other hand, may boost household wages while lowering demand for microcredit and interest rates.

Mersland and Strøm (2013) also argued that stable macroeconomic environments increase chances of better performance by microfinance institutions even in the face of high rate of interest. This is consistent with admirable level of performance by microfinance institutions in East Africa in which high default rate was expected but turn out to be different. According to World Bank data, the growth rate of most emerging nations outpaced that of developed ones. Sub-Saharan Africa and Asian countries, in particular, have been identified as having the fastest growth rates in the developing world. In 2013, 2014, and 2018, the growth rates were 5.19 percent, 5.13 percent, and 3.27 percent greater than in developed nations. In 2021, this increase is predicted to reach 4.08 percent. With this comparatively high growth rate in Sub Saharan Africa, it is worth noting to anticipate the same level of trend in business growth and development especially microfinance fraternity. Therefore, if the country growth rates are stable, performances of MFIs possibly improved and cover up their overheads. The results look into other argument put forwards by other studies that AGE of microfinance institution is related to its strengths. It is believed that many microfinance institutions with many years of experience are more sustainable and profitable. In this case dummies for microfinance AGE and profit status on sustainability was used, the idea is to measure the difference between mature MFIs and New MFIs in order to determine the institutional difference in term of quality of delivery of financial services. The results discover that AGE of MFI does not have major significant effect on sustainability and profitability. This contradicts Gonzales (2007) who in their studies found positive relationship of AGE with sustainability citing experience of MFI as main factor.

8. Conclusions and Recommendations

It is observed that high interest rate do not leads to high default rate amongst microfinance institutions in Eastern Africa, instead it lead increase financial performance. We strongly believe that stable macroeconomic environments and positive government drive towards poverty alleviation commitment boosted the confidence of small scale businesses and entrepreneurs hence more borrowers are able to meet their financial obligations in Eastern Africa. In addition, we recommend microfinance institutions to adopt appropriate policy adjustment towards social mission as oppose to profitability drive in order to ensure more financial inclusions since poor people might not be able to meet sophisticated credit requirements demanded by most microfinance institutions in the region. Furthermore, more rigorous studies need to be done on various loans techniques which was the not scope of this study to comprehend further as to why high interest rate does not result into portfolio at risk but instead of more profitability leading to greater financial sustainability.

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