Factors Affecting Loan Repayment Performance by Youth in Kenya: A case study of Youth Enterprise Development Fund Between 2008 and 2011

By
Eric Oyare
X50/P/8988/2006

Supervisors:
Dr. Joy Kiiru
Mr. Awiti L.M.

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DECLARATION

I, the undersigned, declare that this thesis is my original work and has never been presented in any other university. All sources of materials used for the thesis have been duly acknowledged.

Declared by:

Name: ERIC O. OYARE
Signature: [signature]
Date: 12/07/2012

The thesis has been submitted for examination with my approval an M.A. (Economic Policy & Management) thesis.

First supervisor:

Name: DR. JOY KIIRU
Signature: [signature]
Date: 14/08/2012

Second supervisor:

Name: MR. AWITI L.M.
Signature: [signature]
Date: 15/08/2012
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<th>Full Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMFI</td>
<td>Association of Micro Finance Institutions in Kenya</td>
</tr>
<tr>
<td>ASALs</td>
<td>Arid and Semi Arid Lands</td>
</tr>
<tr>
<td>BDS</td>
<td>Business Development Services</td>
</tr>
<tr>
<td>CBOs</td>
<td>Community Based Organizations</td>
</tr>
<tr>
<td>FIs</td>
<td>Financial Institutions</td>
</tr>
<tr>
<td>GoK</td>
<td>Government of Kenya</td>
</tr>
<tr>
<td>K-REP</td>
<td>Kenya Rural Enterprise Programme</td>
</tr>
<tr>
<td>KWFT</td>
<td>Kenya Women Finance Trust</td>
</tr>
<tr>
<td>MFIs</td>
<td>Microfinance Institutions</td>
</tr>
<tr>
<td>MOYAS</td>
<td>Ministry of Youth Affairs and Sports</td>
</tr>
<tr>
<td>NGOs</td>
<td>Non Governmental Organizations</td>
</tr>
<tr>
<td>NPL</td>
<td>Non Performing Loans</td>
</tr>
<tr>
<td>ROSCAss</td>
<td>Rotating and Saving Credit Associations</td>
</tr>
<tr>
<td>SACCOs</td>
<td>Savings and Credit Cooperative Societies</td>
</tr>
<tr>
<td>SMEs</td>
<td>Small and Micro Enterprises</td>
</tr>
<tr>
<td>WEF</td>
<td>Women Enterprise</td>
</tr>
<tr>
<td>YEDF</td>
<td>Youth Enterprise Development Fund</td>
</tr>
</tbody>
</table>
Abstract

This study was conducted to determine factors affecting loan repayment performance among youths who were beneficiaries of the Youth Enterprise Development Fund (YEDF) scheme, through partner financial institutions (FIs). The YEDF is one of the key initiatives of the Government of Kenya under the social pillar of the Vision 2030. The YEDF is mandated to economically empower the Kenyan youths through credit provision, enterprise development, market access and linkages, commercial infrastructure and labour export. The credit mandate of the YEDF constitutes 80% of its youth empowerment programmes.

After its establishment and launch in 2006, the YEDF developed the FI loan on lending component. Thirty-two (32) FIs were selected and contracted to disburse the Youth Fund loans to the deserving youths across the country. However, initial reports presented to YEDF by some of these FIs between 2009 and 2010, depicted a very disturbing scenario where loan repayment rates registered by FIs falling under the categories of SACCOs and NGOs (an average of 65%) were below the rate accepted by the Association of Micro Finance Institutions in Kenya (AMFI) – 95% repayment rate.

It is from the above background that the study set to not only provide empirical results on factors affecting loan repayment performance, but also present policy recommendations on how the YEDF can be sustained as a revolving fund. We employed probit regression on data from 400 youth beneficiaries randomly selected from six purposively sampled FIs partner with YEDF. Estimation results show that age of a youth, nature of business in which a loan was invested, and loan type were not statistically significant in determining the probability of loan repayment performance (default).

Regarding the finding on the nature of business (whether subsistence or commercial), loan type (initial or refinance), the study recommends appropriate business training, and proper follow-up to ensure necessary business advisory and support services are availed to overcome any eminent challenges. Given the findings of this study, we recommend that provision of essential business training and provision of smaller loans for business start-ups coupled with balancing the gender of loan beneficiaries and execution of adequate business follow-up should be key to ensure better loan repayment performance. Policy makers should ensure that these well integrated within loan/credit administration and management mechanisms.

Key Words: Loan repayment performance, partner FIs, loan default, on lending, leverage financing, business training, economic empowerment, sustainability
CHAPTER ONE: BACKGROUND INFORMATION

1.1 Introduction

Unemployment is one of the most daunting economic challenges facing Kenya. The government has consequently placed job creation at the top of its policy agenda. The Youth, defined as age 15 to 30 years constitute two thirds of the economically active population. The Youth account for 61% of the unemployed. Ninety two percent (92%) of the unemployed youth have no job training other than formal schooling. Hence, unemployment is not just a lack of jobs, but also a lack of job skills due to inadequacy of the training infrastructure as well as the means to acquire skills, due to poverty.

It is in recognition of the above facts that the government conceived the idea of institutional financing as a way of addressing unemployment, which essentially is a youth problem. The concept is based on the premise that micro, small, and medium enterprise development initiatives are likely to have the biggest impact on job creation. Young people who constitute the largest segment of our society, is the future of any economy and a key driver of employment growth and economic activities.

The government created the Youth Enterprise Development Fund on 8th December 2006 to address the problem of youth employment in Kenya. One of the key objectives of the Fund is to facilitate young people to access credit to start and expand their businesses. The government set aside Kenya Shillings one billion as a revolving fund to facilitate young people to initiate, conduct and/or expand businesses and access employment abroad. The government committed a further Ksh. 750 million in 2007/8, Ksh. 500 million in 08/09 and another 500 million 09/10 financial years to boost the kitty and ensure its sustainability. However, there was no operational and legal framework in place to facilitate the immediate disbursement of the allocated funds. The Fund has therefore, developed its operational management structures and guidelines in consultations with key stakeholders such as the youth, financial intermediaries, and the development partners. From these the YEDF provides loans to the youth through two channels, one through the constituency and two through Financial Intermediaries (FI’s) – also known as on-lending component.
The on-lending component of the YEDF mainly works through Financial Intermediaries such as banks, Non Governmental Organizations (NGOs), Savings and Credit Cooperatives (SACCOs), and Micro Finance Institutions (MFIs), from which the youth access funds to start and/or expand viable businesses countrywide.

Since the start of the on-lending programme in mid 2007, a number of youths from all over the country have been able to access micro credit from the partner FIs of YEDF. In the year 2008/09 the Fund through partner FIs, disbursed a total of Ksh. 759,307,936 to 20,659 youth enterprises.

From reports provided to YEDF by the FIs on a quarterly basis, the enterprises being run by the youths are varied. The different types of business activities run by the youth can be classified under the following sectors:

Table 1.1 (a): Classification of business activities along sectors.

<table>
<thead>
<tr>
<th>Business sectors</th>
<th>Examples of business activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture</td>
<td>Animal feeds, bee keeping, cash crop farming, horticulture farming, poultry farming,</td>
</tr>
<tr>
<td>Commercial/ Trade</td>
<td>Bookshop, boutique, butchery, cereals, chemist, cosmetics shop, detergents, sale of fuel, grain groceries, retail shop/kiosk, ice-cream vending, milk vending, buying and selling of livestock, second hand cloths, veterinary shop, wholesale shop</td>
</tr>
<tr>
<td>Services</td>
<td>Barber shop, battery charging, cleaning, laundry, machinery repair, photo studio, saloon, training</td>
</tr>
<tr>
<td>Transport</td>
<td>Boda boda, taxi,</td>
</tr>
<tr>
<td>Media</td>
<td>Advertisements, video show</td>
</tr>
<tr>
<td>Value addition</td>
<td>Food processing, hides and skins, honey processing, leather works,</td>
</tr>
<tr>
<td>Arts and performance</td>
<td>Curio shop, creative arts, entertainment,</td>
</tr>
<tr>
<td>Hospitality</td>
<td>Bar and restaurant, catering, cold sea food, Kenchic franchise, soft drinks vending,</td>
</tr>
<tr>
<td>Manufacturing/production</td>
<td>Bakery, carpentry, tailoring,</td>
</tr>
<tr>
<td>IT and Telecommunications</td>
<td>Auto mobile and accessories, bureau, cyber café, electronic shop, engineering, photocopying bureau, printing,</td>
</tr>
</tbody>
</table>

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Further analysis of data presented by FIs on the nature of business activities run by the youth (as shown above) depicts that economic zoning determines a lot the kind of business opportunities ventured into by the Youth. This can be illustrated as follows:

**Table 1.1 (b): Mapping of economic opportunities by youth in Kenya**

<table>
<thead>
<tr>
<th>Economic zoning</th>
<th>Thriving sectors</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Agricultural potential areas</td>
<td>Agriculture</td>
</tr>
<tr>
<td>Coastal areas</td>
<td>Tourism, hospitality</td>
</tr>
<tr>
<td>ASALs</td>
<td>Livestock farming and trade, services, transport</td>
</tr>
<tr>
<td>Lake region</td>
<td>Agriculture (small scale)</td>
</tr>
<tr>
<td>Urban areas/Peri urban</td>
<td>Industrial, jua kali, IT and telecommunications, hospitality, value addition, services</td>
</tr>
</tbody>
</table>

A total of thirty two (32) financial intermediaries entered into partnership contracts with the YEDF. They are as shown in table (1.1) below according to four major categories

**Table 1.1 (c): Classification of Financial Intermediaries**

<table>
<thead>
<tr>
<th>Category</th>
<th>Partner FIs with YEDF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mainstream Commercial</td>
<td>Equity Bank, Family Bank, First Community Bank, K-REP Bank, Kenya Commercial Bank</td>
</tr>
<tr>
<td>Banks</td>
<td></td>
</tr>
</tbody>
</table>

1 There are cross cutting sectors like services, transport, agriculture, IT and commercial/trade, although at a very small scale.
According to financial audit exercises conducted by YEDF on the performance and operations of the partner FIs, the following loan performance (recovery) rates were recorded between 2009 and 2010.

**Table 1.1 (d): Average FIs Loan performance by categories**

<table>
<thead>
<tr>
<th>Category of FIs</th>
<th>Average Loan Recovery rates (2008/09)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mainstream Commercial Banks</td>
<td>90%</td>
</tr>
<tr>
<td>Micro Finance Institutions</td>
<td>75%</td>
</tr>
<tr>
<td>Savings and Credit Cooperative Societies</td>
<td>60%</td>
</tr>
<tr>
<td>Non Governmental Organizations/Community based</td>
<td>65%</td>
</tr>
<tr>
<td>Organizations</td>
<td></td>
</tr>
</tbody>
</table>

The above table shows that loan performance as measured by the percentage of recovered loans was below the accepted rate of not more than 10% default rates for micro finance institutions and not more than 5% for mainstream commercial banks, according to the Association of Micro Finance Institutions of Kenya (AMFI).

**1.2 Problem Statement**

The mission of the YEDF is to increase economic opportunities for and participation by Kenyan Youth in nation building through enterprise development and strategic partnerships. The main
mandate though which the YEDF will ensure the realization of this mission is provision of credit facilities to the youth and other programmes, which go a long way in creating a conducive environment for the youth to do business profitably. The YEDF as a government parastatal falls within the service services sector. This means that it is not for profit. It is a social welfare programme aimed at subsidizing credit access to the youth to ensure economic empowerment and poverty reduction through employment creation.

The idea behind the establishment of the YEDF was not that Kenyan economy (financial sector) is deficient of credit products. However, the youth, as a segment of our society, due to one factor to another, have been unable to effectively access financial services (loans) from our banks and MFIs. The Youth Fund idea was therefore to act as a bridge in the short to medium term by ensuring the youths acquire capacity, collateral, security, credit history and worthiness and business skills necessary to access loans from our financial institutions.

However, all this very good ideas and intentions will not be achieved if a number of issues do not change for the better. One; from the above introduction, it is very clear that the on-lending component of the YEDF, although developed to capitalize on the capacity, network and reach of FIs, still registers high levels of Non Performing Loans (NPL). It is evident that the loans taken up by the youths are not performing very well as expected.

There are multiplier effects, which will emanate from the high portfolios of NPLs. For instance, it will lead to a failure by the youths to improve their credit worthiness and history and thereby affect credit rating. This will in effect affect future prospects of further loans, business refinance and borrowing from alternative sources. Secondly, there will be dismal or total lack of growth in the youth business entrepreneurship sector. The youths of the present generation will in future become very successful business sector players if what is started currently through YEDF and other private and public sector initiatives were sustained. However, if the problems of youths taking up loans and not repaying persists, then the country’s future is bleak. The main aim of the government through such a programme is economic empowerment.

Finally is the issue of sustainability of YEDF as a programme. According to the government policy establishing the YEDF, the Fund was to be capitalized by the exchequer up to Ksh. 5
billion until the year 2012, after which it should be self-sustainable. Although the YEDF is not for profit organization, it is mandated to conduct the business of credit provision to the youth through revolving the already allocated funds, business refinancing and engaging in investment projects like bid and performance bonds and Credit Guarantee Schemes. Out of the small interest rate of 8% charged to the youth the FIs, YEDF gets 1% (as interest earnings) to take care of administrative expenses? This means that loans accorded to the youths, should perform to guarantee growth in YEDF loan portfolio and sustain its programmes and administrative operations.

This study is therefore interested in establishing the factors affecting loan performance by the youth in Kenya. By targeting to use data on the characteristics of youth clients generated by FIs, loan access requirements and loan administration and management styles of FIs, the study will interrogate reasons that could be contributing to relatively high levels of NPL granted to youths under the YEDF on-lending, especially within certain categories of partner FIs with YEDF – SACCOs and NGOs/CBOs.

Since the Fund started its operations in 2007, no such study has been conducted to bring to the facts such issues of interest so that policy makers can further formulate policies to ensure better loans performance, realization of the objective of making the Youth population credit worthy in order to qualify for credit services from the country’s financial sector, ensure business and entrepreneurship development and finally to ascertain the future and sustainability of YEDF.

1.3 Research questions

1. Why do YEDF loans on-lent to FIs classified as SACCOs and NGOs/CBOs perform relatively poorer than those on-lent to mainstream commercial banks and MFIs

2. Other than loan administration mechanisms put in place by YEDF partner FIs (provision of business entrepreneurship training and follow-ups), could there be other factors (youth and loan specific characteristics) that influence loan performance among youths
1.3 Objectives

1. To estimate the factors that influence loan performance under YEDF on lending loan portfolio.
2. To draw up policy recommendations which will lead to high loan performance taking into consideration the three important parameters under YEDF on lending loan portfolio namely: youth characteristics, loan characteristic and partner FI management dynamics.

1.4 Study Hypotheses

Youth training in business entrepreneurship is significant in positively influencing loan performance.

1.5 Significance of the Study

As mentioned above in the study problem section, YEDF preliminary field monitoring mission and progress reports suggest that the YEDF loans on-lent through FI’s are not reaching all the deserving youths as anticipated. There are institutional and structural issues and challenges the youths and FI’s entrusted with the funds face. These challenges in effect hinder fair access to the funds by the youths in question. The YEDF as institution has a mission of economically empowering the youth through micro credit to lead to employment creation and poverty reduction.

This is not to say that in order to achieve this noble vision, the loans should just be dished out without due consideration of the whether the loans will perform or not. It is proper to consider that in the government policy establishing the YEDF, the Fund will only be capitalized by the exchequer to the tune of Kshs. 5 Billion after which it is expected to be self sustainable.

To achieve this self-sustaining status, the YEDF must ensure that both the demand and supply side economics of the on-lending component are streamlined. This will ensure that; a) the youths are made eager and able within their means to demand and access the loans, and by extension, the demand is qualified by ensuring that the basics of micro credit access criteria are met to ensure better loan performance; b) financial intermediaries, whose objectives are purely economic- to make profits, do not shy away from first; entering into on-lending contracts with
government, through such institutions as YEDF and the WEF, among others, whose objectives are social welfare, and whose clients are considered “un-bankable”; and finally that the FIs do not fail to avail micro credit to deserving youths and other vulnerable groups due to barriers or factors which can be controlled and managed like lack of business skills, lack of business experience, lack of loan security among others.

This background therefore calls for a study to find out, apart from the appraisal criteria, which may be different from one FI to another what are the common social economic factors determining which youth is in a position to access the YEDF loans on lent to FIs, and whether after meeting these criteria, the issues of loan performance can be assured.
CHAPTER TWO: LITERATURE REVIEW

2.0 Introduction

In undertaking the work on literature review, this research project underscores, from the word go, and the deficiencies around the study on youth and micro credit. A lot of studies which have been conducted so far especially on developing countries around the world such as Latin America have concentrated of women and microfinance. As such, some of these studies will be used to form the backbone of literature review with an understanding that women and youth, as had been alluded to in chapter one are classified as vulnerable groups with lack or limited to economic resources which accrue due one’s position in the society, like men. It will be assumed that the deductions and policy recommendations from such studies can form a replica scenario in guiding policy response to the issue of youth access to credit in Kenya. Furthermore, the context of Kenya will greatly benefit from a generalized policy environment which presupposes the kind of response necessary to all the vulnerable groups like youth and women, now that the government has so far launched two separate funds2 (in identity) but rather similar in objectives, product modeling and nature of target beneficiaries.

2.1 Conceptual Framework

One of the key pillars of Vision 2030 is employment creation for the Kenyan youth. To operationalize it, the Ministry of Youth Affairs and Sports prepared a youth employment Marshal Plan. The strategic objective of the Marshal Plan is to create more than 500,000 employment opportunities for the Kenyan youth (formal, informal and self-employment) through focused initiatives to be implemented by the Government of Kenya from January 2009. Implementation of some of these initiatives has in fact, been started.

The Youth Enterprise Development Fund is one such initiative expected to play a key role in achieving the objectives of the Marshal Plan. According to the Marshal Plan challenges facing the youth, which impede on their potential as economic agents included among others limited

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2 The Youth Enterprise Development Fund (under the Ministry of Youth Affairs and Sports) and the Women Enterprise Fund (under the Ministry of Gender, Social Services and Development)
access to education and training, lack of business start-up, growth and expansion skills, lack of an entrepreneurial culture and lack of entry and re-entry mechanism. Other challenges fronted by the Marshal were: temptation to crime, drug and substance abuse, lack of guidance and counseling programs, and limited access to Information and Communication Technology.

The YEDF focuses on enterprise development as a key strategy that will increase economic opportunities for, and participation by Kenyan youth in nation building. The mandate of the YEDF is to increase access to capital by young entrepreneurs, provide business development services, and facilitate market access and linkages in supply chains. Other mandates include creating market opportunities locally and abroad for products and services of youth enterprises, facilitating creation of commercial infrastructure to support growth of youth businesses as well as facilitating employment of young people in external labour markets.

Although the government has committed Kshs. 3,315,664,170 billion so far into the YEDF towards economic empowerment of the youth as per the mandate, the YEDF whose major mandate is credit provision to the youth stands a high risk of collapse due to high levels of NPL. As had been envisioned on the Youth Employment Marshall Plan by MOYAS, credit provision to the youth was one of the assured ways of not only creating self-employment but also spurring economic growth through investments and hence increased productivity. Furthermore, the funding from the government, as evidenced by the budget analysis has been diminishing each year as shown in the table below:

**Table 2.1: Financial allocations by Treasury to YEDF**

<table>
<thead>
<tr>
<th>NO.</th>
<th>FINANCIAL YEAR</th>
<th>AMOUNT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>2006/2007</td>
<td>1,000,000,000</td>
</tr>
<tr>
<td>2.</td>
<td>2007/2008</td>
<td>725,000,000</td>
</tr>
<tr>
<td>3.</td>
<td>2008/2009</td>
<td>499,914,170</td>
</tr>
<tr>
<td>4.</td>
<td>2009/2010</td>
<td>540,750,000</td>
</tr>
<tr>
<td>5.</td>
<td>2010/2011</td>
<td>550,000,000</td>
</tr>
<tr>
<td></td>
<td>TOTAL</td>
<td>3,315,664,170</td>
</tr>
</tbody>
</table>

*Source: YEDF Financial Reports*
From the above scenario of dwindling funding from the government, the supply of credit by the YEDF to the youths and youth groups will only achieve the desired goal of poverty reduction through employment creation, if the loans issued are invested into viable businesses, repaid back for more youths still waiting for the loans already lent out to revolve to gain access, and to ensure operational sustainability of YEDF as the administering agent on behalf of the Government of Kenya. Additionally, the need for a sustainable growth and performance of loans by YEDF is informed by a number of factors, situations and recent developments (in 2011/12 financial year)

First, YEDF has already launched a decentralization initiative in adherence to the New Kenyan Constitution whereby 10 Regional offices have been established to take services closer to the youth. Furthermore, the Fund is also establishing county and constituency offices in all the 47 counties and yet to be delimited 290 constituencies all over the country. The county offices will start with an initial pilot of 25 offices – which is already underway. Secondly and in addition to the first point, YEDF has since December 2011, engaged Constituency Officers for a three years contract to assist in the establishment of proposed constituency secretariats and implement the mandates of the Fund at that local level. These structure including the proposed 47 Country offices will require a lot of funding to support transport facilitation (290 motorbikes) and especially allocate more resources in far flung areas which need extra human resource and other logistical facilitation.

Thirdly, YEDF is moving towards equalizing the programme activities and services provided to the Kenyan youth from the other four Mandate areas other than credit. This is because currently government funding to the YEDF is skewed towards credit provision with over 80% of the total budgetary allocations (development vote) going to finance the credit mandate, leaving the other mandates underfunded. The Fund is further planning to move towards medium to long term technology based financing of high impact projects whose effect will result in employment creation for the youth. Additionally, the reduction in GoK development grant in 2011/2012 financial year has led to downward revision of budgets the five programme mandates and support functions like public relations, research among others.
The success of the leverage financing partnerships with the financial intermediaries and the introduction of new lending products command huge investment in up-scaling and capacity building. This will ensure improved access to the available funds and broader reach particularly in the disadvantaged areas.

Youth unemployment is a national problem that requires broader and coordinated actions by all stakeholders including but not limited to development actors and the public in general. Hence, involvement of all stakeholders to enhance ownership and optimize impacts of the interventions is of utmost importance. Public sensitization and awareness on the progress and operations of the Fund is essential to accountability and good governance. Young people aged below 30 years constitute 75% of the Kenyan population, which currently stands at over 40 million. The young people comprise 92% of the unemployed in the country. YEDF needs to create sustainable programmes and interventions to realize youth economic empowerment and poverty reduction.

The target of the YEDF is young persons aged 18 to 35 years who number in excess of 13 million. These large numbers of people have different needs and therefore the interventions vary from one group to another. The wide distribution of the persons across the country means different geographical areas call for relevant approaches to tap into economical opportunities existent in the respective areas. YEDF management has been discussing possibilities of adjusting programme and activity delivery to the youths to make them demand driven in addition to the current approach of supply driven interventions. Demand driven approach in service delivery requires a lot of outstanding capacity. This can only be realized through making inroads in partnership building, cooperation, resource mobilization and collaboration with and/or from likeminded development partners.

YEDF has developed and launched a Resolved Customer Service Delivery Charter, which puts a lot of responsibility and commitment on the institution to meet strict service delivery timelines and targets. As still a young and growing institution, this means that a lot of not only necessary but also sufficient conditional adjustment within very limited time to conform and satisfy “contractual” public demands and expectations. Finally, as mentioned elsewhere in the paper, a number of FIs, which are managing the loans on behalf of YEDF, do not lack sufficient credit facilities to offer to the youth, but rather consider the youth unbankable. This means that YEDF
is for now acting as a guarantor of loans to the youths. The guarantee scheme will only mature (whereby in future, youths will be considered bankable by FIs) if the current loans perform.

From the above background, there are a number of challenges/limitations facing the youth, which make them considered "unbankable". These are considered, among others as; lack of business skills/experience, lack of loan security/collateral, lack of sufficient credit history, and poor business plans

Loan performance in this analysis will therefore guarantee a number of things in the future entrepreneurial endeavors by the youths, which will lead to greater social economic development, characterized by among other situations, easy credit access from financial sector, increased investment in business, leading to increased productivity and growth. The final impact will be high employment rates and ultimately poverty reduction.

For the loans to effectively perform and result in the above scenarios, the following challenges facing the youths must be addressed, either by YEDF, partner FIs or other players in the youth micro-finance sector. First, the prevalent lack of skills among youths which has been cited as one major cause of unemployment in Kenya alongside limited access to markets for their products (goods or services), should be addressed through adequate provision of training in business skills and provision of market access and linkages support programmes. This will in effect also address the high failure rates for business start-ups, which discourages the youth from making entry into business entrepreneurship.

Secondly, the technical, material and financial resources available to effectively provide business development services, are limited in the face of the task to be carried out; a collaborative mechanism is therefore needed to encourage and provide room for the involvement of other players in the achievement of the YEDF’s objectives. Furthermore, the target of the YEDF is young persons aged 18 to 35 years who number about 13 million. The youth in this bracket are at different levels in terms of entrepreneurial competencies, different approaches therefore will have to be employed in their capacity building programs.
Thirdly, maximum output/return needs to be generated from the resources (especially youth loans) which are invested in the youth programs, there is need for a strategy ensures that the youth are equipped to make good use of the business capital provided. This will in effect increase youth loans performance. Based on the size of the target group in the face of the existing unemployment crisis, there is urgent need to develop a strategy that categorizes the Youth based on needs to ensure that all categories are involved in the ongoing programs and that performance evaluation is based on those categories.

Finally, the YEDF has moved towards establishing quality services to the youth, which include systematic loan appraisals, training, recovering and support to business growth. YEDF partner FIs should emulate this.

2.1.1 Ensuring High Loan Performance

When the YEDF was established and started programme implementation in early 2007, one of the key strategies employed to reduce risks of high NPL was the on-lending. Through this, the YEDF partnered with qualified FIs across the country and provided each with varying amounts of loans for forward on-lending to the youth. This was done because of among other reasons; the FIs have wide networks across the country and therefore were able to reach out to the youths with very minimal layout of logistical challenge, they had experience and expertise in credit work and therefore would assist YEDF reduce the risk of default, and lastly YEDF in using the FIs was then left with enough time to put up administrative structures all over the country which would later on come in handy in managing YEDF direct loans to the youths.

These FIs were given contracts by YEDF to take full control of managing the loans. They were to repay back the loans to YEDF after three years with 1% interest rate. They were to charge the youths an interest rate of 8% (with the 7% margin being their profit). The contracts between YEDF and FIs were further premised on issues like; ensuring the loans only benefit the youths (the youths were classified as people falling between the ages of 18 and 35 years). Secondly was a cap on interest rate charged not to exceed 8%. Thirdly, that the contracted FIs were not going to deter youths from accessing the loans due to issues pertaining to lack of security/collateral. The FIs were however, allowed to demand for modest loan collaterals like chattels mortgage.
Finally, that the loans were to accessed by poor youths and not be used discriminatively, where only those youths who could secure the loans were given priority.

Each of the FIs hence established individualized loan appraisal criteria embedded in the credit policy manuals. The criteria can be synthesized to contain the following requirements: presentation of a viable business proposal/plan; availability of security/collateral/guarantors by the youth; type of loan applied for (seed or expansion money); business type (individual/group); credit history of the applicant (with the FI or other FIs); and availability of essential business entrepreneurship skills.

The following chart is therefore a hypothetical presentation of a loan management framework that we consider very applicable in the lead up to better performing loans and finally a sustainable YEDF.
2.1.2 The Ideal Loan Management Framework

Fig 2.1.2: Proposed Loan Repayment Management Framework

Challenges facing the Youth
1. Limited access to education and training
2. Lack of business start-up, growth and expansion skills
3. Lack of an entrepreneurial culture
4. Lack of business entry and re-entry mechanism
5. Temptation to crime, drug and substance abuse
6. Lack of guidance and counseling programs
7. Limited access to Information and Communication Technology

Youth Enterprise Development Fund (YEDF) -
Mandates:
- Credit Provision
- Enterprise Development (Training and mentorship)
- Market Access and Linkages
- Commercial Infrastructure
- Labor Export

Youth limitations to credit access
1. Lack of business skills/experience
2. Lack of loan security/collateral
3. Lack of credit history
4. Poor business plans/proposals

Better performing loans??

Expected Outcomes
1. Easy credit access from financial sector
2. Increased investment in business
3. Business growth & expansion
4. Increased business productivity
5. More employment opportunities

Expected Impact
- Youth Economic Empowerment
- Poverty Reduction
It is our expectation that if this framework is properly implemented, loan performance among the borrowing youths will be assured. Similarly, limitations barring youths from directly accessing loans from commercial banks and other lending institutions will be highly reduced. FIs have previously depicted risk averseness when it comes to appraising youths for purposes of lending. Although a number of FIs have also employed group lending to mobilize social capital in place of loan security, a good number of youths demand individual loans. Without such loan collaterals like land title deeds, car logbooks and worthy assets like real estate to attach to loans as security, the issue of individual loaning (directly from YEDF) will not be feasible.

This model will highly affect and positively influence youth behavior in their demand for loans and other credit facilities and make them strive at qualifying their demand even before they approach FIs for funding. By qualifying demand, we mean, ensuring that they meet the basic loan access criteria before applying for the loans. The FIs will also ensure that as a practice, they roll out such programmes as business training, business incubation and mentorship provision to equip the youth with basic business and credit management skills. They will, in their organizational systems also ensure proper loan follow-up to constantly remind the youths of importance of loan repayment. The follow-up will lead to business growth and expansion through constant monitoring and technical support.

All these effects will lead to the following major benefits among others: the YEDF as an institution (and even the Women Enterprise Fund) will increase demand of its on-lent loans by the Youth; the FI’s will perceive the youths as people who are bankable and hence increase supply of the loans through leverage financing model; the increase in demand and supply of loans will lead to increased uptake of the loans, good business and loan performance; and lastly the improvement in loan performance will lead to increase in employment opportunities through opportunities arising within the growing enterprises, for the youths and hence lead to poverty reduction and economic development.
This whole process will ensure that YEDF loan portfolio is well performing through good loan recovery and business refinancing hence sustainability without further funding from the government.

2.2 Empirical Literature Review

Youth as micro and small entrepreneurs have increasingly become a key target group for micro-finance programmes especially due to problems associated with the youth including insecurity, drug abuse and unemployment. Providing access through micro-finance is considered a precondition for poverty alleviation, but also for youth empowerment. As a poor and a marginalized group, the youth are increasingly recognized to be better borrowers, they are starting to become of interest also to regular financial institutions. But despite the proven positive impact of providing microfinance services to young entrepreneurs in the informal sector, microfinance is just one tool among others to address the multiple causes of poverty, unemployment and social exclusion.

2.2.1 The Youth Enterprise Development Fund as A social programme

According to Mayoux (1995); and Hilhorst and Oppneoorth (1992) strategies of availing the youth and women with access to financial services can be categorized as; a) Social programmes, managed by commercial banks, providing clients with incentives on behalf of the government; b) Intermediary programmes, which are in most cases implemented by NGOs acting as a link for micro-businesses to the mainstream banking system; c) Parallel programmes that provide financial services alongside other development and social programmes through non-formal-bank institutions; d) Poverty-oriented development banks, which operate as parallel programmes before getting official registration to operate as banks; e) Community revolving loan funds, similar to ROSCAs, with government and donor grants or loans. These funds offer limited but useful services to less empowered groups like women. Their sustainability depends largely on sound management practices. However, they suffer risk of erosion of funds due to default and inflation and; f) Savings and credit cooperatives and unions providing special schemes for women and other interest groups members.
Participatory methods help ensure that these organizations meet the real needs of members. They mobilize their own capital and are more or less democratic. However, cooperatives can be formalistic and financial services are not always readily available. This literature shows that YEDF, which was established by the GoK to bridge the microfinance environment gaps for the youth, is imperatively a social scheme.

Furthermore, a closer look at the YEDF in terms of its classification as a state corporation rightfully puts it within the social sector. It is not meant to make profits but rather to provide youths with the much-needed impetus to access financial and BDS from FIs like banks, MFIs and SACCOs. It has been able to subsidize and provide credit guarantee to the youths by rolling out on-lending programmes with FIs.

2.2.2 Youth Access to Microfinance Loans

With the youth, aged 18-35, representing both a major population cohort and a disproportionate number of the poor in many developing countries, many microfinance institutions, youth empowerment and development organizations, policy makers, and bilateral and multilateral donors are exploring the use of microfinance as a livelihood development strategy for youth. Research and practice show the need to explore youth inclusive microfinance from the preparedness and access perspective.

The issue of incomplete markets and imperfect information in the context of credit marketing in the rural Northern Nigeria was addressed by Udry (1990). The study found out that credit transactions, in the informal financial institutions, capitalize on information flow within rural communities. Information asymmetries between borrower and the lender are unimportant, and their institutional consequences (the use of collateral and interlinked controls) are absent. The study indicated that there is only minimal use of collateral and no evidence of contractual inter-linkages with other markets.

According to a household survey carried out in Northern Province in Thailand conducted by Siamwalla et. Al, (1990), 72% of informal borrowers reported that they had not attempted to borrow from other informal lenders. Creditworthiness of an individual lender
takes time to build up. According to the study, 42% of those who did not report any credit transactions were the poorest group in the village. Well to do farmers were more likely to obtain credit from formal sources. Household, which borrowed from commercial banks, belonged to the richest strata of the society.

2.2.3 Factors affecting loan repayment

Almeyda (1996) noted that female loanees were favoured by micro finance institutions, This was because they showed responsibility in loan repayment. The findings of the study showed that female borrowers exhibited lower average loan delinquency rates compared to their male counterparts, especially for small and micro enterprise (SME) loans. It concluded that microfinance institutions with highest rates of female clients record the lowest delinquency rates.

Kulundu (1990), in a study on smallholder credit repayment in Lugari division in Kenya found out that loan diversion, farm income, use of purchased farm inputs, sources of income from farming activities and attitude of the farmer towards loan repayment had a statistically significant effect on loan repayment performance. In the analysis, it was found out that two factors were significantly related to the amount of loan diverted; these are inadequate loan supervision and advice as well late loan disbursement.

Njuguna (2005) noted that an individual’s age displays a quadratic relationship with the demand for credit. This according to him implied that those at intermediate ages have a high demand while the old and young are less inclined to demand credit. The study also realized that educational level is very important an element in the demand for credit. In addition, it was high in the high-income groups, indicating that those individuals with collateral stand a high chance of applying and accessing large amounts of credit.

2.2.4 Loan Security and why youths are considered un-bankable by FIs

International Labour Organization (ILO) 1996) found out that financial institutions lending to young entrepreneurs most often use other substitutes for lack of security to overcome their lack of traditional collateral, such as property, equipment or capital. The
best-known examples according to the study were social capital generation through formation of groups and probation or credit scoring. Both have performed as well as conventional instruments in terms of ensuring repayment and have been used over a long period.

Christen et. al, (1995) found out that successful microfinance institutions are characterized, besides using loan security substitutes, by offering primarily short-term working-capital loans; having a turnaround time for loan approval less than 2 weeks; providing services close to borrowers’ home or work; charging interest rates significantly above the rate of inflation, and having lower salary levels than financially less viable programmes.

Interestingly enough, there does not seem to be a trade-off between reaching the very poor, such as the youth and women, and reaching large numbers of people. It seems to be scale, and not an exclusive focus, that determines whether significant outreach to the poorest could be realized.

2.2.5 Positive Impacts of loans on the youth and other less empowered groups

Schuler and Hashemi (1994) confirms in a study in Bangladesh that advancements in youth physical mobility, economic empowerment, ability to expend, freedom from family influence and peer pressure and involvement in insecurity acts or lawlessness, political and legal awareness and public participation, as a result of a more stable integration into microcredit programmes.

Pitt and Khandkar, (1995) emphasized that access to micro credit by women has positive effects on the education of their children They further said that it increases women's wealth except on the issue of land ownership and is a significant determinant of total household consumption expenditure.

Hulme and Mosley (1996) in a study in Sri Lanka found that loans contributed to women's independence in accessing and controlling their income, giving them more say on family issues and their relation with male family members.
Mk. Nelly and Watetip (1993) found out that enhanced youth economic and political empowerment, such as increased self-confidence, and better cooperation and participation in public life has been observed in Thailand, as a result to access to microcredit.

### 2.2.6 Loans and the Negative Impacts on Youths

A study by Vengroff and Creevey (1994) however, found out that there were negative impacts from microcredit programmes on youth income and employment, such as increased drug abuse and higher social pressure to ensure loan repayment.

Peace and Hulme (1994) and Creevey et. al (1995) concurred with this assertion by noting that positive impact on non-participants in microfinance, such as their welfare and education levels, cannot be automatically assumed. Finally, they noted that participation in credit schemes can lead to indebtedness that is unmanageable, simply because there are no sufficiently profitable revenue generating activities in which to invest. In such situations, young people may end up being even more dependent than they were before.

Hulme and Mosley (1996) continued to note that the very poor have only a limited credit absorption capacity. For example, very poor youth with little education often became over-burdened by the repayment obligation, especially as they use credit primarily for consumption and sustenance purposes. The study showed that the impact of providing microfinance facilities was greatest for persons that live above the poverty line. This was because, it was more cost-effective to provide the somewhat better-offs among the poor with microfinance services. However, they stressed on the importance of mentorship and business incubation coupled with intense entrepreneurship training especially where initial seed capital is applicable.

According to a study by Bhuiya et. al, (2001), micro credit benefits only the better-off people, leading to increase in economic disparities. This is because the extreme poor do not join micro credit programme because of their initial endowment (both material and non-material e.g. education), high opportunity cost of time and limited capacity for labour substitution.
2.2.7 Empirical Models used in Past Studies

Ducaluwe and Nsengiyumva (1994) developed a Computable General Equilibrium model and analyzed the links between real and financial sectors via credit financing of working capital in a financial repressed economy. By undertaking a number of policy simulations, their study revealed that the magnitude of changes on the price and production due to changes in credit depends on whether domestic bank credit is controlled by direct credit ceiling or by a required reserve ratio. A series of comparative static experiments applied to the Rwanda economy showed that the sign and magnitude of the effects of economic policies are different from those obtained from a model that ignores the direct link between economic activity and bank credit cost and availability.

Zeller (1994) in a study undertaken of formal lenders and formal credit groups in Madagascar and estimating a probit model, found out that age, education levels are positively significant in applying for informal credit while gender of the individual appeared not to affect the application process.

Lensick et al. (2003) conducted a survey among members and group leaders of borrowers, who accessed loans from two micro credit programmes in Eritrea. They found out that group leaders take more risk than normal group members do; better educated borrowers take more risk in borrowing and that borrowers that have had payments problems in the past will take more risk.

Using a probit model on a cross sectional data from Ugandan’s Social Welfare Survey of 1999, Mpunga (2003) found out that young educated people were more likely to demand credit while women were less likely to apply and if they do, they apply for smaller loans. Okurut et al (2004) while analyzing credit demand and credit rationing in the informal financial sector in Uganda by using Heckman two-stage model, found that credit demand increases significantly with age, level of education and level of household expenditure.

This study has hypothesized that provision of business training to young borrowers is important in influencing loan performance. The empirical literature presented above has
reinforced this necessary but rather not sufficient condition. The studies have shown that besides providing entrepreneurship training to first-time young borrowers and adequate loan follow ups, there are other factors like gender, amount of loan, interest rate charged and loan duration which affect loan performance.

A number of empirical studies presented have made use of probit model. Others have utilized Computable General Equilibrium Models and Heckman two-stage models. This study will use the probit model as it conducts regression by predicting binary choice (0, 1).

Several studies presented above have analyzed the factors affecting demand especially from the borrower's characteristics or disposition, which will be investigated in this study, as factors affecting credit access (qualifiable demand by the prospective borrower.)

Probit and logistic regression models tend to produce very similar predictions. The parameter estimates in a logistic regression tend to be 1.6 to 1.8 times higher than they are in a corresponding probit model. Long (1997) says that the choice between the logit and probit models is largely one of convenience and convention, since the substantive results are generally indistinguishable. However, in some cases, the need to generalize a model may be an issue. The study will generalize variables affecting the two dependent variables of the study using bi-probit model to arrive at overall findings and policy implications
CHAPTER THREE: MODEL SPECIFICATION

3.1 Theoretical Model

For the purposes of this study, we will use a probit model to conduct regression and estimate the likelihood of independent variables singularly and joint (combinations) affecting the rate of loan repayment performance (loan default/lack of default). The study is interested in determining the factors that influence loan performance as far as characteristics attributable to youths as borrowers, loan characteristics and loan administrative measures put in place by MFI’s. For the model, our outcome variable, which is loan repayment performance, will be a dummy variable and will only have two possible values:

a) Loan repayment performance: Default (1) or No default (0)

We believe that factors such as the age of applicant, gender, and stage of business at financing, lack of business skills, business type and amount of loan granted will determine whether a loan defaults. Because our outcome variable is binary (default or not default, a probit model which is estimated by Maximum Likelihood Estimation will be employed.

Our basic assumptions in drawing the probit model will be as follows

1. The observations on dependent variable (loan repayment performance - Y_t) are assumed to be randomly selected samples from the FIs of interest
2. That the event of Y_t occurring is caused by the X_i, and that the X_i are determined by influences (variables) outside of the model.
3. There is uncertainty in the relation between Y and the X_i which will be reflected by a scattering of observations around the functional relationship
4. The distribution of error terms must be assessed to determine if a selected model is appropriate

The following is a diagrammatic illustration of the flow of our model
3.2 The Model

The study attempts to examine the factors that influence loan repayment performance by youth in Kenya from a welfare based criteria. This is because, the government of Kenya in its social welfare objectives established the YEDF to give out loans to young people, not because there is limited supply of loans within the financial sector, but because the youth, as a segment of the society, face numerous challenges when it comes to meeting the
normal credit access requirements. The model will in its development, take cognizance of
the fact there are factors within the youth as individuals and factors attributable to the
financial intermediaries.

The model will be based on the assumption that all youth borrowers are rational
consumers whose main intention is to acquire business capital for purposes of investment
in viable business. That no young person will intentionally borrow a business loan and
divert it into other unintended purposes except those articulated in the business plans.

As had been mentioned earlier, the dependent variable will be proxied as follows; loan
performance with full repayment on fully matured loans. Simply put, the relationship will
be as follows;

**Loan repayment performance by a loanee** = \( f(\text{Age of loanee, gender of loanee, stage of business at funding, business activity, amount of loan granted, type of loan, availability of follow up by FI, availability of business training by FI}) \)

**The model:**

Because the dependent variable Loan Performance by a loanee is binary, therefore;

\[ Y \in \{0,1\} \] \hspace{1cm} (1)

Some of the independent variables are also binary while some are continuous. Let \( X_i \) be
the independent variable as described above, these are the covariates for subject \( i \), \( \beta \) is the
conformable parameter vector such that

\[ X_i \beta = \beta_i + \beta_2 X_{i_2} + ... + \beta_p X_{i_p} \] \hspace{1cm} (2)

\( Y_i | X, i = 1, ..., n \) are assumed independent with

\[ P(Y_i = 1 | X) = \Phi(X_i \beta_i) \] \hspace{1cm} (3)

Where \( \Phi \) is the cumulative density (or distribution) function of the standard normal
distribution.
In our case

\[ Y_i = \begin{cases} 1 & \text{if loanee } i \text{ defaults} \\ 0 & \text{if otherwise} \end{cases} \]  

\hspace{10cm} (4)

\[ X_i = [1, AG_i, GE_i, LT_i, LA_i, BA_i, SOBF_i, AET_i, ALF_i] \]  

\hspace{10cm} (5)

Where;

AG = Age of the loanee i 

GE = Gender of the loanee i 

LT = Loan type for loanee i 

LA = Loan amount for loanee i 

BA = Business activity for loanee i 

SOBF = Stage of business at funding for loanee i 

AET = Availability of entrepreneurship training for loanee i 

ALF = Adequacy of loan follow-up for loanee i 

In this case

\[ Q_i = 1 \]  

\[ |AG_i, GE_i, LT_i, LA_i, BA_i, SOBF_i, AET_i, ALF_i| = \Phi(\beta_1 + \beta_2 AG_i + \beta_3 GE_i + \beta_4 LT_i + \beta_5 LA_i + \beta_6 BA_i + \beta_7 SOBF_i + \beta_8 AET_i + \beta_9 ALF_i) \]  

\hspace{10cm} (6)

\[ \frac{1}{1 + \exp(-Z_i)} = \frac{1}{1 + \exp(-Z_i)} \]  

\hspace{10cm} (7)

Where;

\[ Z_i = \beta_1 + \beta_2 AG_i + \beta_3 GE_i + \beta_4 LT_i + \beta_5 LA_i + \beta_6 BA_i + \beta_7 SOBF_i + \beta_8 AET_i + \beta_9 ALF_i \]  

\hspace{10cm} (8)

Equation (7) is known as the (cumulative) logistic distribution function. Here \( Z \), ranges from \(-\infty \) to \(+\infty \); \( P_i \), ranges from 0 and 1; \( P_i \) is non-linearly related to \( Z_i \) (i.e. \( X_i \)) thus satisfying the two conditions required for a probability model.
In satisfying these requirements, an estimation problem has been created because $P_t$ is nonlinear not only in $X$ but also in $\beta$'s. This means that we cannot use the OLS procedure to estimate the parameters.

Here $P_t$ is the probability of loan default and is given by

$$\frac{1}{1+\exp(-Z_t)} \quad \cdots \quad (9)$$

Then $(1-P_t)$ which is the probability of no loan default

$$\frac{1}{1+\exp(Z_t)} \quad \cdots \quad (10)$$

Therefore;

$$\frac{P_t}{(1-P_t)} = \frac{1+\exp(Z_t)}{1+\exp(-Z_t)} \quad \cdots \quad (11)$$

$P_t/(1-P_t)$ is the odds ratio in favor of loan default; i.e the ratio of the probability that a youth loanee will default on a loan to the probability that he/she will not default. Taking natural log of (11) we obtain;

$$LRP_t = \ln(\frac{P_t}{(1-P_t)}) = Z_t = \beta_1 + \beta_2 AG_t + \beta_3 GE_t + \beta_4 LT_i + \beta_5 LA_i + \beta_6 BA_i + \beta_7 SOBF_i + \beta_8 AET_i + \beta_9 ALF_i \cdots \quad (12)$$

3.3 Parameter and variable definition

The study will examine the following variables as defined within the parameters.

3.3.1 Loan repayment performance (LRP)

This is a dependent variable according to the model will be measured using full repayment of loans which have fallen due at the time the data was compiled by the FIs. The study will make use of data gathered by selected partner FIs between 2008 and 2011. From the FIs records defining loan administration, majority of loans are repayable within one year
with maturity periods varying based on grace periods given. However, the on lending contracts were for three years.

3.3.2 Age of beneficiary (AG)

This variable, according to the study may not make significant influence on the dependent variables. The reason being that the study target population is already defined as youth (people aged between 18 and 35 years). Age will be treated as a continuous variable and analyzed for each case of loanee. It is however expected that as one’s age advances from twenties to thirties, the issue of loan performance will also improve due to other exogenous factors like family responsibility, experience in running a business and acquisition of relevant business management skills.

3.3.3 Gender (GE)

Gender is a natural characteristic of an individual, which can also be used to men sex. According to this study, this variable is definitely very important, as other studies, as depicted in the literature review section, have also shown some glaring disparities, when it comes to how women manage micro-credit vis a vis men. The study will be interested in finding out how female youths utilize their loans as compared to male youths. This variable is expected to have significant effect on the dependent variables.

3.3.4 Stage of business at funding (SOBF)

The stage of business at funding as a variable being considered in this study to mean whether a business is start-up or expansion. The study population are regarded as people with relatively little or no business experience and therefore available of an already started business is a good sign (to the FIs) that an individual already knows what he/she wants, the challenges associated with running such kind of a business and hence have some strategies in place to cope with risks and challenges. Further, it is considered that such individuals already have a clear plan and path for business growth and expansion hence positive influence on not only loan performance but also business performance.
3.3.5 Business activity (BA)

Business activity will be treated by the study as a key variable in terms of what nature of business activity the youth beneficiaries samples, run. Business activity is categorized into subsistence and commercial. Subsistence businesses include kiosks, grocery, mitumba, and hawking business among others. Commercial businesses consist of saloon, boutique, and transport services. Inference made from amount of loan granted may be misleading if used to calculate the value of the business. Nevertheless, simplicity of data available will enable the already discussed classification (subsistence and commercial.) It is expected that commercial business will have a positively effect on loan repayment performance.

3.3.6 Amount of loan granted (LA)

This variable will take the form of small loans (defined as ranging between Kshs. 1,000 to 50,000), and micro loans (defined as ranging between Kshs. 50,001 and 500,000). Although other factors affecting loan sizes are of much importance, it is the considered view of this study that huge loans (small as per the definition) are only attracted to well set-up businesses with risk mitigation mechanisms in place. As such, these loan sizes will positively affect loan and business performance.

3.3.8 Type of Loan (LT)

The type of loan as a variable is important as a determinant of loan performance. Conventionally, refinance loans are only granted to businesses which are performing. However, the study wants to investigate how different is the performance of businesses funded as start-ups versus those under refinance.

3.3.9 Adequacy of loan follow-up by FI (ALF)

Although regarded as exogenous, availability of follow-up mechanisms on disbursed loans by FIs, as a variable is very important as a determinant of loan performance. Within their credit policy manuals, the FIs do articulate how loan follow-up is carried out. FI

\footnote{Mitumba, in Kenya, means second hand clothes.}
monitoring and evaluation activities by YEDF coupled with FI YEDF loan portfolio performances can be used to allude to the fact the some FIs have relatively weak follow approaches while others have relatively strong field follow-up actions. It is expected that the stronger and elaborate such follow-up programs are the better the loan performance.

3.3.10 Availability of entrepreneurship Training (AET)

Youth as loan applicants and beneficiaries as challenged in the sense that majority of them do not (after graduating from colleges or schools) have essential basic business development skills necessary in running such businesses. As such a number of FIs have instituted, within their credit programs, pre-loan capacity building and training activities meant to empower the would-be beneficiaries with knowledge and skills in areas like group management and dynamics, business start-up process, customer care and marketing, credit management, book keeping and business plan/proposal development. This according some of these FIs is a pre-requisite in order for one to qualify for a loan. Such programs are implemented different with some as one off seminars and/or others as very well structured periodic (ranging from 2 weeks to 8 weeks) courses. Regardless of the nature of the course planning, it will be regarded as provision of BDS by the FIs, contrary is total lack of such a program. It is expected that those FIs which provide business training to youths before loans are disbursed, have a positive effect on loan repayment performance.

3.4 Predicted variable signs

Table 3.4: Predicted Variable signs

<table>
<thead>
<tr>
<th>Type of variables</th>
<th>Name of variable</th>
<th>Definition</th>
<th>Relations hip with dependent variable</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loan repayment performance</td>
<td>Dependent variable which is a dummy (1 if there is default, 0 if no</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Borrower - Specific</td>
<td>Loan Specific</td>
<td>Business Specific</td>
<td></td>
<td></td>
</tr>
<tr>
<td>---------------------</td>
<td>--------------</td>
<td>------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Borrower - Specific</strong></td>
<td><strong>Loan Specific</strong></td>
<td><strong>Business Specific</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age (AG)</td>
<td>Loan type (LT)</td>
<td>Stage of business at funding (SOBF)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age of borrower. Continuous variable</td>
<td>Loan graduation from the same FI. 1 if first loan 0 if otherwise e.g. refinance</td>
<td>Stage of the business at the financing stage. (1 for start up; 0 for expansion or otherwise</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Youth borrowers who are mature are able to invest their loans wisely, run their businesses prudently and pay back their loans more than younger applicants</td>
<td>Initial loans have a high likelihood of poor performance unlike refinanced loans</td>
<td>Seed loans are faced with more business start-up problems and therefore more likely to perform poorly than expansion loans</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender (GE)</td>
<td>Loan amount (LA)</td>
<td>Business activity (BA)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sex of borrower (1 if male 0 otherwise)</td>
<td>Amount of loan disbursed. Divided into small and micro loans. Small loans are those amounts up to Kshs. 50,000 while micro loans are amounts over between 50,000 and 1,000,000 (1 for small; 0 for otherwise</td>
<td>The type of business activity financed by the</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Some studies have shown that female borrowers are better loan payers than their male counterparts, while otherwise have also shown that male borrowers are better payers depending on other factors like level of education and business type</td>
<td>Smaller loans are more easier to pay off than larger loans</td>
<td>Loans used to run business activities which are subsistence in nature are</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
borrowed loan. Classified as (1 for subsistence and; 0 commercial or otherwise. more difficult to repay than those invested in commercial activities

| Lender specific | Availability of loan follow-ups (ALF) | Availability of loan follow-up by the lending FI. (1 if available and 0 for otherwise | + FIs which have in their loan management systems, proper loan follow-up mechanisms record minimal levels of PAR/NPL |
| Availability of entrepreneurship training (AET) | Provision of business entrepreneurship training by the lending FI. (1 for availability of training and; 0 for otherwise | + FIs which provide pre-requisite business training to young loan applicants record minimal levels of NPL |

### 3.5 Data and Sources

As have been above under the section of model specification, the study will generate from secondary data collected from client information files and compiled by YEDF partner FIs. The study will sample 60% of loanees from each FI with a total targeted sample size of about 400 loanees from the 6 purposively sampled partner FIs with YEDF based on the following clusters;

1. Mainstream commercial (First Community Bank and Family Bank)
2. Micro Finance Institutions (K-REP)
3. SACCO (Taifa SACCO and Tana Teachers SACCO)
4. NGO/CBOs (KENA ROSCAS)

The study will focus will focus on the 2008 to 2011 period. This was the first YEDF strategic plan period and the period within which all FIs’ on-lending contracts were implemented (for three years). However, the data used, was that gathered from partner FIs during 2009/2010 financial year. This is because this is the latest data on loan performance already in possession of YEDF from partner FIs. Secondly, this is the data on the latest...
disbursed loans, which have fully matured. The said data has already been received by YEDF from partner FIs through the Integrated Financial Management and Information System (IFMIS) complimented by various field audits and monitoring and evaluation missions' report compiled by YEDF's Audit and Monitoring and Evaluation team on FIs.

The on-lending contract between YEDF and the partner requires that the FIs submit quarterly status reports capturing issues to do with loan performance including among other variables; name, age, gender and location of individual/group borrowers; amount of loan disbursed; number of businesses financed; amount of loan due; outstanding loan amounts; amount recovered; and businesses status. This data once received by the YEDF is screened and analyzed to find out the performance of loans and businesses, which by extension, indicate the impact the loans are having on the lives of the youths in terms of employment creation through entrepreneurship.

Separately, the FIs also run Information Management Systems, which they utilize in tracking loan performance, among other issues. It is from this IMIS supported by data submitted on quarterly basis by the FIs to YEDF that the study will derive data to be used for variable analysis.

Due to constraints in obtaining data on some variables from the FIs' IMIS, like education level of beneficiaries, possession of or lack of essential BDS skills among others, the study will only regress variables which can be readily found and authenticated by the two sources of data, that is, quarterly FI reports to YEDF and FIs Information Management Systems (IMS)
CHAPTER FOUR: DATA ANALYSIS AND FINDINGS

4.0 Introduction

This chapter discusses the data analysis and findings from the study. We first begin by providing the descriptive statistics to summarize the information on the variables used in the study. Then, we provide the correlation analysis among the variables. This will be followed by regression analysis of the dummy-dependent variable of the model using probit regression. Logit regression will be applied later for comparative purposes.

Finally, being a cross sectional or longitudinal data set, the problem of heteroskedasticity is imminent. Since loan repayment performance (default) equation is estimated using a probit model, running robust estimation using STATA software easily solves this problem.

4.1 Descriptive Statistics

Descriptive statistics show at a glance the variables of interest, and their measures of central tendency, with respect to the mean, standard deviation, the maximum and minimum values, and the number of observations.

Table 4.1: Summary statistics

<table>
<thead>
<tr>
<th>Variable</th>
<th>Obs</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>age</td>
<td>400</td>
<td>32</td>
<td>7.159479</td>
<td>20</td>
<td>67</td>
</tr>
<tr>
<td>sex</td>
<td>400</td>
<td>.535</td>
<td>.4993081</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>busactivity</td>
<td>400</td>
<td>.49</td>
<td>.500526</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>stageofbus-s</td>
<td>400</td>
<td>.4375</td>
<td>.4965986</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>loantype</td>
<td>400</td>
<td>.9375</td>
<td>.2423646</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>loanamount</td>
<td>400</td>
<td>.79</td>
<td>.4078183</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>bustraining</td>
<td>400</td>
<td>.3825</td>
<td>.4866063</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>followup</td>
<td>400</td>
<td>.385</td>
<td>.4872047</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>loanrepaym-t</td>
<td>400</td>
<td>.17</td>
<td>.3761032</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

From table 4.1, there are nine variables of interest, each having four hundred observations. Age has a mean value of 32 years, meaning that the average age of the sample is 32 years of age. The youngest loanee was 20 years old, with the oldest being 67 years of age. The gender of loanees is composed of both male and female, who are coded as 1, and 0.
respectively. With the mean value as 0.535, it means that there are relatively more male than female youth loanees.

**Business activity** is an important variable in determining one’s loan repayment ability, which is coded as 1 for the subsistence activity and 0 for commercial activity. With a mean of 0.49, it means that there are almost a similar number of subsistence activities as those of commercial nature from the observations.

**Stage of business at funding** was also examined, as it is also an important variable when it comes to determining whether a loanee has some form of business experience. It was coded as 1 for start-up businesses and 0 for expansion. With a mean of 0.4375, it means that there were more businesses under expansion funded by the FIs than start-ups.

**Loan type** is also a key variable in determining the level of confidence a loanee has acquired from the FIs. It can also depict the level of credit worthiness attributable to a particular loanee. Loan type was taken to mean either initial loans or refinance coded as 1 and 0 respectively. With a mean of 0.9375, it means there were overwhelmingly more initial loans advanced to youth loanees than those under refinance.

**Loan amount** was also examined as a variable that can be used to determine that nature of creditworthiness, business viability – as predetermined by the lending FI and/or availability of loan security/collateral. The variable was coded as 1 for loans between Kshs 1 and 50,000 (small loans) and 0 for loans ranging between Kshs. 50,001 and 1,000,000 (micro loans). FI loans are capped at this amount, meaning the FIs cannot solely lend any amount over Kshs 1,000,000 without approval from the YEDF. With a mean of 0.79, it means there were more small loans than micro loans.

**Availability of business training** by the lending FI is an important variable in determining the level of preparedness in running business, among the youth loanees even as they take up the loans. It was coded as 1 for available and 0 for not available. With a mean of 0.3835, it means that there were fewer FIs providing their youth clients with business training (business training not available) than those, which were providing (business training available).
Adequacy of loan follow-up by the lending FI is also an important variable which determines how constantly the loanees are kept being reminded about their obligations in repaying the loans and even in provision of further business technical support, in case of any challenges. It was coded as 1 for adequate and 0 for not adequate. With a mean of 0.385, it means that there were more FIs with no adequate business follow-up mechanism than those, which have adequate follow-up mechanisms.

Finally is the dependent variable loan repayment performance, which denotes the promptness of loan repayment to expectations of period and installments (premiums). It was coded as 1 for default and 0 for no default. A loan which defaults by our definition means a loan which is not fully paid up after its maturity period (majority of the loans were for a period of twelve months). With a mean 0.17, it means that there were more non-defaulting (performing) loans than there were defaulting loans (non-performing).

4.2 Correlation Analysis

Correlation is a method of analysis that looks at the relationship and correlations among variables. The table below provides the correlation coefficients among the variables of interest:

<table>
<thead>
<tr>
<th></th>
<th>corr</th>
<th>age</th>
<th>sex</th>
<th>busactivity</th>
<th>stageofbusiness</th>
<th>loantype</th>
<th>loanamount</th>
<th>bustraining</th>
<th>followup</th>
<th>loanpaymen-t</th>
</tr>
</thead>
<tbody>
<tr>
<td>age</td>
<td></td>
<td>1.0000</td>
<td>-0.2685</td>
<td>0.1266</td>
<td>0.0134</td>
<td>0.0014</td>
<td>0.0017</td>
<td>-0.2532</td>
<td>-0.2558</td>
<td>-0.0028</td>
</tr>
<tr>
<td>sex</td>
<td></td>
<td></td>
<td>1.0000</td>
<td>-0.0114</td>
<td>0.1048</td>
<td>-0.0751</td>
<td>-0.0992</td>
<td>0.2387</td>
<td>0.2432</td>
<td>0.1684</td>
</tr>
<tr>
<td>busactivity</td>
<td></td>
<td></td>
<td></td>
<td>1.0000</td>
<td>0.0114</td>
<td>0.1911</td>
<td>0.4685</td>
<td>0.2370</td>
<td>0.2419</td>
<td>-0.1241</td>
</tr>
<tr>
<td>stageofbusiness</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.0000</td>
<td>0.1236</td>
<td>0.1454</td>
<td>-0.3673</td>
<td>-0.3560</td>
<td>0.4532</td>
</tr>
<tr>
<td>loantype</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.0000</td>
<td>0.2979</td>
<td>-0.1581</td>
<td>-0.1565</td>
<td>0.0069</td>
</tr>
<tr>
<td>loanamount</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.0000</td>
<td>-0.2354</td>
<td>-0.1241</td>
<td>-0.0444</td>
</tr>
<tr>
<td>bustraining</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.0000</td>
<td>-0.3014</td>
<td>-0.2897</td>
</tr>
<tr>
<td>followup</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.0000</td>
<td>-0.3014</td>
</tr>
<tr>
<td>loanpaymen-t</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.0000</td>
</tr>
</tbody>
</table>

The correlation matrix above shows the correlation coefficients among the variables. The correlation coefficient between loan repayment and age is -0.0028. This indicates that there is a negative and weak correlation between age and loan repayment (default). Thus, age is not a big factor in determining loan default. Other variables, which have negative and weak correlation with loan repayment (default), also include business activity, loan
amount, and availability of business training and availability of loan follow-up. What this means is that as these variables change (increase) from their minimum to maximum values, be they dummy or continuous, loan default as a dependent variable decreases.

The remaining independent variables of the model, that is, sex, stage of business at funding and loan type have a positive and weak correlation with loan repayment (default) at 0.1684, 0.4327 and 0.0069 respectively. This means that as these independent variable change (increase) from their minimum to maximum values, be they dummy or continuous, loan default as a dependent variable also increases.

4.3 Regression Analysis

The following table represents the probit regression results. Also presented is a logit regression results for comparison purposes. The analysis has beforehand taken care of any problem of heteroskedasticity by conducting robust probit regression.

<table>
<thead>
<tr>
<th>Probit regression results</th>
<th>Number of obs = 400</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wald chi2(7) = .</td>
<td></td>
</tr>
<tr>
<td>Prob &gt; chi2 = .</td>
<td></td>
</tr>
<tr>
<td>Pseudo R2 = 0.3397</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Probit regression</th>
<th>Robust Std. Err.</th>
<th>z</th>
<th>p</th>
<th>[95% Conf. Interval]</th>
</tr>
</thead>
<tbody>
<tr>
<td>loanrepaym-t</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>age</td>
<td>-0.0087046</td>
<td>0.012391</td>
<td>-0.70</td>
<td>0.482</td>
</tr>
<tr>
<td>sex</td>
<td>0.5567491</td>
<td>0.205903</td>
<td>2.70</td>
<td>0.007</td>
</tr>
<tr>
<td>busactivity</td>
<td>-0.0038604</td>
<td>0.2118122</td>
<td>-0.02</td>
<td>0.985</td>
</tr>
<tr>
<td>stageofbus-s</td>
<td>1.410948</td>
<td>0.2403174</td>
<td>5.87</td>
<td>0.000</td>
</tr>
<tr>
<td>loantype</td>
<td>-0.5576144</td>
<td>0.4101955</td>
<td>-1.36</td>
<td>0.174</td>
</tr>
<tr>
<td>loanamount</td>
<td>-0.7799436</td>
<td>0.2587257</td>
<td>-3.01</td>
<td>0.003</td>
</tr>
<tr>
<td>bustraining</td>
<td>7.436659</td>
<td>0.2493406</td>
<td>-25.25</td>
<td>0.000</td>
</tr>
<tr>
<td>followup</td>
<td>6.101014</td>
<td>0.2945406</td>
<td>-25.25</td>
<td>0.000</td>
</tr>
<tr>
<td>_cons</td>
<td>-0.4707325</td>
<td>0.6269022</td>
<td>-0.75</td>
<td>0.453</td>
</tr>
</tbody>
</table>

Note: 0 failures and 1 success completely determined.

Table 4.5 above provides the probit regression results for the variables of interest. We therefore want to examine which predictor variables are statistically significant before we interpret the parameter coefficients. From the table, at 95% level of confidence we realize that the age of a youth in years, the nature of business activity (whether subsistence or commercial) and loan type (initial or refinance loan) are not statistically significant in determining loan performance (default or no default). This assertion is however, contradicted by Chirwa (1997) who used a probit model to estimate the probability of
agricultural credit repayment in Malawi. The study found out that among other factors (household size and club experience), loan amount and sex were statistically insignificant determinants of agricultural credit repayment. This might have been because of sector focus in the Chirwa's study. The YEDF loans are not specific to any particular sector, and therefore, capital intensity was considered as a factor in choosing the nature of a business to be initiated. The other independent variables of the model are statistically significant as determinants of loan performance and are discussed as follows.

The probit coefficient for stage of business at funding is 1.4109. This means that the mean of loan default will increase by 1.41 units if a loan was advanced to a start-up business rather than an expansion business, holding the other predictor variables constant. The probit coefficient for loan amount is -0.7799. This indicates that the mean of loan default will decrease by 0.7799 units if a smaller amount of loan between Kshs. 1 and 50,000 was advanced to a youth beneficiary rather than a micro loan ranging between Kshs. 50,001 up to 1,000,000. The probit coefficient of business training is -7.4365. This means that the mean of loan default will decrease by 7.4365 units if a youth loanee was provided with essential business training before a loan was advanced.

From the above probit regression results, we can estimate our loan repayment performance equation as;

\[ LRP_i = b_1P_i/(1-P_i) = Z_i = -1.093 - 0.013A_i + 1.023GF_i - 0.890LT_i - 1.400LA_i + 0.005BT_i + 2.623BTR_i - 20.885ATE_i + 18.430ALF_i \]  (13)

**Table 4.3(b): Logit regression results**

| Loanrepaym-t | Coef. | Robust Std. Err. | z  | P>|z| | [95% Conf. Interval] |
|--------------|-------|------------------|----|------|----------------------|
| age          | -0.134128 | .021765         | -6.2 | 0.538 | .0560763 - .092507 |
| sex          | 1.022874   | .370125         | 2.76 | 0.006 | .2974423 - 1.748306 |
| busactivity  | .0048638   | .3650062        | 0.01 | 0.989 | -.7105352 .7202628 |
| stageofbus   | 2.622995   | .4877041        | 5.38 | 0.000 | 1.667113 - 3.578877 |
| loanotype    | -1.8904011 | .8561323       | -2.14 | 0.029 | -3.56839 - .7875874 |
| loanamount   | -1.403198  | .4870039        | -2.86 | 0.004 | -2.318712 - .4880829 |
| bustraining  | -20.88466  | .5823348        | -31.86 | 0.000 | -22.02601 - 19.7433 |
| followup     | 18.43004   | .8233348        | 21.86 | 0.000 | 18.43004 18.43004 |
| _cons        | -1.093275  | 1.180127        | -0.93 | 0.354 | -3.406281 1.219731 |

Note: 0 failures and 1 success completely determined.
The logit regression results are as shown in table 4.5(b) above. From the results, we can see that there is no major difference between the logit and probit results especially in terms of which predictor variables are statistically significant in relation to the dependent variable. Further, the results show that the direction of change of the dependent variable as depicted by the parameter coefficients resulting from changes in each of the predictor variables, holding the rest constant, is as found out from the probit results. Confirming this assertion was Long (1997) who noted that the choice between the logit and probit models is largely one of convenience and convention, since the substantive results are generally indistinguishable. However, he further noted that in some cases, the need to generalize a model might be an issue.

4.4 Hypothesis Testing

In this section, we intend to present findings and analysis of one-sample t-tests of default as the dependent variable and all the independent variables of the model. More critically, we shall be determined to prove the hypothesis of the study that training in business entrepreneurship is significant determinant of loan performance. The other independent variables of the model, with proven statistical significance, from the regression results, have also been presented to provide a more elaborate analysis of the hypothetical relationships.

Table 4.4.1: Testing the hypothesis that business training in important in improving loan repayment performance

<table>
<thead>
<tr>
<th>Variable</th>
<th>Obs</th>
<th>Mean</th>
<th>Std. Err.</th>
<th>Std. Dev.</th>
<th>[95% Conf. Interval]</th>
</tr>
</thead>
<tbody>
<tr>
<td>loanrepayment</td>
<td>153</td>
<td>0.0261438</td>
<td>0.0129423</td>
<td>0.1600868</td>
<td>[0.0005739, 0.0517337]</td>
</tr>
</tbody>
</table>

One-sample t test

<table>
<thead>
<tr>
<th>Ho: mean = 0</th>
<th>degrees of freedom = 152</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pr(T &lt; t) = 0.9774</td>
<td>Pr(</td>
</tr>
<tr>
<td>Ha: mean &gt; 0</td>
<td>Pr(T &gt; t) = 0.0226</td>
</tr>
</tbody>
</table>

The table above presents the analysis of hypothesis that business training is important in determining loan performance. From the table above we can see that the value of t calculated is less than t-critical (2.0200) in all the three scenarios of alternative
hypotheses. We therefore accept the null hypothesis, that is, business training is an influential determinant of better loan performance.

This was confirmed by Okurut et al (2004), who while analyzing credit demand and credit rationing in the informal financial sector in Uganda, hypothesized and found out that business training to young borrowers was key in influencing loan performance. The study showed that besides providing entrepreneurship training to first-time young borrowers and adequate loan follow ups, there were other factors like gender, amount of loan granted, interest rate charged and loan duration which affect loan performance.

Hulme and Mosley (1996) also stressed on the importance of mentorship and business incubation coupled with intense entrepreneurship training especially where initial seed capital is applicable in order to improve loan repayment performance.

Table 4.4.2: Testing the hypothesis that female youth loanees are more responsible in loan repayment

<table>
<thead>
<tr>
<th>Variable</th>
<th>Obs</th>
<th>Mean</th>
<th>Std. Err.</th>
<th>Std. Dev.</th>
<th>[95% Conf. Interval]</th>
</tr>
</thead>
<tbody>
<tr>
<td>loanrepayment</td>
<td>186</td>
<td>.1021505</td>
<td>.0222657</td>
<td>.3036636</td>
<td>.0582232 .1460779</td>
</tr>
</tbody>
</table>

mean = mean(loanrepayment)  
t = 4.5878  
Ho: mean = 0  
degrees of freedom = 185  
Ha: mean < 0  
Pr(T < t) = 1.0000  
Ha: mean != 0  
Pr(|T| > |t|) = 0.0000  
Ha: mean > 0  
Pr(T > t) = 0.0000

The results from the table above shows that the values of t-calculated with in all the three alternative hypotheses are each less than the value of t-critical (4.5878). This means that we accept the null hypothesis. Therefore as had been predicted, female youths are better payers of loans as compared to their male colleagues.

This was confirmed by Almeyda (1996) who noted in one of the studies that women became the preferred clients of microfinance institutions. This is because they tended to be better borrowers. The study found out that women borrowers' average delinquency rates tend to be lower than men's, especially for microloans.
Table 4.3.3: Testing the hypothesis that business funded for expansion improve loan performance

\[
\text{ttest loanrepayment==0 if stageofbusiness==0} \]

One-sample t test

<table>
<thead>
<tr>
<th>Variable</th>
<th>Obs</th>
<th>Mean</th>
<th>Std. Err.</th>
<th>Std. Dev.</th>
<th>[95% Conf. Interval]</th>
</tr>
</thead>
<tbody>
<tr>
<td>loanre-t</td>
<td>225</td>
<td>.0266667</td>
<td>.0107644</td>
<td>.1614665</td>
<td>[.0054542 .0478792]</td>
</tr>
</tbody>
</table>

mean = mean(loanrepayment) \hspace{2cm} t = 2.4773

Ho: mean = 0 \hspace{2cm} degrees of freedom = 224

Ha: mean < 0 \hspace{2cm} Pr(T < t) = 0.9930

Ha: mean > 0 \hspace{2cm} Pr(T > t) = 0.0070

The table 4.3.3 above presents results of hypothesis testing on the influence of stage of business at funding on loan performance. The result shows that, values of t-calculated (within all the three alternative hypotheses) are each less than the value of t-critical (2.4773). We therefore accept the null hypothesis. This means that expansion businesses lead to better loan repayment performance.

Table 4.4.4: Testing the hypothesis that if smaller loan amounts are advanced, loan performance will improve

\[
\text{ttest loanrepayment==0 if loanamount==1} \]

One-sample t test

<table>
<thead>
<tr>
<th>Variable</th>
<th>Obs</th>
<th>Mean</th>
<th>Std. Err.</th>
<th>Std. Dev.</th>
<th>[95% Conf. Interval]</th>
</tr>
</thead>
<tbody>
<tr>
<td>loanre-t</td>
<td>316</td>
<td>.1613924</td>
<td>.0207284</td>
<td>.368476</td>
<td>[.1206088 .202176]</td>
</tr>
</tbody>
</table>

mean = mean(loanrepayment) \hspace{2cm} t = 7.7861

Ho: mean = 0 \hspace{2cm} degrees of freedom = 315

Ha: mean < 0 \hspace{2cm} Pr(T < t) = 1.0000

Ha: mean > 0 \hspace{2cm} Pr(T > t) = 0.0000

From the table above, the values of t-calculated are each less than the value of t-critical. This means that we accept the null hypothesis. Therefore, we find that youth loanees stand a better chance to register improved loan repayment performance if loans advanced are smaller. The finding can by extension be interpreted to infer to, “right-amounts-of-loan”. This simply means giving out the correct size of a loan to offset business start-up or expansion purposes. However, this can only be realized if a proper business capital appraisal of the proposed business is conducted by the lending FI.
Using a cross sectional data from Ugandan's Social Welfare Survey of 1999, the above hypothesis was further confirmed by Mpunga (2003) who found out that educated and the young are likely to demand credit while women are less likely to apply and if they do, they apply for smaller loans. This by extension meant that the smaller loans borrowed by women would perform better, by inference, considering the fact women have turned out to be better borrowers.

However, this finding is contrary to that of a study by Njoku and Odii (1991) which concluded that among other factors (years of formal education, household size and interest paid of a loan) loan volume was positively related with loan repayment performance. The difference might have been due to the fact the YEDF loans are by design meant to be smaller loans intended to fund the youths with viable business proposals but lack accessibility to formal and mainstream financial services due to lack of security among other deterrent factors.

Table 4.4.5: Testing the hypothesis that proper business follow-up improves loan performance

<table>
<thead>
<tr>
<th>Variable</th>
<th>Obs</th>
<th>Mean</th>
<th>Std. Err.</th>
<th>Std. Dev.</th>
<th>[95% Conf. Interval]</th>
</tr>
</thead>
<tbody>
<tr>
<td>loanre-t</td>
<td>154</td>
<td>0.0324675</td>
<td>0.0143289</td>
<td>0.1778165</td>
<td>0.0041596, 0.0607755</td>
</tr>
</tbody>
</table>

mean = mean(loanrepayment)  
degrees of freedom = 153

t = 2.2659

Pr(T < t) = 0.9876  
Pr(|T| > |t|) = 0.0249  
Pr(T > t) = 0.0124

From the table above, the values of t-calculated from all the three alternative hypotheses are each less than the value of t-critical. We therefore accept the null hypothesis that proper business follow-up instituted by the lending FI positively affects loan repayment performance. This is reinforced by Christen et. al, (1995). They found out one of the factors used to categorize microfinance institutions was by how closer their services were to borrowers' home or work. This in the long run will positively affect the performance of these services.
This was actually one of the criteria used by YEDF when vetting FIs, which were later to be contracted to offer the on-lending services to the youths. Their geographical reach and networks were considered not only to ensure equal access to all Kenyan youths, but also to later aid in loan follow-up activities.

4.5 Estimating Marginal Effects

Table 4.5: Dependent and Independent Variables Marginal Effects

| dep | Robust Std. Err. | $z$ | $P>|z|$ | x-bar | 95% C.I. |
|-----|-----------------|-----|---------|-------|---------|
| age | -.0011779       | .0016994 | -0.70  | 0.482 | 32      |
| sex*| .0743308        | .0270143 | 2.70   | 0.007 | .535    |
| busact-y* | -.0005224 | .0286565 | -0.02  | 0.985 | .49     |
| stageo-s* | .2308462 | .0447555 | 5.87   | 0.000 | .4375   |
| loantype* | -.1055155 | .1020789 | -1.36  | 0.174 | .9375   |
| loanam-t* | -.0143587 | .0599325 | -3.01  | 0.003 | .79     |
| bustra-g* | -.9152714 | .0210691 | -25.25 | 0.000 | .3825   |
| followup* | .9886775 | .00393 | .385  | .99838 |

The marginal effects analysis presents the change in the dependent variable because of a unit change in an independent variable. From table above, the marginal effects indicate that if a youth borrower receives full business training, loan repayment performance will increase by 91.5% (or a decrease in default by 91.5%). Similarly, if a youth loanee goes for an initial loan, and a smaller loan of between Kshs. 1 and 50,000 the business will witness an increase in loan repayment performance by 10.6% and 14.5% respectively.

The sex of youth loanee is positively associated with loan repayment performance, though not statistically significant at 5%. The results show that if a loan was advanced to female youth, loan repayment performance will increase by 7%. This is confirms the hypothesis that male loanees are poor in loan repayment; rather female loanees are more responsible in loan ensuring loan repayment. The other independent variables with positive association with loan default are stage of business at funding (0.2308) and adequacy of loan follow-up (0.9887)
The above finding of high positive relationship between loan repayment and business training, was also confirmed by Roslan and Mohd (2009) who analyzed the factors of microfinance repayment in Malaysia. The study found out that loan repayment was influenced by gender, with lower default among women than men. Loan repayment was also influenced by the type of business, amount of loan and the repayment period. They realized that those entrepreneurs who received training before business had higher repayment rates than those who did not access the training. Accordingly, they concluded that business training had positive impact on loan repayment. This finding was also supported by Kuzilwa (2005) who while studying role of credit for small business success in Tanzania, and Stohmeyer (2007) in Germany found a positive relationship between business skills training and entrepreneur’s performance.

Finally the aspect of the association between loan repayment and follow-up can be linked to a study by Gine and Karlan (2009) who found that group lending led to group liability and improved monitoring of each other’s business activities and loan repayments. This in effect would minimize the risks of individual liability due group guarantee system and peer pressure. The groups ensured that all loans were repaid by all members before any subsequent loans could be advanced. However, this arrangement rather had negative impacts on business performance, which is outside the scope of our study.

In our study a number of the FIs sampled instituted loan follow-up mechanisms through a similar approach. Loans were advanced to individual youths who were members of certain loosely formed, but rather well organized groups (with constitutions and leadership structures). The groups were responsible for loan applicants vetting and appraisal. They organized bi-weekly meetings where among other issues, they collected loan repayment premiums on behalf of members. They reduced loan repayment transactions costs and ensured greater monitoring (an example is KREP Bank).
5.1 Conclusions

This study undertook to examine the factors affecting loan repayment performance among youths who are beneficiaries of the Youth Enterprise Development Fund, within the partner Financial Institutions on-lending component. The on-lending component is one of the credit provision channels, which was operationalized by the YEDF in 2007 after it was launched in 2006. The strategy was to enable the YEDF, which at that particular time in its establishment, lacked the necessary credit provision systems and infrastructure, to take advantage of the existing FIs local network and reach to avail the funds to the youth all over the country. This strategy was also used by YEDF in order to transfer credit risk to the contracted FIs by taking advantage of the FIs’ experience in financial management and credit work, to ensure that the loans performed to minimize the risk of default.

As has been stated elsewhere in the paper, the government of Kenya did not initiate the YEDF due to lack of adequate services like microcredit in the financial sector in Kenya. Rather it was due to the youths being considered unbankable and risky borrowers by financial service providers (commercial banks, MFIs and SACCOs). The loans from YEDF are therefore meant to assist the youths access subsidized funds for business start-ups and expansion, gain business experience and acquire creditworthiness through prompt loan repayment. These will therefore lead to employment creation to not only sort out the problem of youth unemployment but also provide a means of livelihood for the youths through income generation and poverty reduction.

The GoK has not only initiated the YEDF but also WEF, and of late the MSE Fund. All these are initiatives with very good intentions to reduce the bottlenecks in the access to financial services being experienced by the youth, women and small and micro enterprise operators, in the mainstream financial sector. The biggest challenge however, remains on the performance of these funds. Most of these funds although social, by nature are supposed to be revolving. The funds are also supposed to be sustainable after a certain
level of capitalization by the exchequer. The most common way to achieve all these expectations is to that the loans perform. From the study, we present empirical findings and recommendations that in our view will ensue this is met.

Our study discovered that majority of loans were given out to male youths. The study went further to determine that there was a positive correlation between loan repayment performance (default) and sex (male youths). As such, the FIs should strive to balance loan disbursement between the two genders in order to realize increased loan repayment performance/reduce loan default.

The study employed probit regression from which we discover that age of a youth, nature of business in which a loan is invested and loan type were not statistically significant in determining the probability of loan repayment performance (default). This revelation means that FIs disbursing loans to the youths (18-35 years) need not focus so much on age, as it is an already predetermined variable. Whether one falls within the lower (18 -26) or upper (27 -35) brackets should not really affect credit appraisal. Regarding the finding on the nature of business (whether subsistence or commercial), loan type (initial or refinance), we recommend business training, and proper follow-up to ensure necessary business advisory and support services are availed to overcome any eminent challenges.

Furthermore, the study particular discovered that business training and follow-up, stage of business at funding and loan amount are statistically significant in determining loan repayment performance. These factors were also discovered to be negatively related with loan default. This means that FIs should disburse smaller loans to business, which are getting started by the youths. They should in addition provide proper training in business management skills and consistently provide adequate follow-up, to not only ensure loan recovery but also business growth.

5.2 Policy recommendations

From the above, we present the following as a combination of recommendations for policy consideration. We call on policy makers to ensure these factors become an integral part f
the management and administration of government-subsidized microfinance services geared towards youths economic empowerment.

That in order for the government initiatives like YEDF, WEF and MSE Fund to expect maximum loan repayment performance, sustainability of the funds and economic empowerment of the target beneficiaries, the following should hold:

\[
\text{Good loan repayment Performance} = \text{Provision of essential business training} + \text{Provision of smaller loans for business start-ups} + \text{Balancing the gender of beneficiaries} + \text{Execution of adequate business follow-up}
\]

Finally, this study also set out to find out why youths clients to MFIs classified as SACCOs and NGOs had numerous cases of nonperforming loans as compared to those under MFIs and commercial banks. We discovered that this was because the SACCOs and NGOs do not provide business training and lack proper follow-up mechanism. This can be explained by their structures. Typically, majority of these FIs suffer from organizations, administrative, structural and financial challenges and constraints. This explains their lack of input in providing systemized training and loan/business follow-up as effectively done by MFIs and commercial banks.

We therefore recommend that these government funds should put in place proper institutional assessment mechanisms to help appraise prospective partner FIs before they are recruited to implement on-lending contracts. This institutional assessment framework should entail an examination of credit policies of bidding FIs to ensure they will have clear provisions for business training and clear loan follow-up of funded businesses.

5.3 Limitations of the study and areas of further research

The study relied upon secondary data gathered by YEDF partner FIs from their youth clients. This limited the scope of the study by constraining the model variables. Primary data collection would have allowed the study to examine other vital variables like level of education, incomes from other economic activities and even business performance.

We recommend that further research should be conducted to; a) examine the relationship between youth loan repayment performance and business performance, b) analyze of loan
repayment performance among organized youth groups; c) determine factors loan diversion and finally; d) assess the socio economic impacts of government loans on the livelihood of the youths.
REFERENCES


