DETERMINANTS OF UPTAKE OF DIGITAL CREDIT BY THE YOUTH IN INSTITUTIONS OF HIGHER LEARNING IN KISUMU, KENYA

BY

MISIGA ONDIEK GIDEON

A RESEARCH DISSERTATION SUBMITTED IN PARTIAL FULFILLMENT OF REQUIREMENTS FOR THE AWARD OF THE DEGREE OF MASTER OF SCIENCE IN DEVELOPMENT FINANCE OF KCA UNIVERSITY

AUGUST 2019

DECLARATION

I declare that this dissertation is my original work and has not been previously published or submitted elsewhere for the award of the degree of Master of Science Development Finance. I also declare that this dissertation contains no material written or published by other people except where due reference is made and the author duly acknowledged.

Gideon Misiga Ondiek Registration No: **KCA/08/02787**

Signed: _____ Date: _____

I do hereby confirm that I have examined the master's dissertation of Misiga Ondiek Gideon

And have approved it for examination.

Signed_____ Date_____

Dr. Micah Odhiambo Nyamita

Dissertation Supervisor

DEDICATION

This research project is dedicated to my dear wife Melania and children; Rainee Blesssing, Joy-Grace and Manuel Sol. I thank God for the Grace and His providence and my family for their encouragement and prayers during the days I stayed late and away from home. I also express my gratitude to nephew Wilbur and brother Gordon for their financial support. My supervisor for insights, a willing spirit and guidance, the KCA University academia for positive feedback, guidance and indepth interrogation of my work.

ABSTRACT

With the advent of Mpesa, Kenya is a hub for digital credit and for youth in Kenya Opesa, Tala, M-shwari, The Branch, Timiza are no strange names. This study sought to explore the determinants of uptake of digital credit by financial service providers and FinTech amongst the youth in in institutions of higher learning Kisumu, Kenya. The study sought to identify the major determinants of uptake of digital credit on college students in higher learning institutions; Technical Vocational Education and Training - TVETs and universities in Kisumu, Kenya. In terms of scope, the study focused on ages 18- 35 years, male and female at two (2) universities; KCA University and Maseno University, and two (2) TVETs- Kisumu National Polytechnic and Kenya Institute of Management (KIM). The study used both primary and secondary data through informal interviews, questionnaires, comprehensive desk review of bibliographic research and policy analyses. The study targeted a population of 18,700 youth with a sample of 377 students. The sample size was determined using a 20% approximation for the desired sample size for the study. The researcher personally administered the questionnaires and involved data clerks to reach more students. The actual sample size for this study was arrived at proportionately through the Krejcie & Morgan's method. The Statistical package for Social Scientist software (SPSS) was used to analyse the collected data. Both descriptive and inferential statistics were used in presentation of the results. The study findings were that government regulation and credit terms were most significant determinants of uptake of digital credit. Sensitization and social influence were also found to moderate uptake of digital credit. While the paper may not project the best model for digital lending, it's hoped that policy makers, development finance institutions, FinTech executives, investors, academia will draw more input for a broader inclusive digital credit.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

ACRONYMS AND ABBREVIATIONS

CBA - Commercial Bank of Africa

DFIs - Development Finance Institutions

FINTECH – Financial technology

FSD – Financial Sector Deepening

GDP – Gross Domestic Product

GPFI – Global Partnership for Financial Inclusion

ICT – Information Communication Technology

IMF – International Monetary Fund

KIM - Kenya Institute of Management

KIPPRA – Kenya Institute of Public Policy Research and Analysis

KNBS – Kenya National Bureau of Statistics

MNOs - Mobile Network Operators

MTN - Medium Term Plan

PwC – Price Waterhouse Coopers

SDG – Sustainable Development Goals

SPSS - Statistical package for Social Scientist

TVET - Technical Vocational Education and Training

TVETs- Technical Vocational Education and Training Institutions

UNCTAD - United Nations Conference on Trade and Development

UNDP – United Nations Development Programme

OPERATIONAL DEFINITION OF TERMS

Development: Refers to the process of developing or being developed towards attainment of higher standard of living for the people (Stewart, Yaworsky & Lamont, 2018).

Digital Credit: Is a service offered within mobile money products, it has three distinct key attributes of instant, automated, and remote (Chen and Mazer 2016). Digital finance product provides borrowers with quick, ready access to short-term loans but also enable financial service providers to reach the mass market at scale. Collection, assessment of customer credit worthiness including repayment of loans is done remotely through data mining. For the purpose of this study, digital money, mobile money and credit have been used interchangeably but the terms refer to same thing.

Financial inclusion: These is where the services such as credit, savings, payments and insurance are provided by the financial system to all individuals including young adults (GPFI, 2016).

Financial literacy: Is knowledge of and the handling of money matters (Kodongo, 2018).

Mobile Applications (Apps): Alludes to software developed specifically for utilization with a mobile phone (Barnes, 2008).

M-Shwari: A product developed jointly by Commercial Bank of Africa and Safaricom Limited in Kenya. It is a value-added mobile money service (VAS) offering micro lending, savings, allows moving money in and out savings account to M-PESA account. It is offered to M-PESA users only (Cook and McKay, 2015)

Policy & Legislation: Policy Refers in general to a purposive course of action that an individual or group consistently apply while legislation is the act or process of making or enacting laws (Malala, 2018).

CHAPTER ONE

INTRODUCTION

1.0 Introduction

This chapter gives the background of the study by exploring the key concepts of the study from a global, regional and local perspective. It goes on to discuss the statement of the problem, objectives of the study, research hypothesis, justification of the study and lastly the scope of the study.

1.1 Background of the Study

There has been dramatic changes in financial intermediation over the past three decades mainly because of evolution in technology resulting from developments in information technology, telecommunications as well as financial practice. Traditional banks played the main role in the sphere of finance. Rapid technological changes have however brought changes to the global economics leading to gradual shifts to the digital channels known as financial technology (Fintech) companies (Skan, Dickerson & Masood 2015). The market for digital credit is huge, this demand for alternative finance could not be fully covered by FinTech. Over a period of one year, global alternative finance industry had reached an estimated US$145 billion worth, which was grew to 264% from 2014-2015(KPMG, 2016). The process of payment through; mobile phones, transferring of money, credit, fundraising and management of assets is a type of financial services in the 21st century and is done through high tech devices. Digital credit is therefore among the key innovations by Fintech (Björkegren, & Grissen, 2018).

The use of mobile phones to take a loan and repay it digitally is referred to as digital credit. The fact that digital credit is instant, automated and remote, makes the digital loans to be differentiated from all other conventional loans (Chen and Mazer 2016). Financial education if

essential for young people when taught early as those that have the skills tend to manage their finances better than those who do not possess the skills as asserted by (Mazer and Rowan, 2016). Many studies conducted previously also showed that financial behaviors and financial education had a positive relationship (Borden *et al.*, 2008; Borden *et al.*, 2015, Hayhoe, Leach, and Allen, 2005; Lyons, 2008). Financial education can have such positive influence on financial behavior which can affect attitudes, perceived control, and subjective norm (Ndung'u, 2018). Literature and evidence available on microfinance and mobile banking, indicate that indeed innovative finance greatly contribute to financial inclusion. This is especially to the largely unbanked bottom of the pyramid population, and the eventual impact in semi urban and urban communities. The developing world needs to come up with ways in which they will embrace the valuable asset so that they can have the tools required to make their lives better. Economic development can also be fostered through extending high quality services and including digital credit (Stewart, Yaworsky & Lamont, 2018).

FinTech (financial technology) has been one phenomenon that has been the accelerator of pace of change in finance and technology where the status quo of the industry has changed according to PWC Global FinTech Report of 2016 (PWC Global, (2016). The advent of Mpesa in 2007 a mobile money platform by Safaricom Ltd in Kenya, was followed by a decade later, by an explosion and growth of FinTech companies. While other financial service providers(FSPs), fintech companies have been the key driver on development of digital loan applications(Apps). Digital lending for benefit of this study refer to loans that are disbursed and repaid typically over a mobile phone (PwC Global, 2016).

According to Chen and Mazer (2016), digital credit is differentiated from conventional loans by three key characteristics: digital credit is instant, remote and automated. The names; Tala, KCB-Mpesa, Opesa, Fuliza, the Branch, Equitel by Equity bank, M-Coop Cash, M-Akiba are not strange names in Kenya. They use the internet and mobile platforms to market there

products including among others short text messages(SMS), calls and print media. In Kenya, these names pop on internet enabled phones, targeting mostly the tech savvy populace. They are amongst a few financial technology companies that followed the launch of Mshwari by CBA Bank and Safaricom. Digital credit offer advantage of a convenient, fast and private option for borrowers. And policy makers, business leaders and scholars agree that revolution and disruption by FinTech brought a major shift in financial services and inclusion especially in Kenya. The use of mobile money services has brought benefits such as access to credit, payments services, reduced transactions time, reliable savings options and convenience (Malala, 2018).

The core components of models of digital lending (credit) are as follows (Accion, 2018); Online Lender where financial service providers (FSPs) that provide end-to-end digital credit products via a website or mobile application. Supply Chain Lender comprising of non-cash digital loans for specific asset financing, invoice financing, or pay-as-you-go asset purchase within a supply chain or distribution network. Marketplace Platforms that originate and match one borrower with many lenders for an origination fee; the lender and borrower then enter into a bilateral agreement. E-Commerce and Social Platforms, wherein credit is not their core business, but they leverage on digital distribution, strong brand, and rich customer data to offer credit products to their customer base.

Moreover, the Mobile Money Lender whereby lenders work in partnership with mobile network operators (MNOs) to offer mobile money loans to their customer base, leveraging mobile phone data for scoring. Tech-enabled Lender that comprise of traditional financial service providers (FSPs) that have digitized parts of the lending process, either in-house or through partnerships. P2P Lender, which are digital platforms that facilitate t provision of digital credit between many borrowers and lenders. They play an ongoing central role in the relationship between these parties.

Core Components of Digital Credit

Digital credit has three main components in it. They are; digital channels which involves the use of both the smart phones and Unstructured Supplementary Service Data (USSD)to reach all customers wherever they are for the to apply for credit, receive loans, get information on their accounts and make necessary payments (Stewart, Yaworsky & Lamont, 2018). This channel uses FSP to support the collection of information form the customers. The second channel is digitalized data which is used to evaluate clients. These are customer's bank statements, payment of bills, data records, their transactions and credit bureau information. This information is used to determine the ability of the customer to pay loans. The last one is the experience and engagement of customers. How the digital products is experienced by the customer is focused on. Digital credit players ensure that clients are offered convenient access, fast approval, personalized communication, effective products and fair pricing Stewart et lal,, 2018).

Digital Credit in Kenya

Following the introduction of M-Shwari in the year 2012, there has been an exponential and rapid growth in digital credit market in Kenya. M-Shwari attracted KSh 24 billion in deposits and disbursed KSh 7.8 billion in loans in just one year after launch. M-Shwari had a head start on the competition thanks to an exclusivity agreement between Safaricom and CBA that initially limited Safaricom's ability to offer competing lending services embedded on the M-Pesa platform (FSD Kenya, 2016a).

In 2014, several developments and new entrants significantly expanded the reach of digital credit in Kenya. First, smartphone penetration continued to grow, which increased the pool of potential customers for app-based lenders such as Tala, M-Coop Cash, and new entrant Branch, which launched in 2015. Second, the contractual agreement that restricted Safaricom's ability to partner with others beyond CBA expired in 2015. This allowed Kenya Commercial

Bank (KCB) to partner with Safaricom to launch KCB M-Pesa on the M-Pesa network. Third, Equity Bank introduced a mobile virtual network operator (MVNO) that runs on Airtel's network to offer a range of digital financial services, including a full mobile banking solution and a digital credit product called Eazzy Loans (FSD Kenya, 2016a).

In 2016, instability in Kenya's banking sector decreased many institutions' appetites for risk. Moreover, the Kenyan government introduced an interest rate cap for regulated lenders of 4 percentage points above the Central Bank rate, which has remained between 9 percent and 10 percent (for a total of about 13–14 percent interest) since the cap was re-instated. The cap narrowed the range of products on offer, effectively decreasing providers' interest in experimenting or taking risks (FSD Kenya, 2016a).

The advent of digital credit introduced complex regulatory questions, particularly those related to consumer protection and credit reporting. In Kenya, general consumer protection regulation applies to digital credit products offered by or with a regulated financial institution. The rules, however, do not apply to non-regulated digital credit products, including those from app-based and "over-the-top" lenders or from partnerships between MNOs and unregulated lenders. This results in an uneven playing field, where regulated and unregulated lenders operate under different rules. For regulated lenders, the rules in both countries require clear disclosures of all fees and charges associated with a digital loan. In Kenya, banks are further required to present standardized APRs for traditional credit products (to be listed on the website https://www.costof credit.co.ke/), but not for digital credit products (Bharadwaj, Jack & Suri. 2019).

Moreover, the country has credit reporting requirements. The first credit reference bureau (CRB) in Kenya was licensed in 2010. Since 2014, Central Bank of Kenya (CBK) has required regulated banks and MFIs in Kenya to report "full-file" credit histories, meaning positive as well as negative items. Enforcement has been inconsistent, however, and one of the largest lenders

initially reported only negative information, impeding other lenders from accurately assessing potential customers' risk profiles and narrowing borrowers' options. Furthermore, in Kenya, non-regulated lenders can report to CRBs with permission from their customers and approval by CBK, but they are not required to report to CRBs. Additionally, the interest rate cap in Kenya does not apply to non-regulated lenders, meaning that some digital lenders can charge substantially different rates than others, and as a result offer different types of loans (FSD Kenya, 2016a; Ndung'u, 2018).

Nairobi city and by extension Kenya is a hub for FinTech businesses. And tech giants have built strong strategic partnerships to do business in the lucrative market. With Safaricom Limited Mpesa leadership, the number of Fintech companies in Kenya have more than doubled in the last 4 years, this explain the fast uptake of digital credit services in most urban areas. A study on digital credit by Kaffenberger, Totolo and Soursourian, (2018), suggest that growth in the digital credit market is driven by a segment of active users, mainly under 35 years; who borrow on a frequent basis between weekly or monthly. The same study by Kaffenberger et al., (2018) also indicate over indebtedness as 35% of Kenyans had borrowed from more than one digital lender and 14 % had outstanding loans. Despite the numerous benefits of using mobile money services for transactions, a study by (Kaffenberger et al., (2018) point a possibility of negative outcomes on social and economic development among the youth, as repayment behaviors' indicate some respondents have to repay one loan with another; further the digital loans are short term and highly priced. Therefore, this study sought to identify the determinants of digital credit uptake amongst the youth in Kenya, particularly college students in Kisumu County.

Uptake of Digital Credit

The massive growth in the market for digital credit can be illustrated by the supply-side figures. The pioneer digital banking product in Kenya was M-Shwari provided by the Commercial Bank

of Africa (CBA). This product was taken up an estimated 2.6 million consumers in Kenya which translated to over 20 million loans during the first two years following its launch. The digital loan product saw a significant transformation in the banking sector with CBA shifting from a bank that mainly served corporate clients only to a bank that now served the mass market. This was followed by other banks experiencing such shifts in their market, for instance, in the year 2015 when Kenya Commercial Bank (KCB) launched KCB MPESA, the number of loans processed per year increased in manifold (FSD Kenya, 2016a; Hwang & Tellez, 2016).

Other developments in the digital credit scene was the entry of traders offering loans through mobile applications, such as Tala and Branch. The two apps have more than one million installs from Kenya's Google play store. According to press reports, since its launch, Tala has to date disbursed more than 5.6 million loans whose estimated net worth is approximately Ksh 28 billion. On the other hand, since its launch in 2015, Branch had expended approximately 1.5 million loans whose value was estimated at Ksh 3.63 billion to close to 350,000 customers (FSD Kenya, 2016a; Costa, Deb & Kubzansky, 2016).

A look at the demand-side reveals that the introduction of digital loans resulted in the filling of a significant gap in credit demand, unfulfilled previously by the existing formal lenders. Statistics show that, in the year 2009, in every 10 adults in possession of a phone, only one had ever utilized a loan obtained formally from either a bank or non-bank financial institution (NBFI). Additionally, statistics reveal that informal sources of credit, such as borrowing from friends, families, employers amongst others, were the most prevalent sources of loans since one in two adults were documented as having utilized these form of loans by the year 2009. However, this situation greatly changed following the emergence of digital credit products in the year 2013. By the year 2017**,** at least three in four adults who owned a phone has accessed and utilized a formally acquired loan, including a mobile loan (FSD Kenya, 2016a; Malala, 2018).

A further review of digital borrowers, who own a phone, by gender, location and age reveals that; females aged below 30 years have a higher likelihood (50%) of using digital compared to their counterparts aged above 30 years. Moreover, females in the rural regions and aged below 30 years have a higher likelihood (50%) of using digital credit compared to their male counterparts aged. The vice versa of this is reflected in the urban regions. The review further reveals that there are three key demographic groups of active borrowers that are double the size of the inactive borrowers; urban, males over the age of 30, urban, females under the age of 30 and rural, females over the age of 30. Rural, males under the age of 30 have the smallest share of active digital borrowers (9.2 active borrowers for every 10 inactive borrowers) across all demographic groups. The implication of this is that, male youths in the rural regions have either had, poor digital credit experiences, first loans mismanagement or find no value adding element in digital borrowing, in comparison to other groups (Owens, 2018).

According to Kenya Economic Survey report 2017, enrolment in 2016/17 in TVETs and universities stood at 202,556 and 546,507 respectively (KNBS, 2017). The number of bursary applicants and awardees according to Higher Education Loans Board (HELB) in public universities and TVET institutions in the same period stood at 15967 and 201,553(KNBS, 2017). While it can be inferred that not all students enrolled in colleges had a need for education loan, government partial funding was below 30 per cent. In Kenya, a number of students have taken to funding school need through Fuliza, Mkopa, Tala and other digital lenders (Kaffenberger et al., (2018).

Factors affecting Uptake of Digital Credit by Youths

Youth are considered riskier by most financial institutions hence most lenders allocate a very small proportion of loans to youth. Banks are reluctant to lend to youth because of lack of adequate collateral. This affects the supply of credit to youth. It is because of this that most youth do not qualify for conventional bank loans. Only a paltry 2% of the potential microfinance

client's access credit in the developing countries, getting only 1.4% of their potential credit needs. 70% of the world youth is said to be completely excluded from the banking systems which render their uptake of credit less than desirable. The unavailability of credit to youths limits their ability to engage in activities that generate income for them and this in turn highly limits their contribution to the country's gross domestic product (Ramachandar, 2009).

Youth in Kisumu County

Kisumu County is located in the western part of Kenya along the shores of Lake Victoria. The County is comprised of 952,645 inhabitants. The county is a heavily an agricultural zone, relying heavily on sugarcane and rice farming which in the recent days have taken a nose dive, with industries under receivership creating a complex situation and aggravating poverty levels, though the county has experienced growth in TVETs and university colleges. Currently, young people dominate the County's population with three quarters of the young population being below 30 years of age while 43.5% is below 15 years of age. The Kisumu CIDP (2018) identified the youth coupled with high levels of unemployment as a significant threat to the County's development. The report further observes that the implication of the current youth population is the continued growth of such trends in age in future (Kisumu CIPD report, 2018).

At the national level, youths have for a long time been acknowledged to be a potentially significant asset to the new system of governance due to their contribution towards the promotion of governance. However, this can only be achieved if the youths are able to organize and mobilize themselves so as to participate meaningfully in the governance function. This is in addition to leaders at both levels of government promoting the participation of youth in governance through creation of participatory environments (Innocent, 2010).

Financial freedom through digital credit can go along way in empowering the youths through enabling them to start up and engage in income generating activities. Digital credit is

therefore a product that has emerged at a timely point. Youth stakeholders now have the opportunity to guide the youths in terms of using the products to emancipate the youth from unemployment hence empowering them. Digital credit can therefore be utilized in the emergent and aggressive youth discourse aimed at reconfiguring the roles and responsibilities of the youth at both levels of government in Kenya.

1.2 Statement of the Problem

Digital loans created a wave of transformation in Kenya's credit market over the past five years. The possibility of obtaining a loan through the phone opened doors, for millions of adults, to acquiring private and formal credit. On the other hand, some characteristics of these emerging form of credit, for instance, marketing, pricing, regulation gaps, possible products misuse and extensive reporting of borrowers for failure of repayment, has led to growing concerns over the products design as well as the unpleasant effects they result on to consumers and the financial system at large (FSD Kenya, 2018).

There are a number of studies on digital credit and its impact on financial inclusion on women and youth (to Amato-McCoy, 2006; Zimmerman and Arnold, 2013; Kodongo, 2018; Malinga *et al.,* 2017; Chiumbo, 2013; Osikena, 2012; and Firpo, 2010). However, most of these were done in urban set ups and focused on effect of mobile money, especially access to credit for businesses and entrepreneurship for the unbanked bottom of the pyramid in Asia and some countries of Africa Kenya, Ghana, Uganda and South Africa but with minimal focus on education and college students. Research has pointed a lot of celebration and positive impact of digital credit and mobile money on businesses and entrepreneurship, however, there's is a gap and very little information on the effect on the present and future negative effect on the 1.3 billion youth, mostly in developing countries.

1.3 Objectives of the Study

The general purpose of this study was to investigate the determinants of uptake of digital credit by the youth in institutions of higher learning in Kisumu, Kenya.

Specific Objectives;

i. To assess how sensitization affect uptake of digital credit by the youths in institutions of higher learning in Kisumu, Kenya.

ii. To explore how social influence affect uptake of digital credit by the youths in institutions of higher learning in Kisumu, Kenya

iii. To investigate to what extent government regulation affect uptake of digital credit by the youths in institutions of higher learning in Kisumu, Kenya.

iv. To establish how credit terms of digital lenders affect uptake of digital credit by the youths in institutions of higher learning in Kisumu, Kenya.

1.4 Research Hypothesis

To attain the objectives of this study, the research tested the following null hypotheses.

H01: Sensitization has no significant effect on uptake of digital credit by the youth in institutions of higher learning in Kisumu, Kenya

H02: Social influence has no significant effect on uptake of digital credit by the youth in institutions of higher learning in Kisumu, Kenya

H03: Government regulations has no significant effect on uptake of digital credit by the youth in institutions of higher learning in Kisumu, Kenya and

H04: Credit terms of digital lenders has no significant effect on uptake of digital credit by the youth in institutions of higher learning in Kisumu, Kenya

1.5 Justification of the Study

The paper is hoped to supply academia, financial professionals, investors, development finance institutions (DFIs) and policy makers to have a deeper and better understanding of which areas of digital credit require further in-depth research for college going youth. It is also hoped that the findings of this study will help develop additional literature in the area of digital credit services in order to model long term and affordable credit to spur growth and impact social and economic development of youth towards attainment of Sustainable financial inclusion. In specific; Development finance institutions (DFIs), business leaders and investors- the DFIs and business leaders can further their research on how to leverage on FinTech platform, and collaborate with governments to have in place long term finance for impact in education of the youth. Also, for central and county governments and FinTech – the findings can benefit regulators and policy advisors in design and development of specific policies to regulate the digital credit and environment of fintech.

1.6 Scope of the Study

The study was limited to establishing the determinants of uptake of digital credit by the youths: a case of Kisumu, Kenya. The independent variables of the study were; Credit Terms, Sensitization, Government Regulation, Social Influence while the dependent variable was uptake of digital credit. The descriptive research design was used in studying of the research problem. The survey targeted 18,700 male and female students from one TVET- Kisumu National Polytechnic, KCA University, Maseno University- Kisumu campuses, and Kenya Institute of Management (KIM). Based on the Krejcie & Morgan's (1970) table for determining sample size, for a given target population of 18,700, a sample size of 377 was needed. The sample size of the study was therefore 377 respondents. The study used the mixed-methods approach consisting of a number of semi-structured interviews, existing literature, and questionnaires. The study was undertaken over a period of 10 months, from January 2019 to October 2019.

. CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter reviewed digital credit related literature to help and support its broad understanding. It outlined how the independent variables and the dependent variable are related based on the views of previous writers to support the study.

2.2 Theoretical Framework

This study was guided and grounded on the Unified Theory of Acceptance and Use of Technology (UTAUT) theory. The theory was validated and found appropriate in the innovation and adoption of new technology.

2.2.1 The Unified Theory of Acceptance and Use of Technology (UTAUT) within the context of digital credit.

Venkatesh *et al.,* (2003), postulated that Information systems or Information technology behavioural intention and behavior were determined by expectancy performance, expected efforts, influence of society and facilitated conditions as the four core constructs in the Unified theory. The use of gender, age, experience, and voluntariness are also moderates of core constructs effects according to the theory (Venkatesh *et al.,* 2003). Venkatesh *et al.,* (2003) developed and began this theory using reviews, maps and integration of other theories and models which include; vis-à-vis the Theory of Reasoned Action (TRA), Motivational Model (MM), the Technology Acceptance Model (TAM), the Motivational Model (MM), the Theory of Planned Behaviour (TPB), a combined Theory of Planned Behaviour/Technology Acceptance Model (C-TPB-TAM), the Model of PC Utilization (MPCU) and the Social Cognitive Theory(SCT), and the Innovation Diffusion Theory (IDT).

The academic field has used these theories successfully in a diverse number of previous studies of innovation adoption and diffusion in the information systems, marketing, management and social psychology among other disciplines. Mugambe(2017) expound that because, the Unified Theory of Acceptance and Use of Technology theory has validly been used to explain user intentions to adopt new technology and innovation and usage behavior in mobile money services procedures, the writer find the theory appropriate for the study as digital credit is one of the product offered by fintech. Another study by Tobbin (2011), argue that since the determinants of adoption in m-banking and m-payment environment are almost similar, and UTAUT was used in the study of M-banking and M-payment, it should be applicable to digital credit adoption study as well in explaining the influence of the perceived usefulness of technology in the uptake of digital credit by youth in institutions of higher learning in Kisumu County.

2.2.2 Loanable Funds Theory

The relationship that exists between loanable funds and interest rates is explained by the theory. It states that interest rated are determined by increase in demand for loanable funds, when demand increases the credit or interest rates also increase. The supply of loanable funds also relates positively to increase in interest rates. Interest rates are thus determined by demand for money and demand for borrowing. Demand of loanable funds makes the rate of interest rates to increases due to movement of borrowing. The main reason why funds are borrowed at high rates is due to businesses, consumers, governments and foreign borrowers. The loaning done by the banking system leads to the borrowers have a choice for funding (Mutezo, 2005). Supply increases due to increase in interest rates that are also caused by increase in demand.

Therefore, the demand and supply of loanable funds equates the increase in interest rates according to the loanable funds theory. Thus, if demand and supply for loanable funds fluctuates, then the rate of interest also fluctuates. Supply of loanable funds are equated by the demand for

loanable funds (Kimuyu, 2000). Both the borrowers and fund loaners make up the loanable funds market. The economy's monetary and financial conditions determine the short interest rates while long term interest rates are determined by these forces (Gorder, 2008). Specific interest rates balance the Demand for loanable funds and supply of loanable funds. This theory was relevant in explaining how credit terms of digital lenders affect uptake of digital credit by the youth.

2.2.3 Imperfect Information

The modern approach to the problems of microfinance, especially those which serve youth is based on the theoretical position which emphasizes imperfect information and imperfect enforcement of loan contracts. The two propositions are based on screening, incentive and enforcement problems. The screen is based on the inability of lenders to determine satisfactory the extent of inherent risk in projects submitted for credit. The incentive problem is the cost which lenders would have to incur to make certain that borrowers take steps to repay loans. Enforcement problems occur due to legal barriers for enforcement of repayment of loans, for example, the selling of collaterals (Hoff, 1990).

Deposit taking institutions in the formal financial sector use clients' deposits of whilst lenders operating in the informal sector use mainly their own funds to advance money to borrowers. In either case, transactions lead to repayment of principal and interest. If this does not happen, borrowers benefit at the expense of lenders (Hoff, 1990). High interest rates lead to adverse selection of borrowers and this ultimately affect loan repayment. It is widely noted by researchers that repayment rate will not be 100% at a high interest rate. Assuming project return is low, borrowing at 0% interest rate will not make borrowers capable of repaying the loan. Thus, a positive rate increases cost of production, reduces returns from a productive activity and promotes loan default among borrowers (Besley, 1995). This theory was relevant to the current

study as it was expected to assist in explaining how sensitization affect uptake of digital credit by the youths in Kisumu, Kenya.

2.2.4 Asymmetrical Information

This theory of credit market postulates asymmetry information as the cause of poor working of the financial market of developing economies. The asymmetrical information unleashes two outcomes, namely, adverse selection and moral hazards. The two main features of the model can be formulated as follows: lenders allocate money to projects which are risky and may not be bankable; and credit is given out at a cost which is equal to the opportunity cost of funds (Besley, 1995). Adverse selection can be explained as follows: it is assumed that borrowers of money know better the level of risks associated with their projects. The individual with a high risk project may succeed in getting credit at a high rate of interest. At this high rate of interest, an individual with less risky project may be refused credit because it will not make the business viable and threaten his/her loan repayment potential. If the interest rate is raised and the borrower with a higher risk is favored and defaults, this will threaten the capital base of the lender. Lenders who want to minimize risk will give their funds at a lower rather than higher rate of interest.

A realignment of the average quality of the lender's loan portfolio may mean that interest rate mechanism will not bring about market rate equilibrium; rather, rationing of access to credit at a lower interest rate will follow. If lenders do not maintain different loan portfolios, interest rates will raise further (Hoff, 1990). Moral hazard phenomenon is part of the problem of imperfect information concerning borrowers' actions. It is misapplication of borrowed funds that shifts the risk to the lender, especially if the project does not succeed. Borrowers may be tempted to divert borrowed funds to other projects with high risks, thereby reducing loan repayments possibility. Lenders may reduce to take action that will reduce loan repayments due to incentives and enforcement problems. If the moral hazards occur, solutions attributed by the model is credit

rationing (Hoff and Stiglitz, 1990). This theory was expected to assist in explaining how social influence affect uptake of digital credit by the youths in Kisumu, Kenya.

2.3 Empirical Review

This sections gave a review of previous studies undertaken in relation to the specific objectives of the study.

2.3.1 Sensitization and its Effect on Uptake of Digital Credit

According to Amato-McCoy, (2006), college students are a lucrative market for financial institutions and the data available confirm that the mobile money and digital credit players are pushing for a portion of this market as a source of brand-loyalty and immediate revenue. They use the versatility and broad access to internet and mobile telephony especially in Kenya and other countries in the world to achieve this goal. With an uptake above 90% mobile money according to FSD report (2017); among all phone owners irrespective of digital credit usage, there is a huge need for financial knowledge and use of credit among this group.

High debts come with psychological costs which may be difficult for young adults to manage as recorded by Norvilitis *et al.,* (2003); they include; high levels of stress and psychological well-being being decreased. During graduation, graduates may have stress over credit card debts and student loans accumulation which would overwhelm them due to lack of financial planning as suggested by Holub (2002).

Problems associated with managing their finances is greatly influenced by formal financial education according to Chen and Volpe, 1998; Doll, 2000; Pilcher and Haines, 2000; Varcoe *et al.,* 2001; Weston, 2001; Lyons, 2003; Lyons, 2004, Lyons, 2005) in their studies. Financial education if essential for young people when taught early as those that have the skills tend to manage their finances better than those who do not possess the skills (Varcoe *et al.,* 2005.

Those who offer education on finances and how they receive it matters to the students according to the studies.

Financial education if essential for young people when taught early as those that have the skills tend to manage their finances better than those who do not possess the skills as asserted by Lyons (2003). Many studies conducted previously also showed that financial behaviors and financial education had a positive relationship (Borden *et al.,* 2008; Borden *et al.,* 2015, Hayhoe, Leach, and Allen, 2005; Lyons, 2008). Financial education can have such positive influence on financial behavior which can affect attitudes, perceived control, and subjective norm.

This lack of experience coupled with aggressive marketing tactics of digital credit players and financial institutions may create vulnerabilities to group in terms of financial decision making, psychological costs and possibility of future high debt and promote savings culture (Zimmerman and Arnold, 2013). According to another study by Zimmerman and Arnold (2013) on "Five Obstacles to Mobile Money Innovations for Youth Financial Services" on an Indonesia-based Plan International's Youth Economic Empowerment project. The study on this project showed that besides youth participants receiving training and education at specialized training centers in life skills, reproductive health, basic financial and entrepreneurship, continuous use of short message services (SMS), with messages encouraging them on how to make savings every week in small bits. The messages that the participants received made them change their behavior in how they used money and how they made savings.

The study findings of Lyons & Hunt, (2003) on "The Credit Practices and Financial Education Needs of Community College Students" indicate that community college students prefer to receive financial education in one-on-one discussions small group settings and from financial aid officers on financial assistance and on how to become responsible credit consumers.

Birech (2013) did a study on the factors affecting loan utilization among youth in Nakuru County. This study focused on the effect of investment site on loan utilization and the effect of investment knowledge on loan utilization. The study target population was 83,102 youth. He used a sample size of 314. The study findings showed that there is a significant 19 correlation between entrepreneurial knowledge, investment site and uptake of credit by youth. The findings of Kodongo (2018) on "Emerging Markets Finance and Trade" found that low literacy may jeopardize financial inclusion efforts and recommended that Kenya should boost financial literacy efforts, relax customer identification requirements in specific instances, and stabilize macroeconomic environment to mitigate unintended adverse effects of macro-prudential regulations.

2.3.2 Social Influence and its Effect on Uptake of Digital Credit

Social influence is the extent to which consumers or users believe that friends and families should influence the use of a particular technology or idea. Studies by Singh et al, 2010; van Gelderen and Bik, 2016; Yu, 2012) to test the relationship between social influence and behavioral intention to use mobile money found social influence as a strong predictor for intention to use mobile banking. A study by Mugambe(2017) on Determinants of mobile money services adoption by traders in Uganda generally agreed that social influence is a driver of mobile money service adoption by traders in Uganda. Traders agreed they are more likely to adopt the service if their business associates influenced them to use it.

This finding is in line with the findings of Venkatesh *et al.,* (2003), with reference to the original UTAUT model, as well as being in agreement with the findings of Wang *et al.,* (2009) and Mbogo (2010), who found that consumer decision to adopt a payment system is significantly affected by the amount of the other consumers and traders using it. In another study by Omwansa (2012), poor peers adopted the mobile money because a poor person adopted. The relationship between social influences and the intention to use mobile money services for trade transactions

was strongly positive. The effect is explained by mobile money services adoption by traders being influenced by business partners important to the traders, business associates encouraging traders to use it for trade transactions, and traders' business rivals forcing them to use it for business transactions.

2.3.3 Government Regulation and its Effect on Uptake of Digital Credit

A study by Malinga *et al.,* (2017), on "Determinants of mobile money services adoption by traders in Uganda" found that traders in Uganda agree that legal issues is a driver to the behavioural intention to adopt mobile money services for trade transactions. The study findings of Malinga *et al.,* (2017) also agree with the findings of Chiumbo (2013), Osikena(2012) and Firpo (2010) who observed that other barriers to consumer adoption of mobile money services are regulation and regulatory framework for mobile money services, risk of money laundering and fraud. The findings are also in line with the assertion by Gutierrez and Choi (2014), Lonergan *et al.,* (2009) and Shinyekwa (2013) that there is no legislation governing mobile money services in Uganda. However, the above authors emphasized on the need for strong legislation and regulatory framework to protect interests of customers, the financial institutions and the mobile network operators-MNOs.

Besides, The Central Bank of Kenya's role in regulating activities of financial institutions, the regulator has not kept pace with the ever changing environment of FinTech; FinTech activities are always and often disruptive and way far ahead of regulations. However, Credit Reference Bureaus (CRBs) have also played a big role in complementing Central bank role, by helping lenders make faster and more accurate credit decisions as they collect, manage and disseminate customer information to lenders. Whether fintech companies submit and access this information from CRB for decision making is another question in Kenya. Most fintech companies use robo-intelligence to assess customer credit worthiness. Credit Reference Bureau Regulations operationalized in 2008 also allow borrowers to take their credit history from one

financial institution to another, thereby making lending markets more competitive, more affordable besides enabling businesses reduce risk and fraud.

The digital lenders may face a challenge having the right information as most youth could be accessing these mobile based services using their parent's credentials. In Kenya to own a mobile phone and a registered SIM by which the applications can run, one must be over 18 years old and owning a National Identity Card(ID), most youth who do not have the IDs must do with their parents' IDs to access the digital services. Persons in Kenya under the age of 18 years are considered minors.

In another study "the impact of credit reference bureaus on credit performance of Kenyan banks"(Dalal, 2018), respondents indicated that the presence of credit reference enable financial institutions to obtain credit information on the prospective borrowers therefore facilitating the evaluation of credit requests and minimizing the risks of credit default. The findings of this study revealed information from credit bureaus reduce the borrowing cost by forcing creditors to be more competitive for good borrowers (Dalal, 2018)

2.3.4 Credit Terms (Fees, Interest rate and Loan size) and its effect on adoption of digital credit

Zimmerman *et al.,* (2015), recognizes that transparency and disclosure on issues fees and interest charges are critical areas of concern in digital credit/finance. This allows borrowers to understand their obligations to enable them to make informed decisions when taking out a loan. Digital credit model compares more with microcredit only that digital add the convenience of use of mobile phone at the touch of a button.

A study by Mcloughlin (2013), on 'Impact of microcredit interest rates on the poor" provides evidence that microcredit can help poor people cope with economic shocks but has acknowledged the negative implications of high interest loans. To repay the short term loans

with high interest rates of between 25%- 40% may require borrowers to effectively rely on an increase in their income. Failure of clients to increase income mean default on loans, possibility of falling into indebtedness and inability to invest and grow savings. The short repayment period of M-Shwari is one of the limitations in having people adopt its use. A delay by one month mean one has to pay double their interest, for example from 7.5% for the first month to 15% for the extra month. Borrowers who borrowed because of crises, faced a challenge recovering and at the same time having to pay double interest.

The study by Kaffenberger *et al.,* (2018) "Insights from Borrowers in Kenya and Tanzania"; Tanzania borrowers' experienced poor transparency on loan fees and terms, while 1/5 (fifth) reported same in Kenya. While respondents in the Kaffenberger *et al.,* (2018) study reported not to understand how fees was charged on the credit advanced, a number of other respondents reported that lenders unexpectedly withdrew money from account without an explanation raising disclosure challenge. In another study by Mirzoyants & Attfield (2015), majority of respondents were in agreement that perceived low cost loans was a great benefit and main reason why they preferred Mshwari to other lenders. Carlson(2017) concluded that besides the presence of credit reporting bureaus, a robust credit information sharing system among lenders for both positive and negative reports may root out defaults and multiple lending.

The M-shwari report, 2015, states that on the size of loans, the clients who were advanced credit or funds from M-Shwari (n=52), indicated that the amount they borrowed was not enough according to their needs, this made them not satisfied and reported to be very unsatisfied with the funds which they were able to access as credit. This was due to the M-Shwari's nature of offering low credit limits and giving short periods of payment. The customers indicated that M-Shwari was only a management tool for money where there are short-term ups and cash flows which are down. Most people with immediate needs and urgency of money

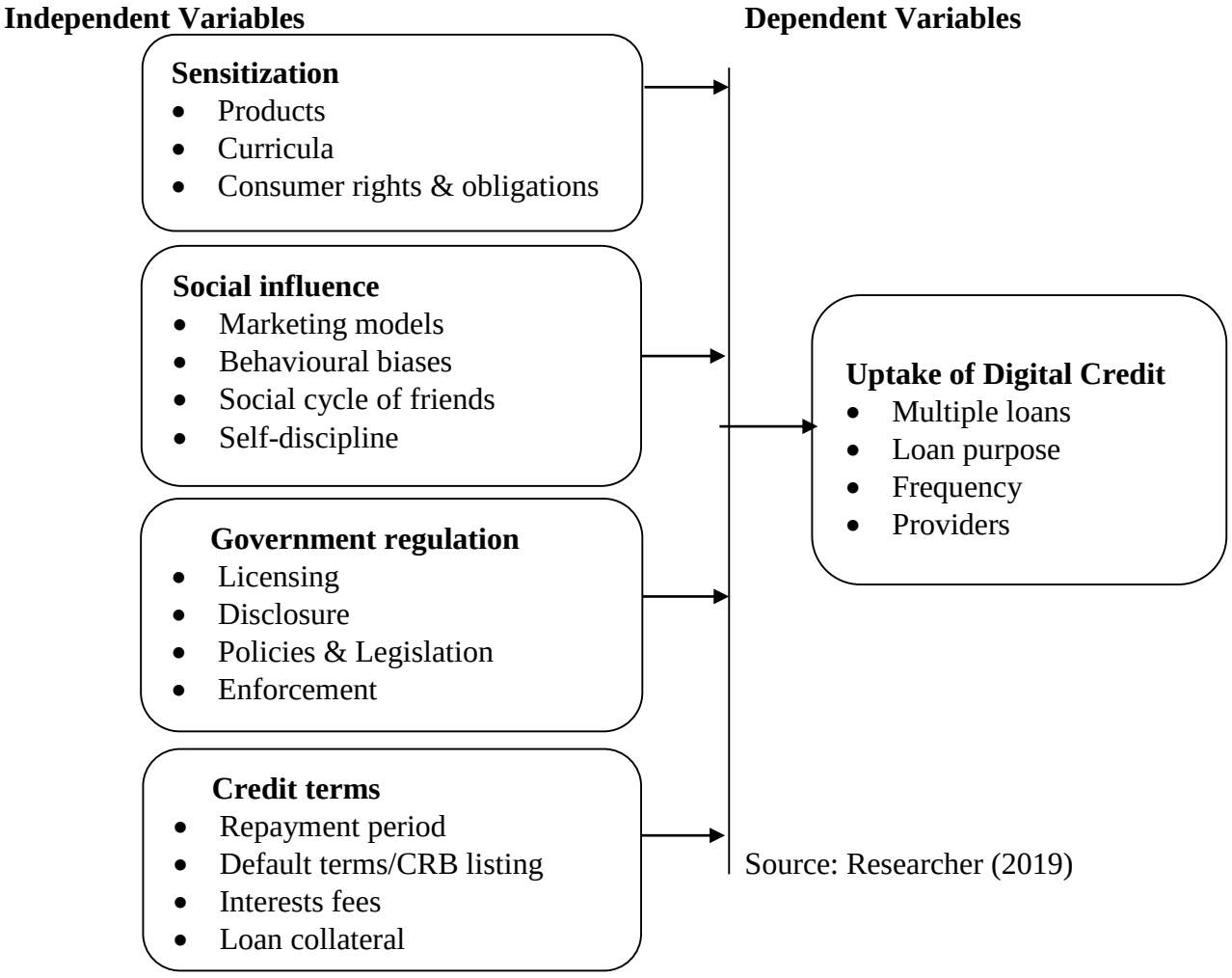
sometimes are limited to borrowing from M-Shwari due to their nature of offering low credit limits and giving short periods of payment according to the M-Shwari report (2015).

2.4 Conceptual Framework

The Figure 2.1 shows the conceptual framework that has major variables and their influence on each other. How the independent and dependent variables are related is clarified in the Conceptual framework. It shows how the meaningful relationships are provided clearly (Cargan, 2017). A report on the investigation is provided where the specific research question is used and presented linking it to the problem statement. In this research, the researcher intended to find out the determinants of uptake of digital credit by the youths in institutions of higher learning in Kisumu, Kenya.

FIGURE 2.1

Conceptual Framework



Source: Researcher (2019)

2.5 Operationalization of Variables

The table 2.1 below shows how different variable indicators were measured which assist in data analysis**.**

TABLE 2.1

Operationalization of Variables

Variable Type	Variable	Measurement Scale	Data Collection Method	Method s of Analysis
				● Descriptive statistics (frequencies, percent, means and Std deviation) ● Regression ● Content analysis
Independent	Sensitization	Nominal & Ordinal scale	Survey	
Independent	Social Influence	Nominal & Ordinal scale	Survey	● Descriptive statistics (frequencies, percent, means and Std deviation) ● Regression ● Content analysis
Independent	Government regulation	Nominal & Ordinal scale	Survey	● Descriptive statistics (frequencies, percent, means and Std deviation) ● Regression ● Content analysis
Independent	Credit terms	Nominal & Ordinal scale	Survey	● Descriptive statistics (frequencies, percent, means and Std deviation) ● Regression ● Content analysis
Dependent	Uptake of Credit	Ordinal scale	Survey	● Descriptive statistics (means and Std deviation) ● Regression ● Content analysis

Source: Researcher (2019)

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The methodology that the study used in carrying out the study is presented in this chapter. The data sources, type, population targeted and methods used in sampling and selection of sample size and the techniques used were described. The collection and analysis of data was also described. How the gathering and processing of information is done is given in the methodology that suits the study (Kothari, 2004).

3.2 Research Design

The descriptive research design was used in studying of the research problem. The phenomenon's what, where and how are used in the concern of a descriptive study as per Saunders *et al*., (2007). Descriptive statistics is methods of collecting, organizing, summarizing, characterization, and presenting data in an informative way (Lind *et al.*, 2005). It involved data collection and analysis in order to describe a phenomenon in its current condition. It enabled the researcher to collect data from respondents, summarize and analyze current information in a simpler way to get deeper understanding and nature of how the independent variables affect the adoption and use of digital credit.

3.3 Target Population

Population target is described, according to Rayan, 2008; Welman & Kruger, (2005); is the hypothetical set of people, events or objects which the researcher tends to use as his/her population to generalize the results of the study. Patton & Michael (1990) define population as an entire set of relevant unit of analysis or data. The survey targeted male and female students under 35 years from one TVET- Kisumu National Polytechnic, KCA University, Maseno

University- Kisumu campuses, and Kenya Institute of Management (KIM). The survey for this study was unrestricted, self-selected survey but only open to bonafide registered students of all ages, though this remained an assumption. The survey was voluntary and any student could participate but within the design, so long as they attend TVETs, colleges and universities mentioned above. Hence, as highlighted in table 3.1, the target population of the study were made up of the estimated 18,700 registered students of the targeted universities and TVETs in Kisumu County (Kisumu County Education Commission, 2017)

TABLE 3.1

Target Population

Institution	**Population**
Kisumu National Polytechnic	8,000
KCA University- Kisumu campus	2,700
Maseno University- Kisumu campus	5,000
Kenya Institute of Management (KIM)	3,000
Total	**18,700**

Source; Kisumu County Education Commission (2017)

3.4 Sampling and Sampling Procedure

The unit of sampling, frame, procedures and the size are described as the study's sample. The selected sample from the initial population is what is described as a sampling frame (Orodho & Kombo, 2002). According to Sakaran (2000), sample sizes that are more than 30 but fewer than 500 offer an appropriate size for undertaking most research studies. Based on the Krejcie & Morgan's (1970) table for determining sample size, for a given target population of 18,700, a sample size of 377 was needed. The sample size of 377 recommended by Krejcie & Morgan (1970) is found to be sufficient and effective for this study after being subjected to Cohen's

(1988) Statistical power analysis. This method is pre-determined scientifically, and thus convenient for the population under consideration. The actual sample size was then arrived at proportionately as presented in the sample size table below.

TABLE 3.2

Sample Size

Institution	Population	%	Sample
Kisumu National Polytechnic	8,000	43	162
KCA University- Kisumu campus	2,700	14	53
Maseno University- Kisumu campus	5,000	27	102
Kenya Institute of Management (KIM)	3,000	16	60
Total	**18,700**		**377**

Source: Researcher (2019)

3.5 Research Instrument

The study used the mixed-methods approach consisting of a number of semi-structured interviews, existing literature, and questionnaires. Survey questions are built upon findings from literature review and will be modified to suit the study needs. The survey targeted college students even those running small business or employed. The survey instrument was divided into two sections.

The questionnaire was short and precise but had different sections, in the first section, the survey participants were asked to answer some questions on demographic data, such as gender, age, current residence; years in college. The second section may include, status whether dependent or independent, monthly income, source of financial information; type of mobile phone owned; savings value, credit amount accessed, source of finance, name of digital lender/s,

whys of borrowing, interest rates paid, number of borrowings, method of repayment, duration of payment. The respondents were also asked qualitative questions on quality of service by digital lenders and challenges of digital credit.

3.6 Validity and Reliability of the Instrument

This section described how the research instrument was tested for validity and reliability;

3.6.1 Validity

The research results' inference meaningfulness and accuracy is termed as validity by (Borg and Gall, 2003). Validity is further assured by the fact that the research variables are chosen in such a manner that the explanatory variables which were deemed to have the largest impact on the response variable are investigated. The researcher first tested whether the design of questions are logical, clear and easy to be understood, whether exhaustive and the duration to complete the questionnaire. The pre-test on 37 respondents who were not be part of the sample, allowed the researcher to check on whether the variables collected could easily be processed and analyzed. The pilot study was undertaken in Nairobi County. According to Connelly (2008), previous literature recommends that the pilot study should comprise of a population size of 10% of the actual sample size. Any questions found to be interpreted differently during the pre-testing were refined and re-phrased so they could have the same meaning to all respondents and also improve the questionnaires before actual data collection. Moreover, to ensure validity of the research instrument, the researcher took into account the opinions of expert raters and his research supervisor.

3.6.2 Reliability

Reliability is the dependability or trustworthiness of the research instrument (Malinga *et al.*, 2017). Simply, it is the degree to which the instrument consistently measure whatever it is measuring in a study (Amin, 2005). Furthermore, reliability of a research instrument measures

its internal consistency, meaning that if the same instrument is administered to two or more independent groups of respondents of the same population, the results measuring the constructs will be similar (Churchill, 1979). In order to determine the reliability of the collected data, Cronbach's Alpha Coefficient was calculated.

3.7 Data Collection Procedure

The researcher engaged 3 research assistants to assist in data collection. The drop and pick later approach was used for questionnaires. Questionnaires were distributed to the respondents and then picked within 7 days' period. The choice of questionnaire as an instrument for the study was due to its practicability and applicability to the research problem and the size of the population. However, the researcher also carried indepth interviews with a small group of the target group. Questionnaires according to Mugenda and Mugenda, (2003), are also cost effective and gives adequate time to the respondent to fill in and return to the researcher.

Though, online survey online questionnaire was rich with the youth and allowed for greater responses it was perceived as a scam thus the drop and pick questionnaire and a few one on one survey were done. For ethical considerations, it was made explicitly clear during the interviews and in the questionnaires that participation is voluntary, was anonymous and confidential to the extent of the study. In addition, a consent form was added to the survey before the first section.

3.8 Data Analysis

The researcher performed a verification of collected questionnaires, examine and ensure they were dully filled. Data entry, data editing, coding was done. Also, to ensure consistency, the researcher verified and performed data cleaning to check the data collected by various tools. The study employed both qualitative and quantitative methods of analysis. Qualitative data obtained from secondary sources was analyzed thematically and presented in prose form. On the other

hand, quantitative analysis was applied for the data collected through questionnaires while qualitative method of analysis was applied for data collected via one on one interviews. Statistical package for Social Science (SPSS 21) computer software was used to analyze data. The researcher applied simple descriptive statistics that included frequency distribution, mean, standard deviation and percentages to interpret results and while inferential statistics were used to explain the relationship between the dependent variable and independent variables.

Uptake of digital credit is the dependent variable which was explained by the following independent variables: sensitization, social influence, government regulation and credit terms.

The model was as below;

$Y= \beta 0 + \beta 1X1 + \beta 2X2 + \beta 3X3 + \beta 4X4 + \varepsilon$

Where: Y = Uptake of Digital Credit

$\beta 0$ = Constant

Term; $\beta 0$, $\beta 1$, $\beta 2$, $\beta 3$, $\beta 4$ = Beta

Coefficient; X1 = Sensitization

X2 = Social Influence

X3 = Government regulation

X4 = Credit terms

ε = Error Term

3.9 Diagnostic Tests

3.9.1 Normality Test

Normality tests determine if a data set is well-modelled by a normal distribution and how likely it is for a random variable underlying the data set to be normally distributed. To check the normality, the Shapiro Wilk test was used.

3.9.2 Multicollinearity Test

Multicollinearity refers to a situation in which there is a strong correlation between independent variables in a study. Multicollinearity occurs when independent variables in a regression model are correlated. This correlation is a problem because independent variables should be independent. If the degree of correlation between variables is high enough, it can cause problems when fitting the model and interpret the results. This test was employed in the study using Variance Inflation Factor (VIF). If there was no collinearity between two independent variables the VIF was expected to be 1. As the variance of an estimator increases, also collinearity increases. A rule of thumb is that if VIF > 10 then multicollinearity is relatively high (Gujarati, 2003).

3.9.3 Heteroscedasticity Test

Heteroscedasticity is a condition that occurs when the variance of the error term is not constant. This test will be employed in the study using Breush-Pagan test using p-value. If the p-value is less than a significance level of 0.05 we conclude heteroscedasticity is present and reject the null hypothesis that the variance of the residuals is constant (Gujarati, 2003)

CHAPTER FOUR

DATA ANALYSIS, RESULTS AND DISCUSSIONS

4.1 Introduction

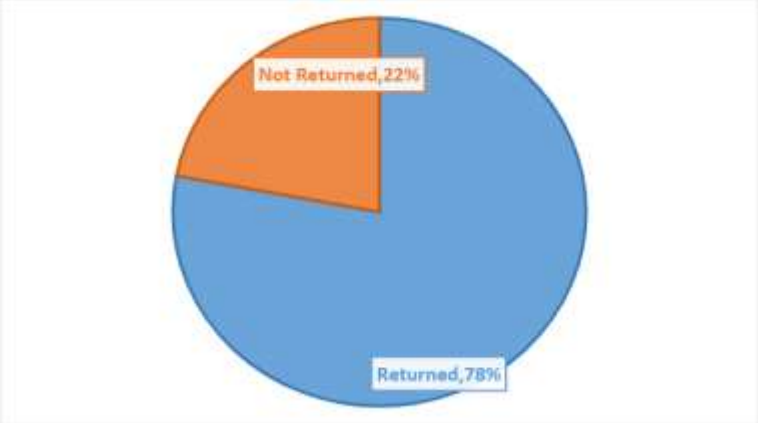
The chapter presents the analysis part of the study. The analysis is based on the research objectives which are tackled according to the analysis techniques designed in the methodology. Data collected was analyzed and the findings are as presented in this chapter inform of tables, figures and narration or discussion of the results.

4.2 Response Rate

The figure 4.1 gives the response rate obtained in the research. It shows that, out of the 377 questionnaires sent to the field, 294 were returned which were correctly field and relevant information provided. This represented 78% of the targeted respondents to the study which is considerably excellent response giving a good representation of the study population. For generalization, Mugenda & Mugenda (2013), consider 50% good and over 70% excellent response

FIGURE 4.1:

Response Rate



Source: Researcher (2019)

4.3 Reliability of the Study

The data collected from pilot study was used to compute the reliability of the instruments. Cronbach's coefficient alpha method was used to determine internal consistency of the items. Items were considered reliable if they yielded a reliability coefficient of 0.70 and above. This figure is considered desirable for consistency levels. Based on the findings presented in table 4.1 below, all the items were consistent and gave reliable data as all the Cronbach's alpha coefficients were greater(>0.70) than 0.70.

TABLE 4.1

Reliability Analysis

Category	**Alpha Value**	**No of Items**	
Sensitization	0.862	10	Accepted
Social Influence	0.938	4	Accepted
Government Regulation	0.734	4	Accepted
Credit Terms	0.709	8	Accepted
Uptake of Digital Credit	0.709	3	Accepted
Average	**0.790**	**6**	

Source: Researcher (2019)

4.4 Descriptive Statistics

Descriptive statistics was used to explain the descriptive characteristics of the studied items (factors) measuring the variables. The findings are then presented in form of tables as given in the following subsections.

4.4.1 Background Information of the Respondents

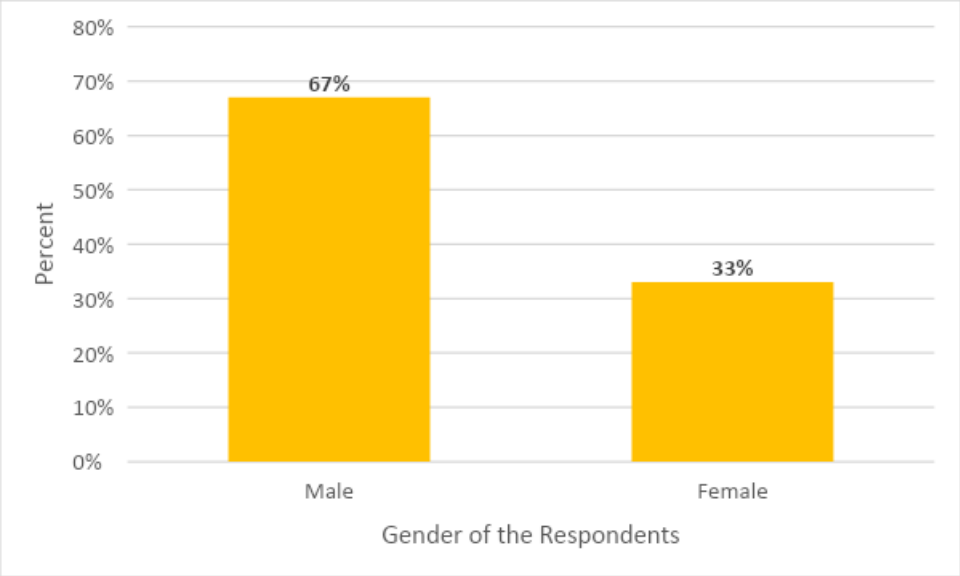
This section presents the results on the background of the youths who responded to the study. It gives the gender, age and education level of the respondents.

4.4.1.1 Gender of the Respondents

The study received most of the information from male youths. This is according to the findings presented in figure 4.2 which shows that majority (67%, n=197) of the respondents were male while the female respondents were 97 representing 33% of the respondents. This illustrates that, mostly the male youths attending TVETs, colleges and universities in Kisumu were accessed to participate in this study.

FIGURE 4.2

Gender of the Respondents



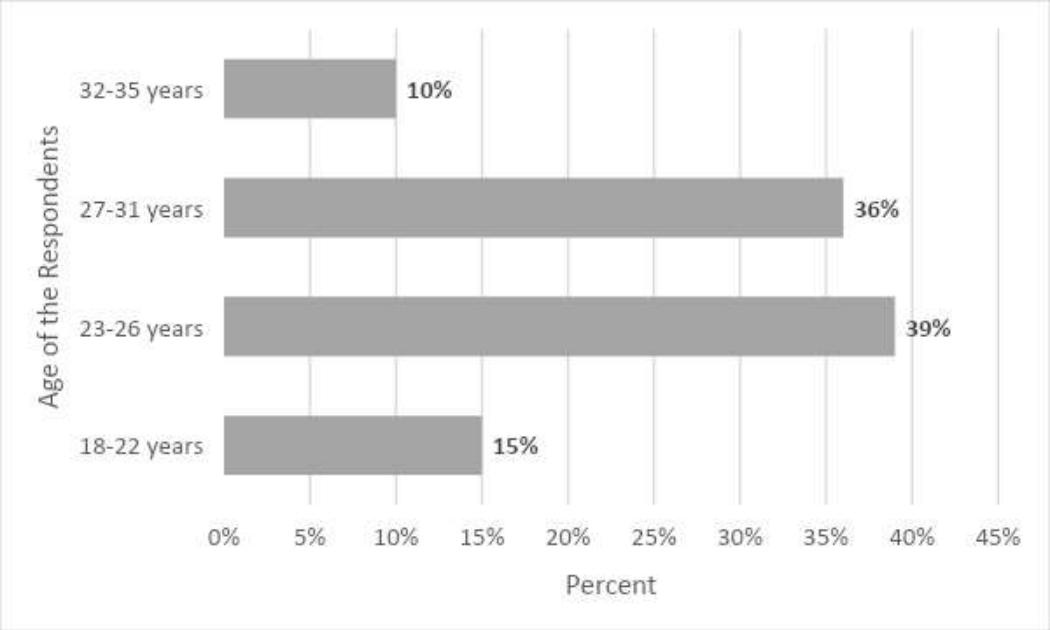
Source: Researcher (2019)

4.4.1.2 Age of the Respondents

From the table, it is clear that, the youth age groups were all represented in the study where most of them were aged 23-26 years. This group had 115 respondents making 39% of the respondents. 106 (36%) respondents were aged 27-31 years, 44(15%) were aged 18-22 years and the least were the respondents in the age group 32-35 years which had 44 respondents representing 10% of the total respondents.

FIGURE 4.3

Age of the Respondents



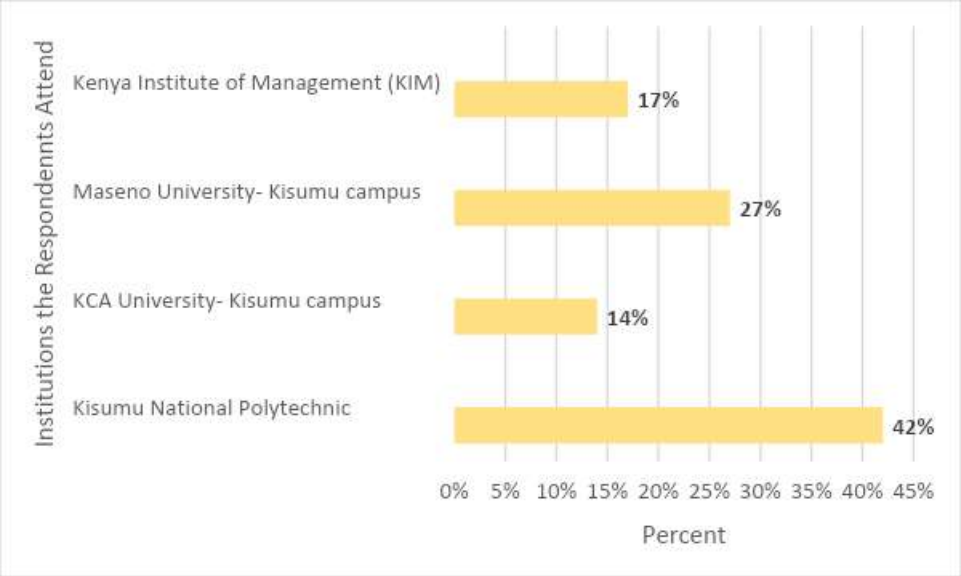
Source: Researcher (2019)

4.4.1.3 Institutions Respondents Attend

According to the study results presented in the figure 4.4 on the institutions the respondents attend, most (42%, 124) of the respondents were respondents from Kisumu National Polytechnic. The KCA University- Kisumu campus respondents were 42 (14%), Maseno University- Kisumu campus respondents were 78 (28%) and those from Kenya Institute of Management (KIM) were 50 representing 17% of the respondents. This shows that all the respondents were from the targeted population hence enhancing the reliability of the study.

FIGURE 4.4

Institutions Respondents Attend



Source: Researcher (2019)

4.5 The Determinants Affect the Uptake of Digital Credit by the Youth

This section presents the extent to which to the determinants affect the uptake of digital credit by the youth in Kisumu, Kenya. The findings are presented in form of means and standard deviations which were obtained based on the Likert scale response obtained. The means are based on the scale 0-1.5 for strongly disagree, 1.6-2.5 for Disagree, 2.6-3.5 for neutral, 3.6-4.5 for agree and mean value above 4.6 for strongly agree.

TABLE 4.2

Sensitization and its Effect on Uptake of Digital Credit

	Mean	**Std. Deviation**
I am aware that some financial products and services may be informal and unregulated	3.041	1.379
I am aware that financial services providers have a duty to treat customers fairly and to ensure information is clear and transparent	3.068	1.330
I am aware of the different digital means of delivering financial products and services	3.126	1.231
I am aware of loan products offered	3.146	1.668

I am aware of the procedures to get credits	3.194	1.324
I have knowledge of consumer rights and obligations in the digital world	3.235	1.243
I pay particular attention when using certain digital financial services for personal purposes or for raising business funding. For example some blockchain-based technologies such as cryptocurrencies, initial coin offerings.	3.478	1.187
I am aware of the lending institutions in our locality	3.497	1.031
I am aware of loan products offered	3.500	1.057
I understand the repercussions of digitally signing a contract and accepting the terms and conditions of a lender	3.503	1.156
Composite Mean	**3.279**	**1.261**

Source: Researcher (2019)

The table illustrates that the factors of sensitization that moderately enhance the youths' uptake of the digital credit based on the mean score values were; the respondents understand the repercussions of signing a contract and accepting the terms and conditions digitally of a lender. his is according to the mean response obtained (3.503) which falls in the interval of 2.6-3.5. This was followed by their awareness of loan products offered which generated a mean score of 3.500. They are aware of the lending institutions in their locality which generated a mean score of 3.497. The respondents were keen and paid attention when using certain digital financial services for personal purposes or raising business funding, for example, some blockchain-based technologies such as cryptocurrencies, initial coin offerings; which generated a mean score of 3.478. They have knowledge of consumer rights and obligations in the digital world which generated a mean score of 3.235. They are aware of the procedures to get credits which generated a mean score of 3.194. They are aware of loan products offered which generated a mean score of 3.146. They are aware of the different digital means of delivering financial products and services which generated a mean score of 3.126. They were aware that financial services providers have a duty to treat clientele in a fair manner and ensure information clarity and transparency, which generated a mean score of 3.068. Lastly, they are also aware that some financial products and services may be unregulated and informal, this generated a mean score of 3.041.

The findings imply that in general, sensitization moderately affected uptake of digital credit by youths in Kisumu County. This was depicted by the responses that the youths' awareness of; the characteristics of the products offered by the digital credit lenders as well as their channels of delivery, their rights as consumers of the products and the level of attention given when using particular digital credit products. The moderate level of influence depicted by the factor of sensitization is viewed by the study as a cause of concern since sufficient information on a product is essential in enabling consumers to make sound decisions. In light of this, the study proposes formulation and implementation of measures to ensure that the digital credit lenders and consumer rights actors enhance the level of knowledge about the digital credit products. The expected results of such sensitization efforts are better decision making with regard to uptake of loans, for instance, the youths would be more aware of the implications of multiple borrowing, advantages and disadvantages of a borrowing culture, spending discipline, fairness of the interest rates they pay against the loans. Cunningham (2000) and Nellie (2002) argue that, youth and young adults most times begin their college careers without ever having been solely responsible for their own personal finances. This lack of experience coupled with aggressive marketing tactics of digital credit players and financial institutions may create vulnerabilities to group in terms of financial decision making, psychological costs and possibility of future high debt.

TABLE 4.3

Social Influence and its Effect on Uptake of Digital Credit

Social Influence	**Mean**	**Std. Deviation**
I am aware that marketing and simplified online lending processes can increase the temptation to access credit without considering the consequences	3.347	1.056
I am aware that simplified marketing and online lending processes play on well-known behavioral biases	3.356	1.214
I understand the importance of seeking to manage these temptations from marketing and simplified online lending processes	3.469	1.216
The temptation to access digital credit is mostly influenced by my	3.573	0.955

social cycle of friends in college		
Composite Mean	**3.436**	**1.110**

Source: Researcher (2019)

According to the findings in the table above, that the factors of social influence were found to moderately enhance the youths uptake of the digital credit based on the composite mean score value of 3.436. The results for the individual statements were; the temptation to access digital credit is mostly influenced by my social cycle of friends in college mean response obtained (3.573) . Coming in next was that respondents understand why it is important to seek to manage these temptations from simplified online lending marketing and processes which generated a mean score of 3.469. They are aware that simplified online lending and marketing processes play on well-known behavioural biases which generated a mean score of 3.356. They are aware that these online lending processes can also increase the temptation to access loans without giving consideration to its consequences which generated a mean score of 3.347.

These findings depict that the factor of social circle had the greatest influence on the uptake of digital credit by the youths in Kisumu. The findings concur with those by a study by Malinga *et al.,* (2017) on Determinants of mobile money services adoption by traders in Uganda generally agreed that social influence is a driver of mobile money service adoption by traders in Uganda. Traders agreed they are more likely to adopt the service if their business associates influenced them to use it. Furthermore, the respondents' knowledge of the tactics used by the digital credit lending companies to propel the element of social influence amongst the youths was found to below.

TABLE 4.4

Government Regulation and its Effect on Uptake of Digital Credit

Government Regulation	**Mean**	**Std. Deviation**
I understand my responsibility to read and check my understanding of product information and disclosure documents including those provided electronically	3.622	0.972

I keep abreast with new digital developments in finance and follow them on a regular basis	3.697	0.935
I know where to check, when possible, that a digital financial service provider is authorized by the relevant national financial authorities.	3.752	0.848
I understand that default to repay a loan may result in listing of my name with Credit Reference Bureau	3.799	0.918
Composite Mean	**3.718**	**0.919**

Source: Researcher (2019)

The findings in the table 4.4 indicates that, the respondents agreed that the factors of government regulation that enhance the youths uptake of the digital credit based on the composite mean score value of 3.718. With regard to the specific statements, most of the respondents understand that default to repay a loan may result in listing of my name with Credit Reference Bureau(CRB) as given by the mean response of 3.799. Also, respondents know where to seek referral and check, that a digital financial service provider is authorized by relevant national financial regulatory authorities as given by the mean response of 3.752. They keep abreast of new digital developments in finance and follow them closely and on a regular basis as given by the mean response of 3.697. They understand their responsibility to read and check their understanding of product information and disclosure documents, even when provided electronically as given by the mean response of 3.622.

The research paper also point to government regulation as a significant determinant of uptake of digital credit. Respondents agree that they understand the repercussion of default, but also agree they took multiple loans. Though this research did not ask the question on whether the respondents defaulted and to what extent in cumulative dollar value the question is whether the robo-advice technology information was shared with the government regulators, for example, the Central Bank of Kenya and the CRBs. Are all the digital players duly licensed and do they file specific reports on loan performance. There is pointer to a gap in policy or laxity to enforce the rules if they exist.

It is important to note and understand that governments can be bureaucratic, so much that the government regulation agencies cannot keep pace with the speed at which FinTech and digital credit players model their products. However, researchers and policy makers can collaborate with IT firms, taking into account data privacy requirements to develop generate data to facilitate decision making by the regulators. Big data and internet of things can be expensive in the short run but support long term economic growth and development of a country.

Further, an indication by recent statements by Central Bank of Kenya governor that some FinTech companies operate like shylocks is should worry the policy makers. It may mean some FinTech do not operate within the confines of the financial requirements or there's an infiltration by illegal FinTech players. Regulation may prove a challenge as some of the players operate virtually within and without the country boundaries and as such may require multi government and agency approach to ensure proper regulation to monitor digital credit players. Regulation should to a large extent target illegal digital lenders and marketing and advertising trends.

Similarly, Lonergan *et al.,* (2009) and Shinyekwa (2013) also assert that there is no legislation governing mobile money services in Uganda. However, the above authors emphasized on the need for strong legislation and regulatory framework to protect interests of customers, the financial institutions and the mobile network operators-MNOs. However, the findings contradict those by Dalal (2018) that the impact of credit reference bureaus on credit performance of Kenyan banks", respondents indicated that the presence of credit reference enable financial institutions to obtain credit information on the prospective borrowers therefore facilitating the evaluation of credit requests and minimizing the risks of credit default. The findings of this study revealed information from credit bureaus reduce the borrowing cost by forcing creditors to be more competitive for good borrowers (Dalal, 2018)

TABLE 4.5

Credit Terms and its Effect on Uptake of Digital Credit

Credit Terms of Digital Lenders	Mean	Std. Deviation
Collateral required is sufficient for me	3.282	1.144
I do not fear taking loans because of the penalty in case of default	3.660	0.949
Interest charged on loans is fair	3.684	0.984
Amount loaned is sufficient to meet my project/college needs	3.687	0.845
Repayment period is fair to qualify for the amount of loan I need.	3.701	0.959
Absence of the requirement to produce financial reports affect my loan qualification	3.714	0.920
Grace period for loan repayments is favourable	3.738	0.848
I do not have to belong to a group to qualify for a loan	3.846	0.895
Composite Mean	**3.664**	**0.943**

Source: Researcher (2019)

Based on the findings in the table above, that most of the respondents agreed that the factors of credit terms were found to enhance the youths' uptake of the digital credit based on the composite mean score value of 3.664. The results for the individual statements were; they do not have to belong to a group to qualify for a loan as depicted by the mean response of (3.846). This was followed by the grace period for loan repayments is favourable which generated a mean score of 3.738. Absence of the requirement to produce financial reports affect my loan qualification which generated a mean score of 3.714. Repayment period is fair to qualify for the amount of loan they need generated a mean score of 3.701. Amount loaned is sufficient to meet their project/college needs generated a mean score of 3.687. The interest charged on loans is fair generated a mean score of 3.684. They do not fear taking loans because of the penalty in case of default generated a mean score of 3.660. Collateral required is sufficient for them generated a mean score of 3.282.

The findings imply that credit terms as a significant determinants of uptake of digital. Digital credit loans are instant and convenient. The conventional filing of paper work and proving

capability of repaying debt is no longer a requirement. Leveraging on IT, FinTech and other financial institutions that offer digital credit employ robo-advice technology, mining data and running algorithms to develop automated portfolio allocation, credit score and investment decisions specific to individual clients. However, even with these technology respondents significantly agree that they successfully applied for multiple digital credit from different digital credit, probably using the same SIM card or different SIM cards.

That the youth prefer to take frequent multiple digital nano loans is a pointer to economic vulnerability. With reports from a few research showing default in loan servicing, multiple concurrent loans could mean an over- indebted group. Also, most college students do not have a stable and consistent income stream and rely on friends and relatives hand- outs. While it is true that digital credit and micro loans have broadened financial inclusion in Kenya and many parts of the world, the pace and speed at which fintech and digital credit players disburse short term with high interest rates is alarming.

The marketing strategies of the digital players employed on the social media also create a wrong impression that interest charged on digital credit is cheap, however, going by a few literature reports, the cost of defaulting a loan could be more than double the initial interest rate. Sub Saharan Africa and Kenya has a young generation, Kenyan youth population is about 60% and to consider 1 out of 3 in loan default point to a third of a population whose savings and asset base is zero or so minimal to support any economic growth. Any earned income will go to servicing multiple debts. The result could be a group that is financially excluded.

These findings agree with the findings by Zimmerman *et al.*, (2015), who recognize that transparency and disclosure on issues fees and interest charges are critical areas of concern in digital credit/finance. This allows borrowers to understand their obligations to enable them to make informed decisions when taking out a loan. Digital credit model compares more with microcredit only that digital add the convenience of use of mobile phone at the touch of a button.

On the other hand, Mcloughlin (2013), on Impact of microcredit interest rates on the poor provide evidence that microcredit can help poor people cope with economic shocks but has acknowledged the negative implications of high interest loans. To repay the short term loans with high interest rates of between 25%- 40% may require borrowers to effectively rely on an increase in their income.

TABLE 4.6

Uptake of Digital Credit

Uptake of Digital credit	**Mean**	**Std. Deviation**
I prefer taking loans from digital lenders (Mkopa, Tala etc) than banks or Saccos	3.514	1.014
I have taken more than 1 (one) loan from different digital lenders(Mkopa, Tala etc) for the last 1 year	3.364	1.261
I take digital credit from digital lenders to meet college needs	3.476	1.287
I sometimes take digital loans for my friends	3.543	1.166
Composite Mean	**3.474**	**1.182**

Source: Researcher (2019)

As per the findings in the table above, most of the respondents agreed that they had taken up digital credit based on the composite mean score value of 3.474. The results for the individual statements were; they take digital credit from digital lenders to meet college needs as shown by the mean response of (3.476). They have taken more than 1(one) loan from different digital lenders (Mkopa, Tala etc) for the last 1 year which generated a mean score of 3.364. They prefer taking loans from digital lenders (Mkopa, Tala etc) than banks or Saccos generated a mean score of 3.514.

The findings imply that indeed the youth in Kisumu County actively took up digital credit to meet their various needs, key among them being meeting their college needs. The youths even went to the extent of taking loans for their friends. Furthermore, the youths took up digital credit from more than one FinTech company hence a situation whereby the youths end up acquiring multiple loans.

4.6 Diagnostic Tests

Diagnostic tests are defined by the extent to which a test correctly indicates the true presence or absence. The data was subjected to normality, Linearity, multicollinearity and homoscedasticity tests and the results were as follows:

4.6.1 Normality test

A normality test is used to determine whether sample data has been drawn from a normally distributed population. It is a symmetric distribution where most of the observations cluster around the central peak and the probabilities for values further away from the mean taper off equally in both directions.

To check the normality for the current study, the Shapiro-Wilk and the Kolmogorov-Smirnov[b] tests were used. The null hypothesis was that there was no normal distribution amongst the residuals. Based on the Kolmogorov-Smirnov[b] tests, the test accepts the null hypothesis of normality when the P value is less than or equal to 0.05. This implies that, at 95% confidence the data does not fit the normal distribution. On the other hand, based on the Shapiro-Wilk tests, the test accepts the null hypothesis of normality the the P (sig) value is less than or equal to 0.05

TABLE 4.7

Tests of Normality

	Credit Terms	**Kolmogorov-Smirnov[b]**			**Shapiro-Wilk**		
		Statistic	**df**	**Sig.**	**Statistic**	**df**	**Sig.**
Uptake	3	.440	99	.000	.626	99	.000
	4	.415	177	.000	.634	177	.000
	5	.414	9	.000	.617	9	.000

a. Uptake is constant when Credit Terms = 2. It has been omitted.
b. Lilliefors Significance Correction

Source: Researcher (2019)

4.6.2 Linearity

Linearity mean the correlation variables which is represented by a straight line. Linearity as a diagnostic test aim to determine whether the relationship between independent variables and the dependent variables is linear or not. The null hypothesis was that there was no linear relationship between the independent variables and the dependent variables. If the value sig, deviation from linearity >0.05 then the relationship between the independent and dependent variables are linear. If the Value sig. deviation from linearity <0, 05 then the relationship between independent variables with the dependent variable is non linear.

TABLE 4.8

Linearity

			Sum of Squares	**df**	**Mean Square**	**F**	**Sig.**
Uptake * Government Regulation	Between Groups	(Combined)	22.307	14	1.593	15.816	.000
		Linearity	6.931	1	6.931	68.793	.000
		Deviation from Linearity	15.377	13	1.183	11.740	.000
	Within Groups		28.109	279	.101		
	Total		50.416	293			
			Sum of Squares	**df**	**Mean Square**	**F**	**Sig.**
Uptake * Social Influence	Between Groups	(Combined)	18.986	12	1.582	14.146	.000
		Linearity	6.742	1	6.742	60.277	.000
		Deviation from Linearity	12.244	11	1.113	9.952	.000
	Within Groups		31.430	281	.112		
	Total		50.416	293			
			Sum of Squares	**df**	**Mean Square**	**F**	**Sig.**
Uptake * Sensitization	Between Groups	(Combined)	6.959	13	.535	3.449	.000
		Linearity	.916	1	.916	5.900	.016
		Deviation from Linearity	6.043	12	.504	3.244	.000
	Within Groups		43.457	280	.155		
	Total		50.416	293			
			Sum of Squares	**df**	**Mean Square**	**F**	**Sig.**
Uptake * Credit terms	Between Groups	(Combined)	36.041	3	12.014	242.366	.000
		Linearity	35.343	1	35.343	713.014	.000
		Deviation from	.698	2	.349	7.041	.001

	Linearity			
Within Groups		14.375	290	.050
Total		50.416	293	

Source: Researcher (2019)

4.6.3 Multicollinearity

Multicollinearity measure the correlation among the independent variables. This correlation is a problem because independent variables should be independent. Tolerance and VIF statistics were computed. Based on Pallant (2011), if the VIF value lies between 1-10, then there is no multicollinearity and if the VIF <1 or > 10, then there is multicollinearity. The null hypothesis was that there was no multicollinearity between the independent variables. The null hypothesis was accepted if the value of tolerance is less than 0.2 or 0.1 and, simultaneously, the value of VIF 10 and above and vice versa. (See table 4.9)

TABLE 4.9

Multicollinearity Coefficients

Model		Unstandardized Coefficients	Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.578	.147		3.942	.000		
	Government Regulation	.260	.033	.236	7.844	.000	.896	1.115
	Social Influence	.029	.019	.050	1.554	.121	.774	1.293
	Sensitization	.017	.031	.017	.546	.586	.826	1.210
	Credit terms	.545	.021	.784	25.702	.000	.875	1.143

a. Dependent Variable: Uptake

Source: Researcher (2019)

4.6.4 Heteroscedasticity

Heteroscedasticity means unequal scatter. In regression analysis, heteroscedasticity is in the context of the residuals or error term. Heteroscedasticity is a problem because ordinary least squares (OLS) regression assumes that all residuals are drawn from a population that has a constant variance (homoscedasticity). The glejser test was used to test for heteroscedasticity.

TABLE 4.10

Heteroscedasticity Test

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.918	.097		9.472	.000
Government Regulation	-.244	.022	-.570	-11.120	.000
Social Influence	-.010	.013	-.042	-.762	.447
Sensitization	.067	.021	.172	3.223	.001
Credit Terms	-.015	.014	-.056	-1.084	.279

a. Dependent Variable: Uptake of digital credit

Source: Researcher (2019)

4.7 Correlation

The association between the dependent and the independent variables of the study was tested with the use of correlation analysis. The correlation results are presented in table 4.11 below. In this study, the Pearson *r* statistic was used to calculate bivariate correlations. Values between 0 and 0.3 indicate no correlation, 0.3 and 0.5 a weak linear association, values between 0.5 and 0.7 indicate a moderate linear association and Values between 0.7 and 1.0 indicate a strong linear association.

TABLE 4.11:

Correlations

		Government Regulation	Social Influence	Sensitization	Uptake	Credit terms
Government Regulation	**Pearson Correlation**	1				
	Sig. (2-tailed)					
	N	294				
Social Influence	**Pearson Correlation**	.213**	1			
	Sig. (2-tailed)	.000				
	N	294	294			
Sensitization	**Pearson Correlation**	.278**	.348**	1		
	Sig. (2-tailed)	.000	.000			
	N	294	294	294		
Uptake	**Pearson Correlation**	.371**	.366**	.135*	1	
	Sig. (2-tailed)	.000	.000	.021		
	N	294	294	294	294	
Credit terms	**Pearson Correlation**	.152**	.330**	.044	.837**	1
	Sig. (2-tailed)	.009	.000	.454	.000	
	N	294	294	294	294	294

****. Correlation is significant at the 0.01 level (2-tailed).**
***. Correlation is significant at the 0.05 level (2-tailed).**

Source: Researcher (2019)

4.8 Overall Regression Analysis

To investigate the extent to which each of the independent variables (sensitization, social influence, government regulation and credit terms) affects the independent variable (uptake of digital credit) in the study, regression analysis was conducted which also answered the regression model proposed in the methodology. The results are then as presented in tables 4.15, 4.16 and 4.17 below.

TABLE 4.12

Regression Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.875[a]	.765	.762	.203

a. Predictors: (Constant), Credit Terms, Sensitization, Government Regulation, Social Influence

The model summary gives the coefficient of determination (R square) which is the measure of the extent to which the predictor variables influences the dependent variable. The R square value from the table is 0.875 which explains that, holding other variables constant, the Credit Terms, Sensitization, Government Regulation, Social Influence account for 87.5% of the variability in the amount of digital credits taken by the youths. Thus other variables which were not considered in this study would account for 13.5% of the variability in the amount of the credits taken by the youths. Thus, based on this, the model results are significant and reliable in explaining the influence of the predictor variables to the dependent variable.

TABLE 4.13

ANOVAa

Model		**Sum Squares**	**ofdf**	**Mean Square**	**F**	**Sig.**
1	Regression	38.559	4	9.640	234.947	.000[b]
	Residual	11.857	289	.041		
	Total	50.416	293			

a. Dependent Variable: Uptake of digital credit

b. Predictors: (Constant), Credit Terms, Sensitization, Government Regulation, Social Influence

Source: Researcher (2019)

The significance of the model was tested at 5% level of significance with a 2-tailed test. The significance value obtained was .000 which is a value below the critical coefficient at 5% level (0.000), thus the model is statistically significant in predicting the youth uptake of digital credit. The calculated F in the model is 234.947 with 293 degrees of freedom. This indicates that the calculated F value is greater than the F critical at 5% level of significance which is 2.3719 and therefore the overall model is statistically significant.

TABLE 4.14:

Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.578	.147		3.942	.000
Government Regulation	.260	.033	.236	7.844	.000
Social Influence	.029	.019	.050	1.554	.121
Sensitization	.017	.031	.017	.546	.586
Credit Terms	.545	.021	.784	25.702	.000

a. Dependent Variable: Uptake of digital Credit

Source: Researcher (2019)

The regression coefficients in the table answer the regression model;

$Y= \beta0 + \beta1X1 + \beta2X2 + \beta3X3 + \beta4X4 + \varepsilon$

Where: Y = Digital credit

$\beta0$ = Constant

Term; $\beta0$, $\beta1$, $\beta2$, $\beta3$, $\beta4$ = Beta

Coefficient; X1 = Sensitization,

X2 = Social Influence

X3 = Government regulation,

X4 = Credit terms

ε = Error Term

Based on the results, the regression model is;

$Y= 0.5780 + .017X1 + .029X2 + .260X3 + .545X4 + \varepsilon$

From the model developed, it is clear that, holding the predictor variables constant at zero (0), the digital credit uptake by the youths could be 0.578 which is the level to which the youths would take the credits without the influence of the predictor variables. Also, from the model,

given a unit increase in government regulations attached to the loans, the youth's digital credit uptake would have a positive result which would result to a 0.260 times increase. A unit change in the youths' social influence would result to a 0.029 times changes in their digital credit uptakes which is according to the coefficient in the model. The model as well illustrates that, a unit change in the youth's sensitization of the credit products would result to a 0.017 times changes in the digital credit uptake in the same direction. The model finally depicted that, a unit change in the credit terms of the digital credit products would result to a 0.545 times changes in the digital credit uptake in the same direction. These coefficients are also statistically significant as indicated by their significant values in the table which are all less than 0.025 critical value at a 2-tailed test at 5 percent level of significance. This therefore confirms that there exist a statistically significant relationship between the digital credit uptake by the youths and the credit terms, sensitization, government regulation and social influence offered by the lending institutions.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents a summary of areas of the study, a summary of research findings, conclusions, recommendations and recommendations for further study.

5.2 Summary

The purpose of this study was to investigate the determinants of uptake of digital credit by the youth in Kisumu, Kenya. The study targeted male and female students under age 35 years from one TVET- Kisumu National Polytechnic, two universities; KCA University, Maseno University- Kisumu campuses, and Kenya Institute of Management (KIM). Questionnaires were used as instruments for data collection.

To begin with, the study found out that the factors of sensitization that moderately enhance the youths' uptake of the digital credit based on the mean score values were; the respondents understand the implications of digitally signing a contract and accepting the terms and conditions of a financial service provider. This is according to the mean response obtained (3.503) which falls in the interval of 2.6-3.5. This was followed by their awareness of loan products offered which generated a mean score of 3.500. They are aware of the lending institutions in their locality which generated a mean score of 3.497. The respondents paid particular attention when using certain digital financial services for raising funds for business and or personal purposes. For example, blockchain-based technologies such as cryptocurrencies, initial coin offerings, which generated a mean score of 3.478. The respondents also have knowledge and information of consumer or client rights and obligations in the digital credit environment which generated a mean score of 3.235. There's awareness of the procedures to get credits which generated a mean score of 3.194. In addition, the respondents are aware of digital

credit products offered which generated a mean score of 3.146. They are aware of the different digital means of delivering financial products and services which generated a mean score of 3.126. They are aware that digital lenders or service providers have a duty to treat customers fairly and to ensure information is clear and transparent which generated a mean score of 3.068. Lastly, they are aware that some financial products and services may be informal and unregulated which generated a mean score of 3.041.In relation to the factors of social influence which were found to moderately enhance the youths uptake of the digital credit based on the composite mean score value of 3.436. The results for the individual statements were; the temptation to access digital credit is mostly influenced by my social cycle of friends in college, mean response obtained (3.573). Coming in next was they understand the importance of seeking to manage these temptations from marketing and simplified online lending processes which generated a mean score of 3.469. They are aware that marketing and simplified online lending processes play on well-known behavioral biases which generated a mean score of 3.356. They are aware that marketing and simplified online lending processes can increase the temptation to access credit without considering the consequences which generated a mean score of 3.347.

The study went on to reveal that the respondents agreed that the factors of government regulation that enhance the youths' uptake of the digital credit based on the composite mean score value of 3.718. With regard to the specific statements, most of the respondents understand that default to repay a loan may result in listing of my name with Credit Reference Bureau as given by the mean response of 3.799. Also, they recorded knowing where to check whenever possible, that a digital lender is authorized by the relevant national financial regulatory authorities as given by the mean response of 3.752. They keep abreast of new digital developments in finance and follow them closely and on a regular basis as given by the mean response of 3.697. They understand their responsibility to read and check their understanding of

product information and disclosure documents, even when provided electronically as given by the mean response of 3.622.

According to the study findings, the factors of credit terms were found to enhance the youths uptake of the digital credit based on the composite mean score value of 3.664. The results for the individual statements were; they do not have to belong to a group to qualify for a loan as depicted by the mean response of (3.846). This was followed by the grace period for loan repayments is favourable which generated a mean score of 3.738. Absence of the requirement to produce financial reports affect my loan qualification which generated a mean score of 3.714. Repayment period is fair to qualify for the amount of loan they need generated a mean score of 3.701. Amount loaned is sufficient to meet their project/college needs generated a mean score of 3.687. The interest charged on loans is fair generated a mean score of 3.684. They do not fear taking loans because of the penalty in case of default generated a mean score of 3.660. Collateral required is sufficient for them generated a mean score of 3.282.

Finally, the study found out that most of the respondents agreed that they had taken up digital credit based on the composite mean score value of 3.474. The results for the individual statements were; they take digital credit from digital lenders to meet college needs as shown by the mean response of (3.476). They have taken more than 1(one) loan from different digital lenders (The Branch, Tala etc) for the last 1 year which generated a mean score of 3.364. They prefer taking loans from digital lenders (The Branch, Tala etc) than banks or Saccos generated a mean score of 3.514. The regression model summary revealed that the R square value of 0.875 which explains that, holding other variables constant, the Credit Terms, Sensitization, Government Regulation, Social Influence account for 87.5% of the variability in the amount of digital credits taken by the youths.

It was also clear that, holding the predictor variables constant at zero (0), the digital credit uptake by the youths could be 0.578 which is the level to which the youths would take the credits

without the influence of the predictor variables. Also, from the model, given a unit increase in government regulations attached to the loans, the youth's digital credit uptake would have a positive result which would result to a 0.260 times increase. A unit change in the youths' social influence would result to a 0.029 times changes in their digital credit uptakes which is according to the coefficient in the model. The model as well illustrates that, a unit change in the youth's sensitization of the credit products would result to a 0.017 times changes in the digital credit uptake in the same direction. The model finally depicted that, a unit change in the credit terms of the digital credit products would result to a 0.545 times changes in the digital credit uptake in the same direction.

5.3 Conclusion

The regression coefficients confirmed that there was a statistically significant relationship between the digital credit uptake by the youths and the credit terms, sensitization, government regulation and social influence offered by the lending institutions. The study thus concluded that all the independent variables, government regulation, sensitization, social influence and credit terms were found to have a positive influence to uptake of digital credit by youth in Kisumu. Government regulation and credit terms were the most significant determinants of uptake of digital credit by the youth. Government regulation is a significant determinant of uptake of digital credit. Respondents agreed that they understand the repercussion of default, but also agreed they took multiple loans.

Though there was a moderate level of influence depicted by the factor of sensitization is viewed by the study as a cause of concern since sufficient information on a product is essential in enabling consumers to make sound decisions. Further, the study also concluded that the factor of social influence had on the overall low influence on the uptake of digital credit by the youths in Kisumu, however, the element of social cycle of friends to take digital loans was significant and high. The findings finally concluded that indeed the youth in Kisumu County actively took up

digital credit to meet their various needs, key among them being meeting their college needs. The youths even went to the extent of taking loans for their friends. Furthermore, the youths took up digital credit from more than one FinTech company hence a situation whereby the youths end up acquiring multiple loans. That the youth prefer to take frequent multiple digital loans is a pointer to economic vulnerability. With reports from a few research showing default in loan servicing, multiple concurrent loans could mean an over- indebted group. Also, most college students do not have a stable and consistent income stream and rely on friends and relatives hand- outs. While it is true that digital credit and micro loans have broadened financial inclusion in Kenya and many parts of the world, the pace and speed at which fintech and digital credit players disburse short term credit with high interest rates is alarming. The result could be a population that is financially excluded.

5.4 Recommendations for Future Research

It will be interesting for future research to provide analysis and trends in the next 5(five) years on digital loan performance on youth. A qualitative research on college students in the same period could identify the change in the social and economic development of the youth. Academic analysis on specifics on education performance in colleges and entrepreneurship may also be of interest.

Research on fidelity of robo-advice technology/algorithms. Leveraging on IT, FinTech and other financial institutions that offer digital credit employ robo-advice technology, mining data and running algorithms to develop automated portfolio allocation, credit score and investment decision making specific to individual clients. However, even with this technology, respondents significantly agree that they successfully applied for multiple digital credit from different digital credit, probably using the same SIM card or different SIM cards. Future research can delve on data quality and use.

Finally, research can also focus on the Real cost of digital loans. The marketing strategies of the digital players employed on the social media also create a wrong impression that interest charged on digital credit is cheap, however, going by a few literature reports, the cost of defaulting a loan could be more than double the initial interest rate. Sub Saharan Africa and Kenya has a young generation, Kenyan youth population is about 60% and to consider 1 out of 3 in loan default point to a third of a population whose savings and asset base is zero or so minimal to support any economic growth. It would be of interest how future earned income of youth will influence debts servicing.

5.5 Recommendations for practice

Based on the findings of the study, the following recommendations were made;

Government, Policy makers and Academia -The study proposes formulation and implementation of measures by policy makers to ensure that the digital credit lenders and consumer rights actors enhance the level of knowledge about the digital credit products. Academia and college administration should be deliberate to ensure students are sensitized on the policies and measures as part of a broader higher education curriculum. The expected results of such sensitization efforts are better decision making with regard to uptake of loans, for instance, the youths would be more aware of the implications of multiple borrowing, advantages and disadvantages of a borrowing culture, spending discipline, fairness of the interest rates they pay against the loans.

Central Bank of Kenya (CBK), Communication Authority of Kenya (CA)and the CRBs specific. Though this research did not ask the question on whether the respondents defaulted and to what extent in cumulative dollar value owing to sensitivity, the question is whether the robo-advice technology information on digital loan default, savings is shared with the government regulators, for example, the Central Bank of Kenya(CBK) and the CRBs. There is pointer to a gap in policy and or laxity to enforce the regulations if they exist. CBK and CA should ensure

all the digital players are duly licensed and file specific reports on loan performance and savings on youth.

Though governments are presumed to be bureaucratic, so much that the government regulatory agencies cannot keep pace with the speed at which FinTech and other digital credit players model their products. Researchers and policy makers can also collaborate with IT firms, taking into account data privacy requirements to develop and generate data to facilitate decision making by the regulators. Big data and internet of things can be expensive in the short run for government but can support long term economic growth and development of youth in an economy.

Further, an indication by recent statements by Central Bank of Kenya governor that some FinTech companies operate like shylocks should worry the policy makers. It may mean some FinTech do not operate within the confines of the financial requirements or there's an infiltration by illegal FinTech players. Though regulation may prove a challenge as some of the players operate virtually within and without the country boundaries and as such may require multi government and agency approach to ensure proper regulation to monitor digital credit players. Regulation should to a large extent target illegal digital lenders, marketing and advertising trends.

Lastly, for Development Finance Institutions, Investors and Fintech players; It is noteworthy, that a significant number of respondents reported use of digital loans to finance tuition needs. While the use is noble it shows a mismatch of long term needs and short term financing. Also, insufficient and volatile income levels by the youth cannot be financed by expensive short term credit and may require a change and modeling in digital finance. Most fintech players are financed by venture capitalists, who by nature would wish to recoup returns in the short run. Short term capital may also be a reason why the digital players charge high interest rates. Education sector is a key driver for social and economic development and

development finance institutions, for example, International Finance Corporation, African Development Bank, other development institutions could collaborate with local banks and fintech to develop long term products that target education in TVETS, universities and other institutions' of higher learning.

REFERENCES

Aron, J. (2017). *'Leapfrogging': A Survey of the Nature and Economic Implications of Mobile Money* (No. 2017-02). Centre for the Study of African Economies, University of Oxford.

Bharadwaj, P., Jack, W., & Suri, T. (2019). *Fintech and household resilience to shocks: Evidence from digital loans in Kenya* (No. w25604). National Bureau of Economic Research.

Björkegren, D., & Grissen, D. (2018, May). The potential of digital credit to bank the poor. In *AEA Papers and Proceedings* (Vol. 108, pp. 68-71).

Black, L. K., Khetan, S., Akwafo, E., Halmrast, N., Harris, C., & Oppenheimer, A. (2018). Digital Innovation, Generational Shifts, and the Transformation of Financial Services. *Chicago Fed Letter*.

Carayannis, E.G., Sindakis, S. & Walter, C. (2014). Business Model Innovation as Lever of Organizational Sustainability. *Journal of Technology Transfer*, 40(1), pp.85–104.

Carlson, S. (2017). Dynamic Incentives in Credit Markets: An Exploration of Repayment Decisions on Digital Credit in Africa. *Department of Economics*.

Casadesus-Masanell, R. & Ricart, J.E. (2011). How to design a winning business model. *Harvard Business Review*, 89(1–2).

CBK, K., & Kenya, F. S. D. (2016). The 2016 FinAccess Household Survey on financial inclusion.

Chesbrough, H. & Rosenbloom, R.S. (2002). The role of the business model in capturing value from innovation : evidence from Xerox Corporation's technology spin-off companies. Industrial and Corporate Change, 11(3), pp.529–555.

Chesbrough, H. (2007). Business model innovation: it's not just about technology anymore. Strategy & Leadership, 35(6), pp.12–17.

Chesbrough, H., 2010. Business model innovation: Opportunities and barriers. Long Range Planning, 43(2–3), pp.354–363.

Connelly, L. M. (2008). Pilot Studies. *Medsurg Nursing*, 17(6), 411-2. PMID: 19248407

Cook, T., & McKay, C. (2015). How M-Shwari works: The story so far. *Consultative group to assist the poor (CGAP) and financial sector deepening (FSD)*.

Costa, A., Deb, A., & Kubzansky, M. (2015). Big data, small credit: The digital revolution and its impact on emerging market consumers. *Innovations: Technology, Governance, Globalization*, *10*(3-4), 49-80.

Dalal, E. J. (2018). *The Impact of Credit Reference Bureaus on Credit Performance of Kenyan Banks* (Doctoral dissertation, United States International University-Africa).

Dennis, A. R., Venkatesh, V., & Ramesh, V. (2003). Adoption of collaboration technologies: Integrating technology acceptance and collaboration technology research. *Working Papers on Information Systems*, *3*(8), 3-8.

Fichman, R. G., Dos Santos, B. L., & Zheng, Z.E. (2014). Digital Innovation as a Fundamental and Powerful Concept in the Information Systems Curriculum. *MIS Quarterly: Management Information Systems*, 38(2), pp.329–353.

Fitzgerald, M. (2013). Embracing Digital Technology: A New Strategic Imperative. MIT Sloan *Management Review*, pp.1–12.

Foss, N.J. & Saebi, T. (2016). Fifteen Years of Research on Business Model Innovation: How Far Have We Come, and Where Should We Go? *Journal of Management*, XX(X), pp.1–28.

Gibson, A. (2016). FSD Kenya: Ten Years of a Market Systems Approach in the Kenyan Finance Market. *Nairobi: FSD Kenya*.

Gregory, R. (2016). Digital Transformation in the Automotive Industry Professional Development Workshop : Academy of Management 2016, Anaheim, CA Car Computing Evolution. , pp.1–27.

Gropp, C. (2010). Business Models for Green G reen Technologies in the Automotive Automo Industry, (August).

Gutierrez, E., & Choi, T. (2014). *Mobile money services development: the cases of the Republic of Korea and Uganda*. The World Bank.

Hanelt, A. (2015). Digital Transformation of Primarily Physical Industries – Exploring the Impact of Digital Trends on Business Models of Automobile Manufacturers. 12th International Conference on Wirtschaftsinformatik, pp.1313–1327.

Hwang, B. H., & Tellez, C. (2016). The proliferation of digital credit deployments.

Kaffenberger, M. (2018). Digital credit in Tanzania: Customer experiences and emerging risks.

Keen, P. & Williams, R. (2013). Value Architectures for Digital Business: Beyond the Business Model. *MIS Quarterly*, 37(2), pp.643–648.

Keil, M., Lee, H.K. & Deng, T. (2013). Understanding the most critical skills for managing IT projects: A Delphi study of IT project managers. Information and Management, 50(7), pp.398–414.

Kodongo, O. (2018). Financial regulations, financial literacy, and financial inclusion: Insights from Kenya. *Emerging Markets Finance and Trade*, *54*(12), 2851-2873.

Kortmann, S. & Piller, F. (2016). Open Business Models and Closed-Loop Value Chains. *California Management Review*, 58(3), pp.88–109.

Lucas Jr, H., Agarwal, R., Clemons, E. K., El Sawy, O. A., & Weber, B. (2013). Impactful research on transformational information technology: an opportunity to inform new audiences. *Mis Quarterly*, 371-382.

Lule, I., Omwansa, T. K., & Waema, T. M. (2012). Application of technology acceptance model (TAM) in m-banking adoption in Kenya. *International Journal of Computing & ICT Research*, *6*(1).

Lyons, A. C. (2005). Financial education and program evaluation: Challenges and potentials for financial professionals. *Journal of Personal Finance*, *4*(4), 56-68.

Lyons, A. C., & Hunt, J. (2003). The credit practices and financial education needs of community college students. *Journal of Financial Counseling and Planning*, *14*(2).

Lyons, A. C., & Hunt, J. (2003). The credit practices and financial education needs of community college students. *Journal of Financial Counseling and Planning*, *14*(2).

Magretta, J. (2002). Why business models matter. *Harvard Business Review*, 80(5), pp.86–87.

Malala, J. (2018). Consumer law and policy in Kenya. *Journal of consumer policy*, *41*(4), 355-371.

Mazer, R., & Rowan, P. (2016). Competition in mobile financial services: lessons from Kenya and Tanzania1. *The African Journal of Information and Communication*, *2016*(17), 39-59.

McGrath, R.G. (2010). Business models: A discovery driven approach. Long Range Planning, 43(2–3), pp.247–261. Available at: http://dx.doi.org/10.1016/j.lrp.2009.07.005.

Mcloughlin, C. (2013). Helpdesk Research Report: Impact of microcredit interest rates on the poor. *Governance and Social Development Resource Centre*.

McWaters, R. J., Bruno, G., Lee, A., & Blake, M. (2015). The Future of Financial Services-How disruptive innovations are reshaping the way financial services are structured, provisioned and consumed. In *World Economic Forum* (pp. 1-178).

Mezger, F. (2014). Toward a capability-based conceptualization of business model innovation: Insights from an explorative study. R and D Management, 44(5), pp.429–449.

Miklos, D. et al., 2015. Cutting Through the FinTech Noise: Markers of Success, Imperatives For Banks. McKinsey and Company, pp.1–18.

Mirzoyants-McKnight, A., & Attfield, W. (2015). Value-added financial services in Kenya: M-Shwari. InterMedia, Nairobi, Kenya.

Monitor Deloitte & University Lucern, (2016). Industrialisation, Unlocking the efficiency and agility of the Swiss Banking industry.

Mugenda, A. G. (2013). Qualitative research methods.

Mugambe, P. (2017). UTAUT model in explaining the adoption of mobile money usage by SMEs' customers in Uganda. Advances in Economics and Business, 5(3), 129-136.

Nan, W. V., & Markus, M. L. (2019, May). Is Inclusive Digital Innovation Inclusive? An Investigation of M-Shwari in Kenya. In *International Conference on Social Implications of Computers in Developing Countries* (pp. 460-471). Springer, Cham.

Ndung'u, N. S. (2018). Next Steps for the Digital Revolution in Africa: Inclusive Growth and Job Creation Lessons from Kenya.

Norvilitis, J. M., Szablicki, P. B., & Wilson, S. D. (2003). Factors influencing levels of credit-card debt in College Students 1. *Journal of applied social psychology*, *33*(5), 935-947.

Owens, J. (2018). Responsible Digital Credit.

Parasa, S., & Batten, L. M. (2016, October). Mobile Money in the Australasian Region-A Technical Security Perspective. In *International Conference on Applications and Techniques in Information Security* (pp. 154-162). Springer, Singapore.

Patton, M. Q. (1990). *Qualitative evaluation and research methods*. SAGE Publications, inc.

Paul Gubbins & Edoardo Totolo (2017) : Digital Credit In Kenya: Evidence from demand side surveys

PwC. (2016). PwC global fintech report: blurred lines: how fintech is shaping financial services.

Stewart, Yaworsky & Lamont (2018). Demystifying Digital Lending; How Digital Transformation Can Help Financial Service Providers Reach New Customers, Drive Engagement, and Promote Financial Inclusion

Totenhagen, C. J., Casper, D. M., Faber, K. M., Bosch, L. A., Wiggs, C. B., & Borden, L. M. (2015). Youth financial literacy: A review of key considerations and promising delivery methods. *Journal of Family and Economic Issues*, *36*(2), 167-191.

Totolo, E. (2018). The digital credit revolution in Kenya: an assessment of market demand, 5 years on.

Van Cooten, J., & Blythin-Hammond, J. (2017). The Development of FinTech in Nairobi: Contributions to Financial Inclusion and Barriers to Growth.

Varcoe, K., Martin, A., Devitto, Z., & Go, C. (2005). Using a financial education curriculum for teens. *Journal of Financial Counseling and Planning*, *16*(1).

Westerman, G., Bonnet, D. & Mcafee, A. (2014). The Nine Elements of Digital Transformation. *MIT Sloan Management Review*, January, pp.1–6.

Wirtz, B.W., Göttel, V. & Daiser, P. (2016). Business Model Innovation: Development, Concept and Future Research Directions. *Journal of Business Models*, 4(1), pp.1–28.

Zimmerman, J. M., & Arnold, J. (2013). Hope or hype? Five obstacles to mobile money innovations for youth financial services. *Innovations: Technology, Governance, Globalization*, *8*(1-2), 233-246.

Zimmerman, J. M., & Arnold, J. (2013). Hope or hype? Five obstacles to mobile money innovations for youth financial services. *Innovations: Technology, Governance, Globalization*, *8*(1-2), 233-246.

APPENDICES

Appendix I: Investment in FinTech, 2014-2016 BLN.US$ (KPMG, 2016).

REGION		2014	2015	2016
USA		14.1	27.4	13.5
Europe		. 12.0	. 10.9	. 2.2
Asia	.	. 3.3	. 8.4	. 8.6

Source: Accenture, 2015

In 2015, the total volume of investment in fintech in USA, Europe & Asia regions was $46.7 billion. In 2016 it fell to $24.3 billion, but this does not mean a decrease in interest towards this field of activity in general.

Appendix II: Questionnaire

My name is **Gideon Misiga Ondiek**, from **KCA University**, I am conducting a research on the determinants of uptake of digital credit by the youth in Kisumu county, Kenya. Please note that any information you give will be treated with confidentiality and at no instance will it be used for any other purpose other than for this project. Your assistance will be highly appreciated. I look forward to your prompt response.

Section A: General information

1. What is your Gender

   Male ☐

   Female ☐

2. What is your age bracket?

   ☐ 18-22 years ☐ 23-26 years

   ☐ 27-31 years ☐ 32-35 years

3. Institution respondent attends?

   Kisumu National Polytechnic ☐

   KCA University- Kisumu campus ☐

   Maseno University- Kisumu campus ☐

   Kenya Institute of Management (KIM) ☐

   None of the above ☐

Section B: The Determinants of and Uptake of Digital Credit by Youth in Kisumu, Kenya

4. Please indicate your degree of agreement (using a score ranging from 1-5) to the following sentences on the relationship between the factors of **Sensitization** and uptake of digital credit by the youths in Kisumu, Kenya.

Sensitization	**1**	**2**	**3**	**4**	**5**
1. I am aware of loan products offered					
2. I am aware of the different digital means of delivering financial products and services					
3. I am aware of the digital credit institutions in our locality					
4. I am aware of that all fintech and financial services providers MUST be duly licensed by the appropriate regulator					
5. I am aware that taking multiple loan/ over indebtness may affect my future access to financial services					
6. I have knowledge of consumer rights and obligations in the digital world					
7. I am aware that financial services providers have a duty to treat customers fairly and to ensure information is clear and transparent					
8. I understand the implications of digitally signing a contract and accepting the terms and conditions of a financial service provider					
9. I pay particular attention to my ability to repay loans before putting a request					
10. I am aware and consistently save to access digital credit					

5. Please indicate your degree of agreement (using a score ranging from 1-5) to the following sentences on the relationship between the factor of **Social Influence** and uptake of digital credit by the youths in Kisumu, Kenya.

Social Influence	**1**	**2**	**3**	**4**	**5**
I am aware that marketing and simplified online lending processes can increase the temptation to access credit without considering the consequences					
I am aware that marketing and simplified online lending processes play on well-known behavioural biases					
I understand the importance of seeking to manage these temptations from marketing and simplified online lending processes					
The temptation to access digital credit is mostly influenced by my social cycle of friends in college					

6. Please indicate your degree of agreement (using a score ranging from 1-5) to the following sentences on the relationship between the factor **Government Regulation** and uptake of digital credit by the youths in Kisumu, Kenya.

Government Regulation	**1**	**2**	**3**	**4**	**5**
I know where to check, when possible, that a digital financial service provider is authorized by the relevant national financial authorities.					
I understand my responsibility to read and check my understanding of product information and disclosure documents, even when provided electronically.					
I keep abreast of new digital developments in finance and follow them closely and on a regular basis.					
I understand that default to repay a loan may result in listing of my name with Credit Reference Bureau(CRB)					

7. Please indicate your degree of agreement (using a score ranging from 1-5) to the following sentences on the relationship between **Credit Terms of Digital Lenders** and uptake of digital credit by the youths in Kisumu, Kenya.

Credit Terms of Digital Lenders	**1**	**2**	**3**	**4**	**5**
Collateral required is sufficient for me					
Amount loaned is sufficient to meet my project/college needs					
Interest charged on loans is fair					
Absence of the requirement to produce financial reports affect my loan qualification					
I do not have to belong to a group to qualify for a loan					
Grace period for loan repayments is favourable					
I do not fear taking loans because of the penalty in case of default					
Repayment period is fair to qualify for the amount of loan I need.					

8. Please indicate your degree of agreement (using a score ranging from 1-5) to the following sentences on **uptake of digital credit by the youths** in Kisumu, Kenya.

Uptake of Digital credit	**1**	**2**	**3**	**4**	**5**
I prefer taking loans from digital lenders (Mkopa, Tala etc.) than banks or Saccos					
I have taken more than 1(one) loan from different digital lenders(Mkopa, Opesa, Tala etc) for the last 1 year					
I take digital credit from digital lenders to meet college needs					
I sometimes take digital loans for my friends					

THANK YOU FOR YOUR INPUT AND COOPERATION!!!

Appendix III: Work Plan

	Jan 2019		**Jun -Jul 2019**		**Jul-Oct 2019**	
Identification of Research Topic						
Proposal Writing						
Proposal Presentation						
Data Collection						
Data Analysis and Submission of research project						

Appendix IV: Budget Plan

Description	**Cost (Kshs)**
Stationery	5,000.00
Printing expenses	15,000.00
Binding of reports	10,000.00
Research assistant	20,000.00
Transport	5,000.00
Miscellaneous expenses (10% of other costs)	5,000.00
Total	**50,000.00**

Appendix V: Three Core Components Of Digital Credit

Source: Accion (2018)

Appendix VI: Krejcie and Morgan (1970) Table

N	*S*	*N*	*S*	*N*	*S*
10	10	220	140	1200	291
15	14	230	144	1300	297
20	19	240	148	1400	302
25	24	250	152	1500	306
30	28	260	155	1600	310
35	32	270	159	1700	313
40	36	280	162	1800	317
45	40	290	165	1900	320
50	44	300	169	2000	322
55	48	320	175	2200	327
60	52	340	181	2400	331
65	56	360	186	2600	335
70	59	380	191	2800	338
75	63	400	196	3000	341
80	66	420	201	3500	346
85	70	440	205	4000	351
90	73	460	210	4500	354
95	76	480	214	5000	357
100	80	500	217	6000	361
110	86	550	226	7000	364
120	92	600	234	8000	367
130	97	650	242	9000	368
140	103	700	248	10000	370
150	108	750	254	15000	375
160	113	800	260	20000	377
170	118	850	265	30000	379
180	123	900	269	40000	380
190	127	950	274	50000	381
200	132	1000	278	75000	382
210	136	1100	285	1000000	384

Note.—*N* is population size. *S* is sample size.

Source: Krejcie & Morgan, 1970