Spring 2022

Building a Future Microfinance Community in Kenya

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By

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Submitted in Partial Fulfillment of
the Requirements for
Graduation with Honors from the
South Carolina Honors College

<May, 2022>

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Special Thanks

During my time writing my thesis I received a lot of help from many different people. Without their help, it would not have been possible to complete this thesis or the honors college. I am grateful for their contributions.

Firstly, I would like to thank the Honors College and the University of South Carolina. The support that they provided throughout my time here has prepared me for my thesis and my career after. Also, the resources made available to me as a student enabled me to complete the research required. I am very thankful that I have been able to be a part of the Honors College here at the University of South Carolina.

Secondly, I would like to thank my thesis director Mustafa Karakaplan, and my second reader Marcelo Frias. They have provided me with support and feedback critical for the success of this thesis. The time that they put forth in guiding me really aided in my process.

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Summary

The lack of access to financial tools has been a significant problem in many areas around the world for a long time. It prevents certain groups of people from being able to progress financially and improve their economic standing. This issue stems from an overall lack of resources and infrastructure in the area. Without the acquisition of new funds, there is no path to poverty alleviation in underdeveloped areas. Currently, the global response has been to try to provide these resources through various methods, including microfinance activities.

Microfinance institutions have been operating in Kenya for decades. They provide a variety of services that include personal loans, business loans, and personal savings accounts, among others. These services have provided a foundation for growth and show promise. However, as currently constructed, these loans fail to demonstrate an ability to provide lasting economic growth on a regional scale. The key is to develop solutions that expand microfinance activities and are focused on growing Kenya's economy.

This thesis examines historical applications of microfinance by using data samples gathered from academic sources. The data is used to conduct financial analysis that helps determine the current factors that have an impact on microfinance activities and their future implications. It also assesses the economic situation that currently exists in Kenya and the potential for future growth. The main purpose of this thesis is to highlight the factors that positively affect poverty alleviation, illustrate efficacious uses of microfinance that already exist, and propose what an effective application of

microfinance activities would look like in the future based on the data gathered in the study.

Introduction and Background

The lack of resources in certain areas of the world limits potential markets, leaving large segments of the population that are unable to better themselves financially. This issue hurts their quality of life and prevents them from participating in the market on a more global stage. The inability of these regions to consume foreign goods not only hurts the Kenyan economy. In the long term, it negatively affects global markets as well. While these emerging markets are blooming with untapped potential, they require extensive cultivation. There is a need to help expand these markets, and many potential financial solutions have emerged. One method that has been previously explored is microfinance. It is a banking service intended specifically for low-income individuals who would otherwise not have access to funds. Microfinance has the potential to positively change the developing world. It is simply a matter of structuring the aid in the correct way.

There are many different stakeholders invested in microfinance activities in Kenya. The first stakeholder group contains small business owners and their families. Gaining access to additional funds can greatly affect the financial security of one's business as well as their personal finances. However, undertaking unpayable debt can be catastrophic for people in developing regions. Ensuring that individuals are gaining access to the right levels of investment for their current situation, is essential for the success of microfinance activities in Kenya. Individual entrepreneurs require aid in order to facilitate growth in Kenya.

Another stakeholder group contains the many microfinance banks and investors in

Kenya. The main concerns for these stakeholders are generating sustainable economic growth in the country and increasing the profitability of their firm. Microfinance Institutions have been operating in the country for many years and have been officially licensed by the Kenyan government. They provide many different products and services to their customers. For their goals to be accomplished, it is necessary for their actions to support the other stakeholders in the region.

The Kenyan government is another stakeholder concerned about microfinance activities. The government's main goal is to make long-term sustainable progress in developing the Kenyan economy. Their role is to encourage further investment in projects within the country and regulate transactions in the industry. The current government is focused on expanding the infrastructure in Kenya. They have funded several projects to do so and are looking to attract additional investors to expand the capabilities of Kenya's transportation and structural infrastructure. The government is directly affected by the results of microfinance activities and is invested in its success.

There are additional stakeholders all over the world. Many different companies and countries interact with Kenya through trade. There is a lot of potential for Kenya's economy to grow and become a rising force in global trade. This event would affect numerous companies worldwide and could have lasting positive effects on the global economy. The success of microfinance activities in Kenya could also be used as a template in other developing nations. Microfinance activities are important because when utilized properly they have the potential to benefit many people. These benefits can be obtained in both direct and indirect ways. Overall, microfinance is becoming an

important tool in the global economy as we continue to perfect its use and maximize the output gained from it.

Even though there is a great deal of potential, there are numerous issues with the current structure of the microfinance industry. A recent study found that; "90% of microloans are used to finance current consumption rather than to fuel enterprise" (Beck 2014). Financing consumption is a large problem because consumption does not create additional value to further individual progress. It hinders their overall status as it increases their debt. The purpose of receiving funding must be to generate income for the loan to be more successful. If the loan does not create additional value for the individual, the loan will leave them worse off than they were without funding and increase their chances of defaulting. Some of these loans can be viewed as predatory, as the investors gain high-interest rates and are able to obtain collateral. This reality is definitely not beneficial to the people in the developing world, but it is also not optimal for the lenders. It is not helpful to the lenders in the long run because it drains the resources from its customers making this business model unsustainable. It also fosters mistrust and exhibits poor corporate social responsibility on the institution's part. This type of reputation is harmful to the institution and hurts the image of microfinance activities as a whole.

Equity-based lending gives a microfinance institution a real incentive to ensure the success of the borrower. It has not yet been attempted on a massive scale as microfinancing has been focused purely on getting the highest short-term returns on its loans. Gaining equity does put the institution at risk, but it is worth it because of the prospective gains. Many projections of economic trends from experts in the industry

illustrate the potential of these products. For example, Nathaniel Popper estimates that access to more funds will; "add 6 percent to the annual economic output of the world's developing nations over the next 10 years" (Popper 2017). That level of growth makes the projects worth investing in for pure capital reasons alone. It would be much more beneficial to microfinance institutions, to gain equity and reap the rewards from the growth in the future. Current microfinance institutions have proven that they are short-sighted and view acquiring equity as a substantial risk because it sacrifices short-term profits. However, microfinance institutions need to recognize that equity-based lending is necessary to ensure sustainability, and it starts with aiding the individual in the present to gain additional income in the future.

Literature review

Discussion of financing options

FINCA is an organization that provides a multitude of financial services. One of their newer projects involves providing microfinance services in a much quicker and more digital manner. The source analyzes the different ways funds are issued and how they can each contribute to improving developing areas. The benefits of easier access to funds are questioned by an article by BBVA. The article states that the rapid easy access approach has numerous legal implications. With such quick transfers in multiple locations, it becomes difficult to comply with numerous regional regulations. This idea is supported by an article called *How gullible Kenyans are losing cash to rogue mobile lenders.* The article illustrates just how these apps can hold exploitative tendencies as they are hard to standardize and regulate. While there are benefits to relying on easy to access mobile services, there are too many concerns that currently exist for mobile services to be the main option that is relied upon.

Discussion of the effects on African economies

A report entitled *What is the impact of microfinance on poor people* concludes that microfinance has a positive impact on the savings of poor people in the region. The data presented builds the historical precedence that demonstrates that microfinance can create positive change. This claim is contrasted with a piece in World Development that states that the general view of microfinance in Kenya and Malawi is very negative (Buckley, 1998). Both works present quantitative and qualitative data to support their claims and this data can be combined to get a bigger picture of microfinance. The negative perceptions exist because the borrowers do not feel that microfinance

institutions are invested in their success. Future microfinance initiatives must do a better job at connecting with the individual borrowers and investing in their future. The positive impact on savings supports the theory that when correctly used, the microfinance system is able to provide financial stability for its users and its potential should be pursued in the future.

Discussion of infrastructure

The infrastructure in many regions of Africa is very underdeveloped. This limits the trade possibilities and growth potential for African economies. A United Nations report on Africa discusses the lack of water, utilities, and roads and how they prevent economic success in many regions (Mahmoud, 2013). Conducting an economic impact analysis will help determine the expected future economic impact of proposed policies, programs, and investment projects (Vega, 1970). The analysis will be a useful method to determine which infrastructure needs to be prioritized in the development of a community.

Impactful studies

Independent studies illustrate very specific examples of microfinance activities. These studies are regional and focus on specific variables. This data is from real experiments and is impactful because it is from an authentic primary source. A study at Voi town in Kenya looked at an area with a population that lacks access to financial tools and formal knowledge about how to utilize them. The study concluded from their surveys that there was a high default rate of around 80% (Njeri, 2013). The study shows why these defaults occurred and the data is useful in determining how to reduce the

default rate. The Kenya country commercial guide provides data on the development of infrastructure within the country. It looks at investments in infrastructure and upcoming projects related to construction. The data forms the foundation for how this study measures the impact of infrastructure on microfinance activities.

Data

Determining the potential effects of specific investments on economic output requires substantial historic data. The first section of quantifiable data used for this specific analysis comes from the CGAP MIX data set compiled in 2010. This data is utilized because it consists of data compiled from 182 different microfinance institutions that operated within Africa. The data set is particularly valuable because it is verifiable and standardized. CGAP explains the compilation of data by saying; "MIX collects and prepares MFI financial and outreach data according to international microfinance reporting standards. Raw data are collected from the MFI, inputted into standard reporting formats, and cross-checked with audited financial statements, ratings, and other third-party due diligence reports, as available." (Consultative). It is valid to the study as it demonstrates the impacts that individual investment activities had on economic output. This is beneficial in analyzing the potential effects that new investments will have on future economic outputs.

The other main source of data utilized comes from a document entitled; *MIX Market Financial Performance Dataset in Local Currencies,* presented by the World Bank. This data was utilized to conduct regression analysis to determine whether a correlation exists between specific factors. The data set is valid because it is pure raw

data collected by the world bank and contains every microfinance transaction made in Kenyan shilling that is on record with the world bank. There is a copious amount of data that encompasses numerous years and comes from many different microfinance institutions. The large sample size provides data to make appropriate assessments from the results that are derived from the regression analysis.

Methodology

The first step was to conduct a thorough SWOT analysis of historical microfinance initiatives to demonstrate the aspects of microfinance that are a positive foundation, as well as show areas that need to be improved upon. The strengths and opportunities will be highlighted as integral parts to be included in recommendations for a future microfinance initiative. The weaknesses and threats will be identified and addressed with ways to minimize their potential impact on future endeavors. The analysis includes both qualitative and quantitative factors affecting microfinance.

Information for the study was collected from a variety of sources. Official reports from the Bank of Kenya, United Nations, World Bank, and CGAP provided specific data about microfinance institutions. This includes how much they lent, where the loans were given, and what the loans generated. Information about the GDP of Kenya was collected on a yearly basis from official GDP statistics posted by Trading Economics. Other detailed statistical data was collected from independent studies. These studies have collected data directly from the source and set up experiments in order to do so. This is beneficial to this research because it provides primary data that can be interpreted and shows what types of projects are successful. The use of data derived from real applications makes this study stronger by establishing precedence and making the data more robust and impactful.

One of the main determinations of success for this study is the overall output of regions in which microfinance occurred. The initial focus is on the GDP for Kenya as a whole and the factors that contribute to its rise and fall. The first factor is the amount of

capital lent out by banks to the people of Kenya. The effects of this factor are studied by determining whether the growth of GDP is correlated with growth in the amounts of loans issued. This is done by conducting a horizontal analysis of the data. The results help gain a better sense of the current economic conditions in Kenya.

Determining some of the issues with microfinance requires analysis of several factors. One important thing to determine is which factor is most responsible for microfinance firms losing money on their regression. Regression analysis was conducted to determine the relationship between delinquent loans and the net loss that is later recognized by the firm. This determined that there was a high level of risk associated with a large number of loans that have been issued by microfinance banks.

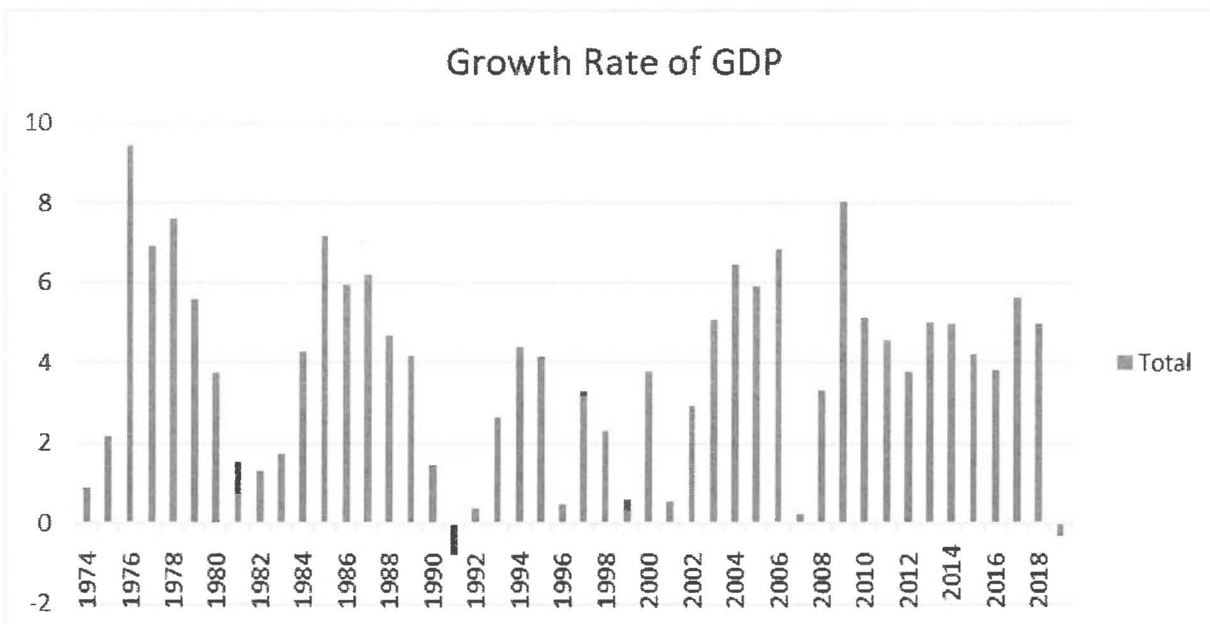
The next step was to determine the importance of revenue from loans in relation to the overall net income of microfinance banks. This was done by conducting another regression analysis with the input being gross loans during the period, and the output represented by a firm's net income. This analysis established a link and demonstrated how reliant microfinance institutions are on lending services. This led to recommendations regarding the diversification of services offered by the microfinance institutions in Kenya. This indicated that other financial services should be explored and potentially offered in the future.

Equity based financing has emerged as a realistic and solid opportunity for institutions. Upon deciding this it became apparent that the investments needed to be made in strategic industries, and in the right firms. To effectively determine some of the best investments multiple factors were considered. Data from the MIX data set was

utilized to help predict to what extent increases in types of investment will increase the overall output of a particular region. The MIX data was thoroughly analyzed and helped formulate strong financial analysis that was heavily backed by historical data. This helped establish a loose model for an overall microfinance community.

Strengths:

One of the strengths of the current microfinance industry in Kenya is the recent growth of the economy. Kenya has experienced a positive growth rate in its GDP every year from 2008 to 2018. Following this, there was a slight dip in 2019 and the COVID-19 crisis significantly reduced Kenya's output. However, this is more of an outlier due to external factors. The historical data shows that there were only two years since 1974 in which the country experienced a decline in the GDP. The following graph demonstrates the growth rate of Kenya's GDP over time.



The strong growth exhibited in this graph has room to continue when the COVID19 situation is resolved and given more clarity. Kenya was ranked 61st in GDP in 2022 by the world population review. There is significant room for them to grow on the

world stage. The strong development and investment that has been increasing in the country put Kenya in a strong position to rebound and resume its growth in GDP.

Specifically regarding microfinance, the main strength Kenya has is the amount of investment interest the country has attracted. The amount of money that microfinance firms have been investing in Kenya has steadily increased over time. Data on microfinance loans issued from the Central Bank of Kenya clearly demonstrates the positive indicators that exist in the industry. The data has been compiled into the following balance sheet table to illustrate the yearly performance of microfinance banks in the country.

Balance Sheets for Microfinance banks by year (Central Bank of Kenya)

	2013	2014	2015	2016	2017	2018	2019	2020
Assets								
Cash Balance	1193	2839	1898	2268	1743	3371	3494	1280
Deposit balances	6440	6940	12961	12102	10025	9497	9587	10935
Government securities	882	1004	721	1769	2500	1886	3484	4309
Net advances	27477	39184	45749	47047	42847	44179	46652	44179
Accounts Recieveables	341	390	706	846	1181	2770	1601	1797
Net fixed assets	3895	4694	5398	6077	6643	5246	6589	9622
Other assets	1122	1920	2032	2401	2658	3805	4986	2757
TOTAL NET ASSETS	41350	56972	69465	72510	67597	70754	76353	74879
Liabilities & equity								
Deposits	24745	35862	40589	40198	38916	40961	43941	49356
Borrowings	8969	6994	13220	16435	13413	14607	14934	11340
Other liabilities	2306	3516	4023	4256	3967	4743	6301	6070
Capital and shareholders funds	5330	10600	11633	11621	11301	10443	11177	8113
Total liabilities and equity	41350	56972	69465	72510	67597	70754	76353	74879

The table demonstrates that over time, the assets owned by microfinance banks increased. The only years in which the assets decreased were 2017 and 2020. The decrease that occurred in 2020 can be explained by the tumultuous atmosphere that occurred because of the COVID-19 pandemic. The economic environment made

investors incredibly cautious and limited the ability for new investment opportunities to be pursued by microfinance institutions in Kenya. Overall, investors have been very willing to make investments in Kenya. This has helped develop various sectors and contributed to the growth of the GDP.

This sentiment is further demonstrated when a horizontal analysis is conducted. The number of investments made from licensed microfinance banks gives an excellent indication of the financial cash flows occurring in the region. The data used in the analysis is historical data from the Central Bank of Kenya from 2010 to 2019. With this data, the growth rate of investments was determined on a yearly basis. The analysis yielded the following table.

Year	Loan portfolio (Ksh)	Growth rate
2019	$ 47,031,000,000.00	1.93%
2018	$ 46,142,000,000.00	-1.37%
2017	$ 46,783,000,000.00	-4.65%
2016	$ 49,064,000,000.00	13.24%
2015	$ 43,327,000,000.00	31.69%
2014	$ 32,900,000,000.00	46.22%
2013	$ 22,500,000,000.00	25.70%
2012	$ 17,900,000,000.00	17.76%

2011	$ 15,200,000,000.00	2.01%
2010	$ 14,900,000,000.00	N/a

The data further indicates strong growth in the overall number of investments over time. Over the span of the 10-year period, the number of microfinance investments in Kenya has grown by approximately 316%. The only years in which investment declined were in 2017 and 2018, which is in line with the rest of the investment and economic activities that occurred in Kenya during those years. Overall, it provides a very positive indicator going forward that there is a substantial market and need for microfinance activities. This need and willingness to encourage these types of investments is a strength for potential investors that are looking at Kenya.

Weaknesses:

While there are many positive attributes of the microfinance industry, there have been many issues with its execution. The areas where the GDP growth rate is low are concerning. This can be attributed to multiple external factors including COVID-19 and the changes in interest rates. The growth rate dipped significantly from July 2016 to July 2017. This coincided with a change in interest rates that dropped the number of loans issued (2019 Finaccess). The sharp reaction to these external factors illustrates how easily investors in Kenya can be swayed by independent events. The key is a lack of commitment to the region. Since a lot of the microfinance firms do not have equity in the regions they are investing in, they are not incentivized to increase their investments when

issues arise. This compounds the problem and makes funding that people require to grow somewhat unreliable.

Another weakness is the country's adaptability which is best demonstrated by the economic responses to COVID-19. As soon as COVID-19 began there were a lot of concerns from investors. This caused the economy to immediately struggle. This is evidenced by this quote from a United Nations report about the COVID-19 crisis; "When the first COVID-19 case was reported in the country, the stock markets declined with stocks such as Safaricom and Kenya Commercial Bank (KCB) declining by 5.4% and 7.0%, respectively, in one day." (UNDP). This reaction showed that the investors within Kenya had a very negative perception of the economic outlook of the country. The effects of COVID-19 have been felt throughout most industries in Kenya. The number of resources available has been constricted, limiting growth and bringing upon a recession. The United Nations also stated that there will likely be significant long-term economic effects as shown by the following quote: "As the health sector soaks up more resources and as people reduce social activities, countries invest less in physical infrastructure. As schools close, students lose opportunities to learn (hopefully briefly) but more vulnerable students may not return to the education system, translating to lower long-term earning trajectories for them and their families, increased inequality and reduced overall human capital in the economy" (UNDP). It is necessary for there to be an increase in the number of investments that are made in Kenyan businesses.

Opportunities

One of the main opportunities for microfinance institutions in Kenya is the potential for investment in utilities and infrastructure. Kenya's infrastructure is widely considered to be underdeveloped. The lack of roads and utilities are in sore need of improvement. The demand for these services is extraordinarily high and there is definitely a market for expanded infrastructure and utilities. The government of Kenya has made increasing the investments in infrastructure a priority and has recently announced partnerships to do so. One such partnership is with Korea, as outlined by The Star: "Kenyan and Korea have formalized a partnership aimed at fast-tracking development of smart city infrastructure at Konza Technopolis. In a statement on Wednesday, Ministry of ICT, Innovation and Youth Affairs CS Joe Mucheru said that the partnership provides a framework for the completion of three pivotal projects in Konza Technopolis. The projects include the development of the Smart City Master Plan covering 500 acres alongside the smart city framework for the remaining 5,000 acres; a feasibility study on the Integrated Control Centre focusing on security operations which will be located in the modern police command center and establishment of a transportation network and smart mobility plans that meet urban functions and characteristics" (Wairimu). The partnership shows that there is a willingness to contribute to the infrastructure in Kenya. An increase in these investments will make utilities more widely available and make daily business activities much easier for the general public. This will help foster growth and greatly benefit the entire country of Kenya.

The government has also taken significant steps to encourage these investments and make them an ideal opportunity for investors. These measures were underlined in a recent report prepared by US embassies abroad; "According to the World Bank, Kenya requires annual spending of $4 billion over the next decade to close the existing infrastructure deficit. The sector however requires additional private sector participation through Public Private Partnerships (PPP) to ease the debt burden on the government. To encourage investors, the National Treasury, through the PPP unit, has strengthened the legal framework governing PPPs and has identified 69 infrastructure projects for implementation as PPPs." (Kenya-Construction). The identification of specific projects that require implementation helps investors become clearer on what is required to help increase the productivity in regions in Kenya. The strengthening of the legal framework also helps ensure that there will be more stability and security for investors with regards to these types of projects. Some of the potential projects include development of; roads, railways, ports, airports and pipelines. As well as completely updating the current airports and railways to increase efficiency, safety, and meet the needs of a developing modern country. These projects are an excellent opportunity for microfinance banks to improve the infrastructure in Kenya which will aid other businesses in the region. The revamped infrastructure will facilitate an increased amount of trade and foster strong economic and business conditions that will be ideal for building a microfinance community.

Threats:

The biggest threat to microfinance is the potential of large amounts of loans being defaulted on. Loans that have higher default risks signify issues that exist within a lending firm. These loans limit a microfinance institution's ability to pursue future growth, while also demonstrating that there is a larger issue that exists within the region they are servicing. Large amounts of loan defaults trigger recessions and other negative economic conditions in the region. These issues need to be assessed and corrected in a proactive manner. To accomplish this, it is necessary to identify loans that are likely to default as they represent a significant amount of risk that is being taken on by the microfinance institution.

The main statistic used to study certain types of loans is delinquency. If a loan has a principal that has been past due for more than a month it can be determined that it has a high default risk. The world bank compiled data from around the world into a massive report on microfinance institutions around the world. Within the data, there are figures that show the number of delinquent loans that individual firms have during a given year. The amounts shown in Kenyan currency provide a snapshot of the risks that have been taken within the industry. Figures that exceed the allotted impairment loss set forth are the most alarming for the firm specifically. The data indicated that there was a strong correlation between the number of delinquent loans and the net loss a firm receives. This is demonstrated by the following linear regression.

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.84258
R Square	0.709941
Adjusted F	0.708622
Standard I	2E+09
Observatic	222

ANOVA

	df	SS	MS	F	gnificance F
Regressior	1	2.16E+21	2.16E+21	538.4658	4.76E-61
Residual	220	8.84E+20	4.02E+18		
Total	221	3.05E+21			

	Coefficients	andard Err	t Stat	P-value	Lower 95%	Upper 95%	ower 95.0%	pper 95.0%
Intercept	3.67E+08	1.38E+08	2.663983	0.008294	95394075	6.38E+08	95394075	6.38E+08
X Variable	7.629902	0.328806	23.20487	4.76E-61	6.981889	8.277915	6.981889	8.277915

The R square score of 0.7099 illustrates that there is a strong positive correlation between the number of delinquent loans held by banks in Kenya and the net loss they are forced to record on their loans. It is vital for the microfinance industry to limit the number of delinquent loans that they take on as they are such a high risk. The risk increases significantly as expansion continues within a microfinance organization and extends to the community that they are servicing. Expansion that occurs too rapidly can lead to an increase in defaults within a quarter or year. This setback can be very harmful to the larger community, as it would limit resources and cause some services to either reduce their capacity or go out of business.

Introduction to the Microfinance Community:

After assessing the current state of microfinance activities in Kenya, it can be concluded that more strategic investments are needed. Determining what areas to contribute the most support to is essential to the success of the microfinance institutions and small businesses receiving the funds. Investments made in businesses that do not have a comparative advantage or proven market are inefficient. It is essential to invest and push projects that would benefit other businesses in the same area. The main goal is to provide funding to businesses that would complement the skillsets of other businesses in the immediate area, building a larger microfinance community.

One of the most important aspects that need to be understood when investing in developing firms is how the funds will be used by the business or individual receiving them. Selecting the right firms and people to invest in relies on a multitude of factors. The importance of having the right resources, machines, and technology cannot be understated when discussing emerging small businesses in Kenya. Investments in firms that intend on using the funds to acquire new machinery or update their technology have a higher potential of being successful. This is supported by a study conducted by Francis Neshamba for the African Business Journal. In the Journal he stated that; "Sixtyfive percent (65%) of the low-growth firms used machines which they bought from auctioneers and used them for some steps of the production process. In contrast, 75% of the high growth firms acquired new plants and equipment during the past 10 years and are involved in product development which has increased their sales." (Neshamba). The statement stresses the importance of internal development for small businesses that

increase the efficiency for their daily operations. Firms that succeed in Kenya need to be extraordinarily efficient with their spending and daily activities to be successful and grow quickly in the current economic conditions. It is necessary that investors and microfinance institutions recognize this and invest in businesses that understand these principles. Guiding these businesses with training that is focused on maximizing efficiency will make these investments more profitable for both parties. By further investing in the success of their customers, microfinance institutions will increase their economic outlook in the future. The adjustment would also provide vital support to aspiring entrepreneurs, and greatly benefit the country of Kenya.

Another important focus for small businesses in Kenya is making sure there is an established market for their products. Having a market or customer orientation requires thinking about their needs for the product, as well as considering the ability to have reliable shipping that would enable the business to provide the customer with the product in a timely manner. A way in which microfinance activities can expand a market and increase its reliability is by funding connected businesses that rely on the services of the other firms in the community. This idea of a microfinance community is essential as it stresses the ideas of connectivity that are sometimes not prioritized.

The main example of this need lies with the infrastructure and utilities. These services are essential to all businesses in Kenya, making it incredibly important for the community to support these types of businesses to be more successful. Likewise, the companies that provide utilities and investors in infrastructure rely on the revenues of

other small businesses to be successful. Constructing a mutually beneficial community is a great way to foster reliable growth over a long period of time. Microfinance

Institutions that prioritize investments that best serve the overall community will increase the security of their investment, as well as the economic output of the region.

Building the model of the community

The idea of building a community by utilizing microfinance tools lines up with the strengths outlined in the SWOT analysis. There is room for growth and expansion within Kenya if the right resources are provided at opportune times. However, there are numerous factors that affect the success of a community. They all must be understood and addressed to ensure that there is sustainable growth and success for all the stakeholders involved.

One of the keys to addressing the rising risks associated with the growth of microfinance institutions is diversification. To protect against these potential risks, it is important to diversify the types of investments that are being made in the community. This is where equity financing becomes a very desirable option. While there are inherent risks associated with this type of investment, the increase in equity financing would benefit both parties. This method means that returns would take longer to get to the microfinance institutions, however, there is potential for much larger returns. The equity also becomes an asset for the institution and the investment does not overpopulate their loan portfolio.

Currently, the income that microfinance banks gain from Kenya is strongly linked to the loans that are issued in the region. Data compiled by the World Bank from multiple finance banks operating within Kenya indicates that there is a strong correlation between the two factors. This is shown in the following regression analysis.

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.88179918
R Square	0.7775698
Adjusted R Square	0.77699355
Standard Error	1216684832
Observations	388

ANOVA

	df	SS	MS	F	Significance F
Regression	1	1.99751E+21	2E+21	1349.3758	4.6889E-128
Residual	386	5.71404E+20	1.48E+18		
Total	387	2.56892E+21			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	-258576809	64798049.01	-3.9905	7.891E-05	-385978116	-131175501	-385978116	-131175501
X Variable 1	0.07856812	0.002138848	36.73385	4.69E-128	0.074362865	0.08277337	0.07436287	0.082773365

The resulting R square score indicates that there is definitely a correlation between the number of loans that are being issued and the net income that a microfinance institution brings in. This shows that there is a large dependency on gaining income from the microloans that are being issued. This leaves microfinance banks extremely vulnerable to delinquent loans. As a result, negative economic impacts can be compounded due to a lack of diversification of the investments made by the microfinance institutions in Kenya. It is important to make sure that there are investments flowing into Kenya that provide these institutions with a different type of revenue. By taking on equity, the microfinance institutions become more focused on the long-term implications, diversify their portfolios, and place less of a strain on the capital of developing businesses.

Understanding the relationship between the assets held by the microfinance institutions and the loans they have issued is very important to the analysis of the risks that the institutions have undertaken. Changes in rates have been a cause of declines in loan revenue in the past and it has severely impacted microfinance institutions and the Kenyan economy. Having other assets and sources of revenue is important for the long-term sustainability and financial security of the firms.

To determine the correlation and overall relationship between loans and assets, a regression analysis was conducted. The regression utilized data from multiple finance banks across different years that was recorded by the World Bank. The data utilized reflected the total assets held by the microfinance institution during the period and the gross loan portfolio. The regression yielded the following results.

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.931835
R Square	0.868316
Adjusted F	0.868004
Standard I	3.06E+10
Observati(	424

ANOVA

	df	*SS*	*MS*	*F*	*'gnificance F*
Regressioı	1	2.6E+24	2.6E+24	2782.638	6.9E-188
Residual	422	3.94E+23	9.34E+20		
Total	423	2.99E+24			

	Coefficients	*:andard Err(*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*ɔwer 95.0%*	*'pper 95.0%*
Intercept	-6.8E+09	1.62E+09	-4.18418	3.48E-05	-1E+10	-3.6E+09	-1E+10	-3.6E+09
X Variable	357390.4	6775.081	52.75072	6.9E-188	344073.3	370707.5	344073.3	370707.5

The regression analysis indicates that there is a strong correlation between loans and assets. This is shown by the high R square score. The large sample size proves that this analysis is significant and a good representation of the status of microfinance activities in Kenya. The results are slightly concerning. The analysis shows that the assets of each of the microfinance institutions are heavily linked to the loans they issue. It further stresses the need for diversification of their business. It is important that the assets they hold are not as critically tied to the loans issued in future microfinance applications.

The main services provided by microfinance banks in Kenya are deposit accounts and lending products. The vast majority of licensed microfinance banks do not invest in the businesses that are being created by their customers. This is primarily done by individual investors on a very selective basis. The current structure leaves a lot of businesses under-serviced and stunts the growth of a region. There is a need for these activities to be conducted on a much larger scale in order to impact an entire region in a positive manner. If they are provided supplementally to the other services issued by microfinance banks, the options for Kenyan citizens would be greatly expanded. This format has great potential to be incredibly lucrative for all the stakeholders involved in the future.

Targeting the right firms to invest in is essential to the effectiveness of the overall community. Investments that foster growth in the immediate surrounding region are the best way to establish economic success in a developing area. Determining these factors can be done by analyzing historical data of investments and how they impacted their

respective areas. Data on microfinance activities collected by the World Bank and issued in their MIX market report shows that there are several factors that have a large impact on growth. The MIX data shows that in Sub-Saharan Africa depositors outnumbered borrowers 3 to 1 in banks and institutions offering voluntary savings products (Consultative). In Sub-Saharan Africa, the average deposit rate was 5.5% for the 182 institutions that contributed data. In rural developing communities the deposit rate was 11.3%. However, in rural areas, the average deposit per depositor was much lower than in the other regions. This coincides with a financial depth in rural areas of 34.3%, which is higher than 28.6% of the financial depth average for the Sub-Saharan region as a whole (Consultative). The depth shows that there is an ability for money to be better allocated in rural areas and this must be done to make microfinance activities more successful.

The main factor affecting the amount of financial depth is the incredibly low number of microfinance institutions that are offering services in rural areas. This demonstrates the need for the expansion of additional services in these types of regions. There are funds that need to be better allocated on a larger scale, as there is clearly more room for investment. Targeting rural areas for the start of a microfinance community would be more beneficial than urban areas. This is because there is much more room for growth in rural communities. Investments in infrastructure, utilities, and other industries will be felt with a greater impact on small businesses and help the country of Kenya to become much more balanced financially.

The outlook for new microfinance institutions is quite positive. Microfinance institutions classified as brand new or young by CGAP had a higher average salary of

their customers when compared to gross national income than mature microfinance banks. This is due in large part to the fact that new microfinance banks are servicing those who have not had a lot of access or exposure to financial services and products. The market for expansion of financial services in Africa is sustainable and presents a large opportunity for potential investors and microfinance institutions in the continent.

There is definitely potential for rural banks to acquire equity and assets within the regions they are servicing. The MIX data shows that deposits account for 77.3% of the total assets held by rural banks. The ratio is higher than the ratios of any of the other types of microfinance institutions. Rural banks also have a much lower portfolio to assets ratio than other institutions. The microfinance institutions have the ability to make more acquisitions and invest in the small businesses of the region. Having more different types of assets would be a positive outcome for microfinance institutions in rural areas. Expanding equity financing and making more of their funds available to the public would contribute to more positive outcomes for microfinance institutions and the communities they serve.

Final recommendations

Currently, there is a need to initiate new microfinance activities in rural areas in Kenya. The expansion of financial services and investment has the most potential to result in a successful economic environment emerging within developing parts of Kenya. There are enough resources that can be diverted to make great improvements to the microfinance industry and maximize its potential. Creating microfinance communities that build upon each other is essential to this endeavor. The focus on equity investing will free up additional capital as the business owner or individual will not be crippled by loan payments.

Business training and guidance should also be offered to make sure that the entrepreneur has the tools and knowledge needed to be successful and is qualified to start a company. The increase in knowledge of the community members will greatly benefit the overall output and performance of the group. Reliability and efficiency are incredibly important to the success of the project. Instilling these principles will maximize the potential of having successful businesses in the area and will result in much larger profitability for all stakeholders.

The areas surrounding rural regions desperately require an infrastructure update. Without investment in infrastructure, establishing successful microfinance communities would be impossible. As it currently stands, the available transit, power, water supply, and other services are inadequate to support everyday business activities. Investments must be made first in infrastructure, to provide entrepreneurs in the developing world with a solid foundation that they can use to operate their businesses. Once the foundation is set, individuals will become more financially successful which

will lead to an increasing culture of consumerism and overall spending in Africa. The increased level of consumption will open brand new markets to the rest of the world as they will increase consumption of foreign goods that they do not have a comparative advantage. Thus, leading to further economic growth in Africa and the greater global community. When the full potential of microfinance is realized, it will alter the way the global economy is viewed and change the personal economic status of many individuals in the present world.

Limitations

This study relied upon quantitative and qualitative data gathered from independent studies and reports done in Kenya. The data sets that were utilized were immense with a robust amount of relevant data but contained some holes in the data. The samples studied were required to have complete data for all the factors being analyzed. Periods that had incomplete data for any of the factors being compared were not included in the analysis. The incomplete data marginally limited the research, however a large enough sample size remained for the analysis to be viewed as valid and an excellent representation of microfinance activities in Kenya.

Another limit placed on this thesis was brought on by the reports that were examined. These reports had some years that were not represented as data collection was stalled during certain time periods. This narrowed the data set and kept the study from becoming more expansive and looking deeper into the historical data. The years that were included all had a substantial amount of data and were deemed to provide a good indication of what future economic conditions will look like for the microfinance industry in Kenya and other parts of sub saharan Africa.

Lastly, the conditions surrounding the COVID-19 pandemic were hard to analyze. A lot of the data observed was inconclusive and incomplete. Additionally, the financing activities that occurred during the pandemic appear to be more of an arbitration. This study was focused on long term impacts and applications of microfinance in Kenya and the conditions will revert back to similar levels that were experienced in 2019 once the

COVID-19 pandemic ceases. This recommendation for a microfinance community is best executed in an economy with less governmental restrictions.

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