

**ANTECEDENTS OF INDEBTEDNESS LEVEL AND THEIR INFLUENCE ON
PERSONAL DEBT AMONG EMPLOYEES OF KENYA COMMERCIAL BANKS IN
NAKURU COUNTY, KENYA**

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DECLARATION AND APPROVAL

Declaration by the Student:

This research project is my original work and has never been presented or submitted to any higher learning institution other than Mount Kenya University for academic credit.

Signed:



Date: 4TH APRIL 2025

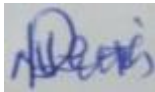
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Approval by the Supervisor:

This research project has been presented for examination with my approval as the appointed supervisor

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DEDICATION

I would like to dedicate this work to my family for unending support throughout the process.

Special mention to Pamela, Giovanni, Llewelyn, Maya and Mina



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May I acknowledge and send my sincere thanks to my project supervisor Dr. Ruthwinnie Munene for her constant guidance throughout this project writing process. She has been always timely in response by advising me on the way forward. I would also acknowledge and thank the Mount Kenya University management for availing this course and providing a number of channels to access academic information.



ABSTRACT

The purpose of this study was to examine the antecedents of indebtedness level of personal debt among employees of Kenya Commercial Banks (KCB) in Nakuru County. The objectives of the research were; to examine the effect of loan product portfolio on indebtedness level of personal debt among employees of KCB in Nakuru County; to assess the effect of demographic elements on indebtedness level of personal debt among employees of KCB in Nakuru County; to examine the effect of finance literacy on indebtedness level of personal debt among employees of KCB in Nakuru and; to assess the effect of behavioral elements on indebtedness level of personal debt among employees of KCB in Nakuru County. The study was underpinned by two theories which included consumer theory and Murray theory of behavior. The study used a descriptive design and targeted both managerial and clerical employees, approximately 187 employees from 7 KCB branches in Nakuru County. A sample size of 127 respondents determined by Yamane's formula was drawn using proportionate stratified sampling method. Data collection entailed use of questionnaires while both descriptive and inferential statistics were applied in data analysis to help in drawing conclusions. The data was presented using tables and figures. The study established that loan product portfolio was significant to indebtedness level of personal debt among employees ($\beta=0.173$, $p<0.05$). Loan interest, lending platform and type of loan (unsecured/collateral) significantly influenced the borrowing behavior and indebtedness level of personal debt. Employees showcased high tendency of being indebted with personal debt when loan products required little or no collaterals with low interest rate per annum. On other end, employees reported increased popularity for digital loan provider like Zenka Loan App, credit card and mobile network operators such as Safaricom over traditional SACCOs and Commercial Banks. The study also established that there was significant association between demographic elements and indebtedness level of personal debt among employees ($\beta=0.155$, $p<0.05$). The cases of indebtedness level of personal debt varied with age, gender, income level and family marital status. The study also established that there was significant association between finance literacy and indebtedness level of personal debt among employees ($\beta=0.149$, $p<0.05$). Majority of the respondents exhibited mathematical skills for computation of loan interest which improved their debt borrowing, repayment behavior, budgeting, planning loan usage and choosing loans with fair interest rates. The study also established that behavioral elements were significant to indebtedness level of personal debt among employees ($\beta=0.173$, $p<0.05$). Risk perception, materialism and emotions were crucial in influencing a person decision to be indebted by acquiring a personal loan. Positive emotions, lowly risk perception and highly materialized individuals tend make irrational loan decision and mistakes while negative emotions, highly risk perception and lowly materialized individuals are cautious while making credit decisions. This study recommends similar studies to be done on the antecedents of indebtedness level of personal debt among employees of other commercial banks in other counties of Kenya to enlarge scope of the study outcomes apart from providing references sources for comparison.

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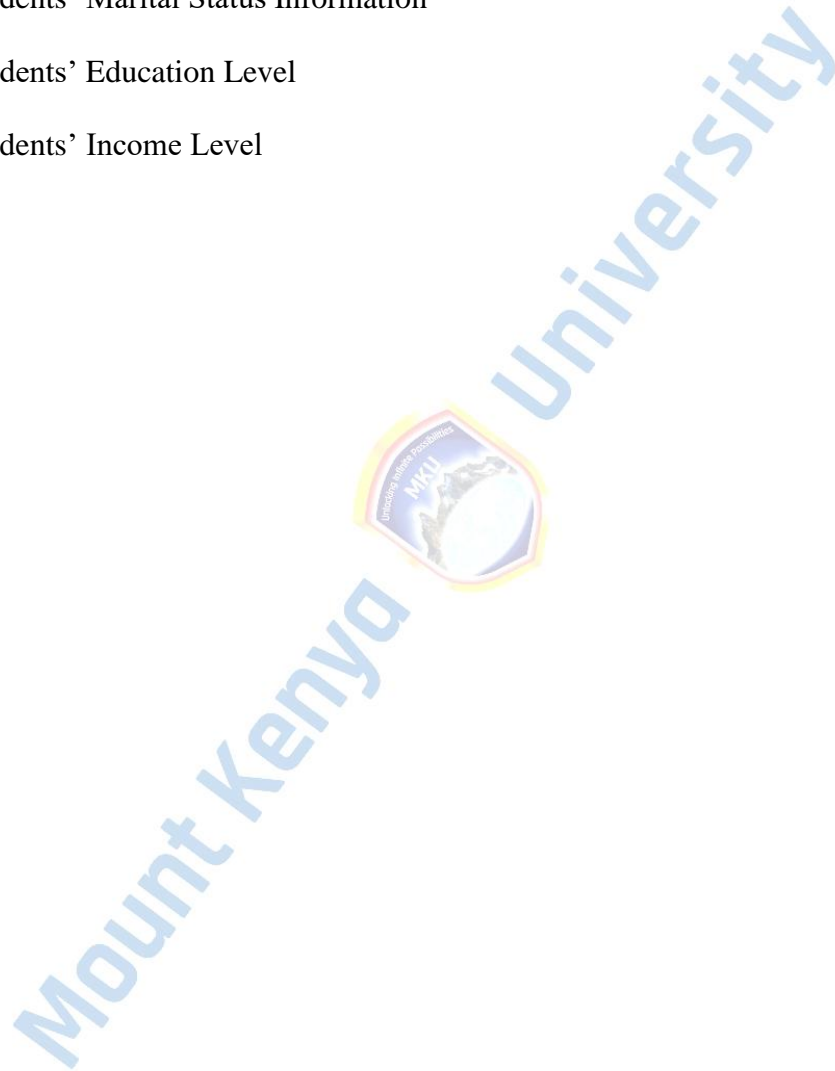


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LIST OF ABBREVIATIONS AND ACRONYMS

KCB: Kenya Commercial Banks

GDP: Gross Domestic Product

MTB: Murray Theory of Behavior

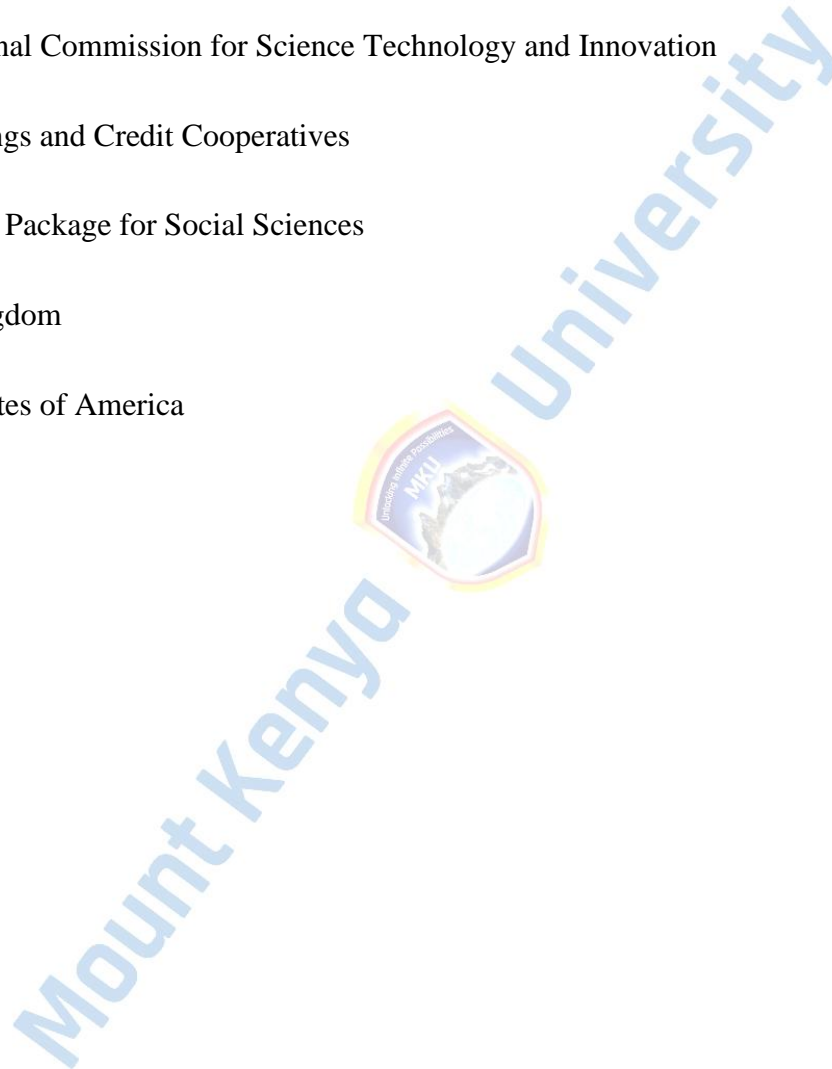
NACOSI: National Commission for Science Technology and Innovation

SACCOs: Savings and Credit Cooperatives

SPSS: Statistical Package for Social Sciences

UK: United Kingdom

USA: United States of America



CHAPTER ONE

INTRODUCTION

1.0. Introduction

Personal debt, the financial obligations individuals have to repay creditors, is often shaped by a complex interplay of factors that precede its accumulation. These antecedents, or contributing elements, encompass a number of elements that can increase the likelihood of indebtedness. This chapter looks at the background of the research, the statement of the problem, the objectives of the research, the significance, limitations, delimitations and assumptions of the study.

1.1. Background of the Study

Debt are means by which many individuals use to finance their household needs such as medical bills, education, mortgages, home renovations and basic needs among others (Cosma & Pattarin 2023) while personal debt can be referred to as consumer debt or household debt or the debt held by an individual and not the institution like the government (Faulkner et al. 2023). People resolve to borrow when their income fall short compelling them to satisfy unmet needs (Vieira, 2023).

Studying indebtedness is a subject of great interest. Indebtedness is a social problem in both developed and developing economies that lead people live in economic distress condition. Therefore it is vital to identify factors that lead individuals to be indebted. People can enjoy life and maintain good financial status if their needs can be sustained with their existing income level. Everyone would wish to be economically well but when needs and expectations exceed their income, they are compelled rely on various credit facilities as means to enhance smooth consumption (Thipe, 2023).

Proliferations of easily accessible loans ensure economic well-being of individuals in short term but may turn into unbearable risks in long-run due to unsecured borrowing. Hilgert, Hogarth and Beverly (2023) report that serious mistakes on lending policies in some economies could be fundamental factors that cause over-indebtedness of the households. Moreover, Shapiro (2023) affirms that micro-credit facilities that are not properly regulated in developing economies tend to perpetrate malpractices that harm consumers with high interests.

Various arguments on household indebtedness have been done in varying context. Peiris (2022) demographic factors and specifically mentioned education, gender, age and income as main determinants of household indebtedness. Apart from demographic elements Lunt (2021) Predicting bases his argument on risk perception and materialism level as behavioral factors critical in influencing personal debt decisions. However, Orton (2020) explains that both behavioral and demographic factors are mediated by financial literacy level and loan product portfolio. Based on various arguments established in the background of the study, this study sought to establish empirical evidence by examining the antecedents of indebtedness level and their influence on personal debt among employees of Kenya Commercial banks in Nakuru County of Kenya

1.1.1. Global Perspective

The level of personal debt has relatively gone high in all economies of the world and economic experts have shown their fear that unprecedented level of debt puts the financial health of a country in a significant risk both in developed and developing economies (Vieira, 2023). In United States of America (U.S.A), excessive borrowing of household loans significantly contributed to 2008 real estate financial crisis. According to 2023 economic report conducted in U.S.A, an American

citizen has a debt average of \$97,539 in all kinds of loan products ranging from credit cards, mortgages and personal soft loans (American Economic Report, 2023). The 2024 recent data further indicates that 23.5 million USA citizens collectively owe lending institutions approximately \$245 billion in terms of personal credits. This is equivalent to 4.4% increase compared to the previous financial year (Mester, 2024).

Similar, the statistics on personal debt in other developed economies like United Kingdom (UK) and developing countries India have been also on increasing trend. In the year 2023, the average personal debt stood at £35,216 which was 3.9% increase compared to the previous financial year in UK. In the year 2024, unsecured credits from personal loans stand at £3 billion and at least 70% of UK adult citizens are indebted. Household debt has grown from £35,216 in the year 2023 to £40,620 in the year 2024 (Le, 2023).

India also experienced 4.1% arise in statistics on personal debt the year 2022 and 2023. In the year 2022 and 2023, personal debt had hit USD 1,430 and USD 1,500.7. Personal loans without collateral amounting to USD 1,000.3 billion were obtained through digital lending platforms in the year 2024; at least 65% of Indian working class adults had acquired different types of loan products while men dominated in the level of being indebted (Fin-Access Household Survey, 2023).

1.1.2. Regional Perspective

In Africa, personal debt rates continue to rise as a result of reforms in financial system to increase household access to bank services. In South African economy, the country recorded 7.3% increase in statistics on personal debt the year 2023 and 2024. In the year 2023 and towards the quarter of the year 2024, personal debt was recorded at USD 1,899 and USD 2,037.6. Unsecured household

debts amounted to USD 1,008.1 billion while loans acquired through digital lending platforms accounted for 89.3% of the unsecured household debts (Fin-Access Household Survey, 2023; World Bank, 2024).

In Nigeria and Tanzania, personal debt account for 9.1% of the country's nominal GDP. The latest 2024 statistics also presents that personal loans have risen to USD 25.34 billion in Tanzania alone (World Bank, 2024). Men were highly indebted compared to women in a ratio of 9:1. This implies that at least in every ten individuals, nine men and one woman were indebted (Fin-Access Household Survey, 2023). According to Nehman (2023), adoption of Fintech solutions and revision of Credit Guarantee systems has been the reason for increase in personal debt apart from other socio-demographic factors such as age, family status and financial literacy among individuals.

1.1.3. Local Perspective

In Kenya, according to Central Bank of Kenya 2022 report, household loans accumulated to sh. 935.11 billion by the end of year 2022. Kenya Economic Survey (2024) also indicated that the borrowing rate by household increased by 9.64% and 12.03% in the year 2023 and 2024 respectively. On average mobile lending Apps, credit cards and personal soft loans are the loan products most accessed by Kenyans across. Mortgage loans were identified to be consumed mostly by middle class and high income earners. Collectively, Kenyans owe credit facilities approximately KSh. 935.11 by the second quarter of the year 2024 (Kenya Economic Survey, 2024).

Ndege (2024) affirms that this has been fueled through government's efforts to ensure increased and easiness in access to credit by households. The households make use of new finance products, instruments and technologies to lift their income level and cope with unmet needs (Ndege, 2024). For employees working in banks, the ease of access to loans from their employers at extremely low interest charges seems to also trigger their thirst for loans. Moreover, their high social class and work environment compels individuals to adapt to a lavish lifestyle which is sometimes unsustainable. This can lead to over-indebtedness if not well managed however much bank employees seem to have debt knowledge. Therefore, this study examined the antecedents of indebtedness level and their influence personal on debt among employees of Kenya Commercial Banks (KCB) in Nakuru County.

1.2. Statement of the Problem

Excessive reliance on credit facilities among people could cause deterioration in household's economic wellbeing thus increasing vulnerability toward high risk accumulation of personal debts. Personal indebtedness has become a major global issue among many households and employees in different parts of the world. This has created severe impacts on socio-economic welfare of the loan consumers. There is need to identify main antecedents of personal debt that leads to household over-indebtedness in the present Kenya. Rahman et al., (2022) explains that individuals in good financial well-being can enjoy lives so long as they are able to meet their expectations using their existing income level. However, when their existing income level falls below their financial commitments, individuals seek loans from different sources to support their obligations, hence becoming indebted. This borrowing behavior has further been fueled by easily accessed loan products, unsecured loan products, socioeconomic and demographic factors that leave the individuals serious debt problems. The situation is very worse in undeveloped nations where

individuals typically opt for unbearable and unsecured lenders to fulfill their financial expectations (Azma et al. 2021).

In Kenya, personal debt ratio has been on rise for the past few years. In 2023, the total household debt rose from Sh.413 billion to Sh907 billion by the end of the financial year with average household debt for a Sh100, 000 monthly incomes increasing from Sh409, 698 to Sh731, 979. In 2024, total household debt rose Sh.1061 billion with the household debt-to-income ratio hitting 60.6%, a slight increase from 51.9% in 2023. Approximately 11.4 million Kenyans had unique loans in the year 2024. This number has been steadily increasing, with additional 7.5 million unique borrowers by the end of February in 2025. A significant portion of these loans are digital loans, with an average of 10 million unique borrowers taking out at least one digital loan annually. While the number of borrowers has increased, the aggregate value of loans disbursed has seen a decline as a result of increased ratio of gross non-performing loans (bad personal loans) commercial banks which reached 15.5% of the banking industry's total lending in February 2025. This is the highest since 2006. The ratio of non-performing household loans in KCB alone has been on the rise, reaching 18.5%. This issue has led KCB to implement various strategies to address the problem, including selling and writing off bad loans, as well as setting up special teams to recover debts. While economic parameters such as fair interest rates, digital lending apps, proliferation on non-collateral loans and explosion of micro-financing institutions can be the reason for increase of indebtedness, there could be also other factors such as socio-demographic and behavioral elements attributing to this increase (Kenya Economic Survey, 2024).

Despite the prevalence of the statistics on personal debt, antecedents to personal debt have received less empirical scrutiny. Kinyura (2023) surveyed factors affecting youth loan uptake in Kenyan

universities while Olima (2023) assessed link between family marital status and mortgage loan uptake among Equity bank employees. The empirical report by Kinyura (2023) was limited to Kenyan youth in universities and could not generalize to bank employees while empirical report by study was limited to a single variable (family marital status). This clearly indicates the existence of contextual gap due to the inadequacy of previous researches and therefore this study sought to address the gap by assessing the antecedents of indebtedness level of personal debt among employees of KCB in Nakuru as the case reference.

1.3. Purpose of the Study

The purpose of the study was to examine the antecedents of indebtedness level and their influence on personal debt among employees of Kenya Commercial banks in Nakuru County of Kenya

1.4. Objectives of the Study

- i. To examine the effect of loan product portfolio on indebtedness level of personal debt among employees of Kenya Commercial Banks in Nakuru County
- ii. To assess the effect of demographic elements on indebtedness level of personal debt among employees of Kenya Commercial Banks in Nakuru County
- iii. To examine the effect of finance literacy on indebtedness level of personal debt among employees of Kenya Commercial Banks in Nakuru County
- iv. To assess the effect of behavioral elements on indebtedness level of personal debt among employees of Kenya Commercial Banks in Nakuru County

1.5. Research Questions

- i. What influence does loan product portfolio have on indebtedness level of personal debt among employees of KCB in Nakuru County?

- ii. What influence do the demographic elements have on borrowing behavior of KCB employees in Nakuru County?
- iii. Does finance literacy level affect indebtedness level of personal debt of KCB employees Nakuru County?
- iv. What influence do the behavioral elements have on KCB employees' borrowing behavior?

1.6. Significance of the Study

The findings of this study will help the lending managers including financial regulators obtain knowledge antecedents of personal debt. This will enable them make informed decisions when adopting sound education policies geared at protecting loan consumers from bad borrowing habits. This will result into low risk credit portfolio for lending institutions to create a mutual benefit to both lending institutions and credit consumers.

The study will also help employees understand elements pertinent to personal indebtedness. As a result, they will be able to make sound choices when it comes to credit consumption. This will help them address indebtedness issues and related effects of over- indebtedness. The survey outcomes will also serve as a reference point in the field of education and research for any other inquisitive study further exploring the subject of personal indebtedness and related factors. Both students and researchers may find the study helpful as a resource of knowledge and insight.

1.7. Scope of the Study

The research focused at conducting an analysis of the antecedents of indebtedness level and their influence on personal debt. Personal debt is the independent variable while antecedents of personal

debt are the independent in which other sub-variables are embedded in. The sub-variables of independent variables specifically include loan product portfolio, demographic elements, finance literacy and behavioral factors. The study employed consumer theory and Murray theory of behavior to explain the effect of each sub-variable on indebtedness level of personal debt. The study was conducted in Nakuru County during the month of March 2025 and specifically assessed a sample of 127 employees of KCB using questionnaires. Specific KCB branches in Nakuru included KCB Nakuru Main Branch, KCB Njoro, KCB Gilgil, KCB Flamingo, KCB Navasha, KCB Edgerton Branch and KCB Menengai Branch.

1.8. Limitations of the Study

The researcher faced several limitations while conducting the study. Foremost, time constraints was a limiting factor since banking sector is a busy industry and there were hesitations to volunteer information by some of the respondents. To overcome this, the researcher distributed the questionnaires 3 weeks in time to give enough time for respondents to fill the questionnaires. Some respondents were also doubtful and failed to cooperate in filling the questionnaires. This denied the researcher from accessing information relevant to this study. However, the researcher guaranteed the respondents of their privacy and anonymity, together with an official letter from the institution which affirmed the purpose of the study.

Statistical limitations due to quality of data collection tools could also cause challenges while conducting the study. This could have affected the quality of the research outcomes. However, the researcher conducted content validity tests of the instruments by seeking expert opinion to comment

on suitability of questions and modified the instrument based on expert suggestions. Pilot study was also done through test-retests to confirm the reliability of the research instrument.

1.9. Delimitations of the Study

This study only focused on specific independent variables and their relationship with dependent variable. These variables included finance literacy, loan product portfolio and demographic elements. Although there are un-countless demographic factors, this study could not explore all these elements and therefore the research was confined to family marital status, age, gender and income as opposed to inner personality traits that are invisible.

1.10. Assumptions of the Study

The study assumed that at least one in every 10 members of study population had a loan either from friends or lending institutions. However, less financially literate individuals were likely to have more debts than financially literate or semi-literate individuals. The study also assumed that family marital status, age and gender were main demographic elements influencing indebtedness levels and income was the common aspect that cuts across all demographic elements. The study also assumed that the study respondents were knowledgeable, fully understood the research questions and provided reliable honest information on study topic.

1.11. Operational Definition of Terms

Antecedents: Factors or causes

Behavioral Factors: pattern of human responses to external stimulus or an event

Collateral: An asset of value that guarantees a loan

Demographic Elements: Statistical characteristics of a population such as age, gender, family status and income among others

Digital Loans: Loans provided through online platforms

Finance Literacy: the capacity of an individual to make sound decisions associated with financial choices and management of finance.

Indebtedness: the likelihood of an individual or an organization having a debt

Loan Product Portfolio: the totality of all credits products the bank issues to customers or other organizations

Materialism: people's act of consumption and their possible responses to possession of property

Personal Debt: consumer debt or household debt or the debt held by an individual and not the institution like the government

Risk Perception: how individuals judge possible negative outcomes of decisions taken

Secured Loan: a type of loan that is backed by collateral

Unsecured Loan: a type of loan that does not need any collateral to be secured

CHAPTER TWO

LITERATURE REVIEW

2.0. Introduction

The relevant literature regarding the antecedents of personal debt has been discussed in this chapter. This includes theoretical review, empirical reviews and conceptual framework. Specific concepts discussed are loan product portfolio, demographic elements and finance literacy in relation to personal debt.

2.1. Empirical Review

2.1.1. Loan Products Portfolio and Indebtedness Level of Personal Debt

Finance industry has dramatically evolved in different regions of the world in the past decade. This has intensified the competition causing commercial banks to tailor survival strategies by ensuring they offer quality products apart from providing diversified range of loan products ranging from digital loan lending applications, credit cards and other type of unsecured loans to include individual loans for specific portions of consumers. These individual loan products are cheap and unsecured to make them easy to process in simple procedures (Agarwal, 2020). The purpose of adopting such measures is to lure potential new customers and retain clients by reducing their shift to other financial market competitors such as commercial banks. As a result, clients are easily tempted to take loans. The worst part of it is when the loan is taken under influence of impulse decisions and there are no plans on how to use or manage the loan which may result in high likelihood of defaulting and over-indebtedness (Young, 2020).

Andersson, (2023) argues to whether commercial banks should continue paying attention on diversifying their loan products or stick on conventional loans since new loan product have proven to easily sway loan product consumers without solid loan management plans. In support of this

view, Davidson (as cited in Agarwal, 2020) explains that credit consumers have shown poor loan uptake decisions by failing to look at other elements of loan such type of loan and interest rates charged (Ndege, 2021). On the same point of view, Halima (2020) argues that although different loan products have addressed the specific needs of clients, the cost of repayment is too expensive especially when credit loans are unsecured leaving borrowers in bad economic state. The problem stems from poor credit evaluation skills which limit the consumer from receiving information needed to make sound credit decision (Halima, 2020).

Rose (2023) also believes that transition to credit card system could be another breed to unsound credit decision and overspending habits. The use of credit cards is increasingly popular and this to some extent is perceived to be among the causes indebtedness that may generate financial distress later in life. Even though credit cards do not need collaterals to finance purchases made by consumers, these cards are linked with high interest rates which causes the potential risk of debt (Halima, 2020 & Ndege, 2021)

Chien and DeVaney (2023) also observed that rapid interest accrual within payment intervals of the credit card could be majorly linked with over-indebtedness of an individual. Credit card interest rates are inflexible since they do not blend with market changes compared to other bank loans. This ensures high returns to the lending institutions but a disadvantage to credit card users (Young, 2020).

Lending institutions also tend to use a number of incentives to attract new customers as promotional mechanisms. For example, cardholders may be awarded deferred interest promotions or interest-free period as means to promote transactions. In deferred interest, the term of language used sounds like there is no payment of interest in full and no interest at all for specific months

(Andersson, 2023; Ndege, 2021 & Rose, 2023). Failing to understand this information or faulting to pay the balance before the end of promotion can be costly. Other promotions may include promos on sign ups, issuance of out freebies, pre-approved application forms shared to potential clients, regular phone calls by agents providing credit cards are elements that may lure clients to acquire credit cards when they are premature to use the card exposing them to high credit risk (Wise & Xu, 2022).

A study done by Dunn (2023) indicated that unsecured lending through different platforms in South Africa recorded an average annual rate of twenty seven percent between the years 2019 and 2023. This accounted for 6% of total retail credit within the same period. Unsecured loans amounted to R34 billion in the year 2019 alone and by the end of the year 2023, unsecured loans had increased to R126 billion with credit card leading with 10% of all unsecured loans. The sharp rise in unsecured borrowing was linked to inadequate awareness among loan product users about the risk and the cost involved in none-collateral loans which increases household indebtedness (Wise & Xu, 2022; Wubben, 2021 and Young, 2020). However, the study was done in a global perspective presenting a regional research gap.

Following these results, Lee and Kwon (2023) content that majority of the loan product consumers tend to be blinded by the fact that using unsecured loans may satisfy their needs immediately by enabling them to purchase things they would not have afforded while buying with pocket cash. However, this has worked against consumers' expectation according to Harris (2023). In his study,

Harris (2023) noted that most unsecured loan consumers recorded high risk of debt and out of 100 households, 57% portrayed high impairment credit records. This was a clear implication that consumers experience financial strains and in most cases could not make rational choices because they lacked information and unable to see through the loan terms and rates. This study was limited to one element of loan portfolio and therefore did not explore other loan product leading to a contextual research gap.

Thipe (2023) also conducted a study on how credit-card incentive packages affect borrowing habits of bank customers. The findings indicated that 96.3% of consumers took advantage of credit card as the opportunity to grab loans compared to secured type of loans. Loan consumers who were also attracted to credit card incentives and had received Short Message Services (SMS) adverts to take up credit cards and they agreed credit cards were very helpful and convenience to use while buying goods and services. The study concluded that although consumers have a general positive view about the credit card, failing to understand terms of interest rates led them rational choices that crippled their financial wellbeing. However, the study was Pretoria North, South Africa which presents both regional and contextual research gap. These findings were also echoed by Soman and Amar (2023) who identified that credit cards were viewed as the main of overspending beyond the budget line and therefore increased consumer debt

Meniago *et al.*, (2021) from economic point of view also argued that loan interest rate, loan lending platforms and type of loans (unsecured vs. collateral) are the reasons why individuals become indebted. These findings coincided with a survey conducted by Wubben (2021) who showcased that the household debt consumers greatly relied on loan portfolio availed to individuals. The results further indicated that there was positive correlation between unsecured loans, digital

lending and individuals' access to credit. These also findings concurred with research findings of Peiris (2022) who established that lack of loan collateral and digital lending platforms had significant positive affect on household access to loans. These studies were done in developed world whose contextual characteristics differ from Kenyan characteristics.

Analysis undertaken by Sum and Memba (2023) also examined the intake of secured loans and unsecured loans among 13 Savings and Credit Cooperatives (SACCOs) in Kenya. The study relied on secondary sources of information to compute the findings. Sum and Memba (2023) identified that the consumption rate for unsecured loans was 6 times higher compared to secured loans. Statistics to support this indicated that consumption pattern for unsecured loans was 2.7 billion compared to secured loans whose consumption pattern was 0.453 billion in the first quarter of the year 2022. It was deduced that individuals were induced borrow loans when collaterals and other loan access restrictions were not imposed. The study focused on SACCOs as opposed to commercial bank sector presenting another contextual research gap.

Ozili (2022) also focused on the effect of digital financing services on households. The study identified that digital finance enabled financial inclusion but have created an easy way where households faced high risk to fall into debt trap. In another survey done by Samaraturunge et al. (2021) also established a strong association between digital finance and the likelihood of obtaining a loan. A single percentage increase in Digital Development Finance Institutions (DFI) index increased the households' likelihood of acquiring a loan by 3.45%. In general, a one percentage increase in DFI index increased the debt level to USD 17.9 for each and every household. Timothy (as cited in Ren et al. 2022) also affirmed that although digital finance had widespread applicability and increased credit market participation, it increased financial distress. However, Wilson (2022)

suggested that if these new digital financing technologies are regulated sufficiently, it may help in curbing the risk of financial distress experienced by households.

2.1.2. Demographic Factors and Indebtedness Level of Personal Debt

More studies from socio-demographic perspective identified income, education, age, family marital status and gender as main antecedents to personal debt (Kemp, 2021). In a study conducted by Zuckerman and Kuhlman (2022) in German, the findings indicated that the levels of impulsivity were high among younger population compared to older population. Therefore young population tended to risk more by acquiring higher level of loans. However, the study was done in developed economies and the findings cannot be applied in Kenya as a developing nation which presents a contextual research gap.

Another study done by Sylves (2022) in America young college students demonstrated extravagance behavior because they have high disposable income. They were likely to borrow when they fall short of money to finance their luxuries at school. As a result, credit card providers have identified teenagers particularly college students as a niche where they target to market credit (Sylves, 2022). Another reason for young teenagers being targeted by credit card providers is that they lacked financial literacy and showed urge for instant gratification. They have no saving skills and they perceive that once they graduate and get employed, money will continuously flow into their bank accounts to solve their financial constraints. It is this misconception that keeps them accumulating bad credit from all the credit card debts (Zuckerman & Kuhlman, 2022; Thipe, 2023). However, the study presented a contextual gap as it was done in different region outside Kenya and the rest of Africa.

However, from another angle of perception Lazarony (2024) argues that young professionals are unable to access loans (especially long term-loans) from banks and agencies since they score poor credit standings. In support of this argument, Tufano (2022) added that most young professionals could not afford buying cars, a home or pay rent for an apartment since many companies conduct background checks on credit ratings. In Mexico alone, Fin-Access Household Survey (2023) indicated that more than 800,000 young Mexicans were filed for bankruptcy year in year out. The numbers of cases seem to grow among the young population ranging from the age of 20-35 years.

Another study done by Nogueira (2023) in Britain found that married families had high level of risk perception and avoided expensive loans while single individuals had a low level of credit risk perception and opted for loans irrespective of high interest charges. Ponchio (2022) in his study established that men as family heads in Australia portrayed high level of tendency to take loans to satisfy their families compared to women. The scope of the pre-existing above studies was limited done global and regional levels and therefore the findings may not be locally generalized in Kenya due to contextual gap in the regions.

Bucks et al. (2022) also made an observation and affirm that family structure has significant influence on financial distress. Both married families and single families marital were linked with being indebted. Single families without children and married couples without kids tend to overspend on luxuries and therefore they are likely to borrow excessively to gratify their instant needs. Most are reported to take loans to finance honeymoon, weddings and couple trips. However, compared to single males, single females show less likelihood of borrowing (Lyons & Kass-Hanna (2022)). For married couples with children, they were likely to borrow to finance

various family obligations such as buying a family home, paying tuition fee for their kids and settling hospital bills.

Similar results were also observed by Stafford and Gouskova (2022) in a survey that examined the relationship between family structure and mortgage loan uptake. Using secondary sources from 2019-2023 Panel Study of Income Dynamics (PSID) data, they established the relationship between size of families, family head and mortgage loan uptake. The correlation coefficients among the independent variables also showed a positive association: married families with children ($\beta = 0.647$), married families without children ($\beta=0.553$), male headed families ($\beta=0.512$), female headed families ($\beta=0.497$), single fathers with children ($\beta=0.349$) and single mothers with children ($\beta=0.334$).

Decision to take to take mortgage was determined by men in male-headed families. This was contrary to female headed families. Middle aged single parents tended to spend more on mortgage loans than young single parents. Young singles with kids reported bad debts and inability to accomplice mortgage home payment as opposed to middle aged singles with children. Compared to single fathers, single mothers were reported to experience high level of financial distress but both cases recorded high level of being indebted. However, the type of loans taken varied in both cases where single mothers borrowed short term loans to raise their children and to gratify other basic family obligations while single fathers borrowed to finance the purchase of houses (Chien & DeVaney, 2023). Stafford and Gouskova (2022) survey was confide to secondary data from 2019-2023 hence the need to examine the relationship between demographic factors and individual indebtedness using primary sources of data.

In terms of debt management, cohabiting families and married families are likely to display different patterns. An analysis conducted by Sassler (2022) showcased that money was the main factor for cohabitation and therefore cohabiting families portrayed a behavior to take loans without due diligence about the cost unlike married families. This was also echoed by Smock, Manning and Porter (2023) made an observation that cohabiters in lower and middle classes believe financial issues are significant in marriages and borrowed to make investments for their nearby marriages. Therefore cohabiters mind improving their financial status before getting married (Smock, Manning & Porter, 2023).

2.1.3. Finance Literacy and Indebtedness Level of Personal Debt

Financial literacy can be defined as the measure knowledge of expansive understanding of financial matters and self-assessed financial knowledge (Gathergood, 2022). A financially literate person has the capacity to make sound decisions on matters to do with loan acquisition, loan management and interest compounding among other aspects. Empirical literature further reveals that skills, knowledge, awareness, behavior and attitude as 5 core elements of financial literacy are very essential when it comes to planning and managing financial resources effectively (Moore, 2023, Hilgert et al. 2023). These elements have conceptual relationship since with good financial skills, credit consumers can gain from loans by interpreting financial terms and conditions comprehensively to make informed choices (Moore, 2023). Making informed choices is not a task to take for granted since knowledge on financial products, financial concepts, financial services, risks and opportunities involved is needed. Decision-making in this case is therefore paramount in enabling individuals control their personal loans and other finances (Hilgert et al. 2023). Benjamin et al. (2022) also affirm knowledgeable consumers matched with financial skills gain from wide range of financial market while those with poor knowledge are prone to make mistakes.

Financial literacy can be acquired through both practical experience and integration of knowledge through schools and organized seminars. When individuals develop and grow their financial literacy skills, they become more competent and sophisticated to handle many financial concepts and make sound resolutions in a digital credit world (Disney, 2022). Dick and Jaroszek (2023) presents the view that in the current technological world, expansion digital credit platforms has enabled easy access to loan products in an environment where people have low literacy level on financial matters. This seems to put loan consumers in difficult conditions as many people are prone to over-borrow to meet their immediate needs. Such behavioral tendencies to over-borrow can become worse to a level of being rendered bankrupt especially for those individuals who are completely financially illiterate or semi-illiterate and lack self-control (Xiao & Porto, 2019; Dick & Jaroszek, 2023).



The borrowers without information about the loan credit terms and conditions are likely to ignore the SMS reminders to repay the loan and are also likely to have multiple loans. Little do they know about the consequences of negative listing on CRB. Xiao and Porto (2023) affirm that loan users without self-control stability coupled with financially illiteracy also portray a tendency of taking advantage of easy access to high-interest credit and are taken advantage of by lending firms. Gathergood (2022) observed that there was significant relationship between financial illiteracy, defaulting and over-indebtedness among consumers who lacked behavior (lack of self-control). The correlation coefficients among the financial illiteracy and loan payment showed a negative association; financial illiteracy ($\beta = -0.635$).

Noyer (2023) also alludes poor financial health coupled with over-indebtedness emanates from bad financial decisions due to little financial knowledge or not financial skills at all. Empirical findings also established this relationship to be true particularly in third world nations (Moenjak et al. 2020). Among one hundred respondents assessed, Fin-Access Household Survey (2023) showcased that 50% of the credit consumers did not have knowledge and relied family and friends for financial advice while 9% blindly indulged in borrowing. This was contrary or a reversal in developed nations where 86% of the loan users relied on self for financial advice. The findings further indicated that the thirty seven percent of the loan users without financial knowledge were taken advantage of by lending firms through being misguided to take high-cost loans.



Financial literacy is confined to small population in terms of gender particular in the third world nations. A survey conducted by Skinner (as cited in Halima, 2020) among 100 group of women, most women by a share of 62% relied “Chama” (a group of women association), family and friends for financial advice compared to 29.3% of men. Most women with a fraction of 57% showcased low financial knowledge and could not correctly compute 12.3% interest rate on USD 12,000 loan. This implied they could not interpret right or did not comprehend the cost of borrowing. Among the cases that exhibited low financial knowledge, 78% complained of being overcharged by loan providers when they began repaying the loans and felt that they were overburdened. These survey findings is a clear implication of the glaring dangers associated with low financial literacy levels and decision to take credit products which may lead to over-indebtedness. Digital literacy is lower in developing nations and particularly very low among

women compared to men. Women struggle to comprehend terms and conditions from loan provider's particulars digital loans. Consequently, they are afraid to use app-based loan providers since they do not understand extensively about credit terms and conditions on app-based user interfaces (Demirgüç-Kunt et al. 2023).

Volpe (2023) found also that illiterate and semi-literate individuals exhibited high debt default behavior since they were less financially informed. On other end, well informed individuals made sound decisions on debt choices and avoided highly risky loans. These findings were also echoed by Evens, (2023) who showcased that financial literate consumers in South Africa had better plans for their finances and avoided unnecessary debts. This study reveals a scope gap since it was not addressed in Kenyan context.

A study done by Ngugi (2023) on Nairobi SACCOs in Kenya documented that, seminared individuals on loan products were favorable to use loans prudently compared to un-seminared consumers. On that case, the study identified that un-seminared consumers lightly perceived the consequences of loan burden and borrowed without reasonable care. On other end, seminared consumers paid attentions on terms of interest rate, repayment period and other benefits linked to the loan products before opting to take the loans. As a result, un-seminared consumers tended to be overburdened by loans due to poor decision making. However, study focused on SACCOs as opposed to commercial bank sector presenting another contextual research gap.

Orton (2020) affirms that training exposure to financial literacy increases the capacity of an individual to make sound financial decisions. Along the intensive margin, training is highly significant to decline in the likelihood of having any outstanding debt and reduces delinquency

rates. As in the case of simple and compound interest, financial literacy seminars on loans seem to enable credit consumers to make right choices (Gathergood, 2022).

Another empirical survey conducted by Kurowski (2021) focused at analyzing the effect of financial literacy on individual indebtedness in the midst of financial crisis during COVID-19 pandemic. The study employed Polish survey data while conducting an analysis of the role of debt and financial literacy on over-indebtedness of households in awake of Corona Virus pandemic. The results alluded that households with better financial literacy exhibited efficiency in both planning and budgeting and the chances of defaulting loan repayment were low since they had accumulated their savings. Equally, households that took mortgage loans also portrayed better skills in managing loan repayments compared to households with low financial literacy.

Wamalwa et al. (2023) also assessed the effect of financial literacy on credit uptake and household indebtedness. The study relied on secondary 2021 and 2023 data from secondary sources. The survey outcomes showcased that there was positive association between financial literacy and decline in digital credit uptake. Well informed household were sensitive while taking digital loan. However, digital credits were mostly consumed by low income households and therefore exhibited difficulties in repaying the loans, compared to the households using conventional credit.

Brown et al. (2022) conducted an assessment on relationship between financial literacy and borrowing behavior. The survey outcomes indicated that people best at mathematical skills exhibited sound financial knowledge which improved debt repayment behavior. Additional mathematics training also improved their budgeting and creditworthiness and therefore record lower levels of debt. Shapiro (2023) also assessed relationship between debt literacy measures and risk perception among 36 households. Only 75% of the households comprehensively understood

interest compounding and were able to compute interest on credit cards as indicated by the study results. Twenty one percent of the households recorded lower levels of debt literacy and incurred expensive transaction costs, costly rates and expensive borrowing costs. Due to that, they experienced excessive debt loads.

Similar findings were also reported in china that financial literacy was low among Chinese households. Most Chinese illiterate households were not aware of the repercussions of their choices on debt (Feng et al. 2023). Paul and James (as cited in Lyons & Kass-Hanna, 2022) also identified that apart from financial illiteracy, there was positive association between lack of self-control and non-payment of consumer credit and If-reported extreme financial loads of credit. Upon this results, Banna and Alam (as cited in Yang et al. 2023) suggested the need for policymakers to provide households with right digital financial literacy. However, financial education may improve financial literacy and people may not be educated on self-control since it is an inner drive. Perhaps policymakers may restrict the credit available through controlling for loan purposes (Beck et al. 2023).

A survey on the relationship between financial literacy and borrowing behavior was also conducted among college students (Lunt, 2021). Lunt (2021) identified that college students had bad credit ratings on credit cards because they overspent on luxuries. The study recommended both school educators and parents to educate teenagers on usage of safe credit and appropriate financial expenditure to keep them within their budget. Before applying for unsecured loans including credit cards, there is need to consider prospects involved such as service charges and penalties. Similar with Lunt's suggestion, Lucas (2022) also recommends the need for any loan applicant irrespective of the type of loan to consult credit review experts for the guidance to avoid being overburdened by

debt. This will enable them learn about the advantages and disadvantages of any type of loans they take. Reading articles, books and online reviews can also help increase their knowledge to put them in a financially secure loan status (Shapiro, 2023; Lucas, 2022 & Orton, 2020).

2.1.4. Behavioral Factors and Indebtedness Level of Personal Debt

Behavioral factors are elements that stem for human character and can emanate from various aspects ranging from personality, social status, life situation and environmental response among other elements (Grable et al. 2022). Financial loan decisions made by people can be affected by human behavior such as individuals' perception towards the level of risk involved, materialism level and emotions that evoked pride, status and fear or nervousness. Kumar and Goyal (2021) observed that household indebtedness was a critical matter that needed to be addressed most regions of the world. They decided to conduct a separate study on the how behavioral factors accounted for household indebtedness in Thailand. The study relied on secondary sources of data which mainly included Web of Science, Social Sciences Citation Index and Scopus. Three hundred and seven articles were reviewed for data analysis. The study reported that materialism, risk perception and emotions were the most significant behavioral factors influencing household indebtedness level. In support of these findings, Fatoki (2023) also contends that behavioral factors have significant influence on household's debt behavior.

A study conducted by Gärling et al. (2022) also focused at examining how behavioral factors affected individuals level of debt. The study considered three elements affecting indebtedness of an individual which were materialism, level of risk perception and emotions. Using primary sources of data obtained using interview and focused group discussion, the study established the relationship between materialism, level of risk perception and emotions and loan uptake. The

correlation coefficients among the independent variables and dependent variable showed both positive and negative association. Individuals with low risk perception exhibited high level of indebtedness ($\beta = 0.557$) while individuals with high risk perception exhibited low level of indebtedness ($\beta = -0.403$). Individuals with high levels of materialism tended to spend more compared to individuals with low levels of materialism. High materialism level was positively associated with high indebtedness level ($\beta=0.622$) while low materialism level was negatively associated with high indebtedness level ($\beta= -0.541$). Emotions evoked varying borrowing behavior. Emotions included pride, status and fear or nervousness. Pride and status pushed people to spend more and therefore were likely to borrow more compared to individuals who exhibited fear or nervousness.

A survey done by Mishra and Mishra (2022) examined the influence of materialism on spending and borrowing behavior. Immaterialized individuals exhibited high saving propensity compared to materialized individuals and their incomes were stabilized which enabled them to borrow less. Materialized individuals spend more on luxuries while immaterialized individuals invested more in mutual funds, bonds, stocks and other businesses. Conclusively, borrowing was viewed positively by materialized people while immaterialized had negative perception on indebtedness level.

An empirical analysis conducted by Richins and Scott (2022) also explored relationship between personal indebtedness and materialism level in Malaysia. The study was questionnaire based survey and was tested among 121 individuals in Kota Kinabalu, Sabah. Using inferential statistics in data computation, the sampled was indebted although they lacked materialistic attitude. Therefore materialism in this case was insignificant to indebtedness level. However, the study

recommended the need to explore other factors that influencing the personal indebtedness level of the residents in Kota Kinabalu, Sabah.

2.2. Theoretical Review

2.2.1. Consumer Theory

Lancaster (as cited in Rieger, 2022) is the main proponent of consumer theory who proposed that rational consumers make choices from variety of alternatives by opting for the alternative he or she will get maximum utility. Preferences for products or services are dictated by a function of attribute those products or services possess (Mudida, 2020). The tendency to use a product or services lies in overall utility of services or products offered, thus the service or products attributes and what they can satisfy to cover up their unmet needs. In this case, the question is whether the product or service chosen will satisfy their needs.

The connection between consumer theory and this study lies in how individuals' loan consumption choices, influenced by factors like income, prices, and behavioral elements influences, can lead to unsustainable debt patterns, especially when coupled with factors like weak financial literacy, impulsive spending, or a lack of financial planning. The tendency to take a loan lies in overall utility of loan products offered, thus the loan product attributes and what loan can satisfy to cover up their unmet needs. In this case, the question is whether the loan product will satisfy their utility and whether the accessibility and repayment terms suit their interest. Preferences for to take loans may also be driven the overall utility consumer finds in fulfilling demographic needs. Consumers will take loans borrowing can help solve income shortages to satisfy unmet needs. Couples and families with children may borrow to pay family bills and honey mood as the overall utility they get from loan. People may also take credit to satisfy their behavioral factors such as materialism.

Materialized people aim at possessing assets and borrow to possess materials like expensive cars, luxuries and impulse purchases to satisfy their interest (Mudida, 2020).

2.2.2. Murray theory of behavior (MTB)

On other side, the MTB theory of the behavior motivation was developed by Henry Murray (as cited in Huy & Zott, 2023). Murray had significant contribution on the way needs can be applied in explaining behavior motivation (Anderson, 2021). Murray describes that needs could occur due to internal processes such as thirst or due to environmental events that give rise of tension level which people attempt to reduce by performing an Act to fulfill the needs. Needs stimulate and trigger behavior in the direction suitable for need satisfaction (Smith, 2020). He described reactive needs as needs associated with response to a specific condition in the surroundings while proactive needs are described as spontaneous needs.

Murray's theory is linked to this study as it provides a framework for understanding how the people response to debt choices based on their income level, age, gender, family structure, risk perception level, materialism level, emotions as well as literacy level among others. By examining how individuals' needs are expressed and how they respond to environmental pressures, we can gain a deeper understanding of the complex relationship between personality and financial well-being. When loans products are friendly and easily accessed, people tend to react by borrowing more to fulfill their proactive needs (spontaneous needs) and reactive needs. People tend to seek loans as spontaneous need to satisfy their income deficits, family or couples' bills and behavioral response to materials; and will avoid unattractive credits (high interest loans products) that may result into over-indebtedness as a reactive need.

Reactive needs in this study any occur as a result of behavioral responses such as credit risk perception, materialism and emotions. For instance, individuals with high risk perception level will avoid borrowing compared to those with low risk perception level. Positive emotions may push someone to more risky loan products while negative emotions may evoke high risk perception associated with loans. On other end, people may exhibit different level of reactive needs determined by their condition in terms of financial literacy. Individuals with poor financial knowledge may react by displaying thirst for loans to satisfy their impulse needs without careful considerations of risks associated with loan products.

2.3. Conceptual Framework



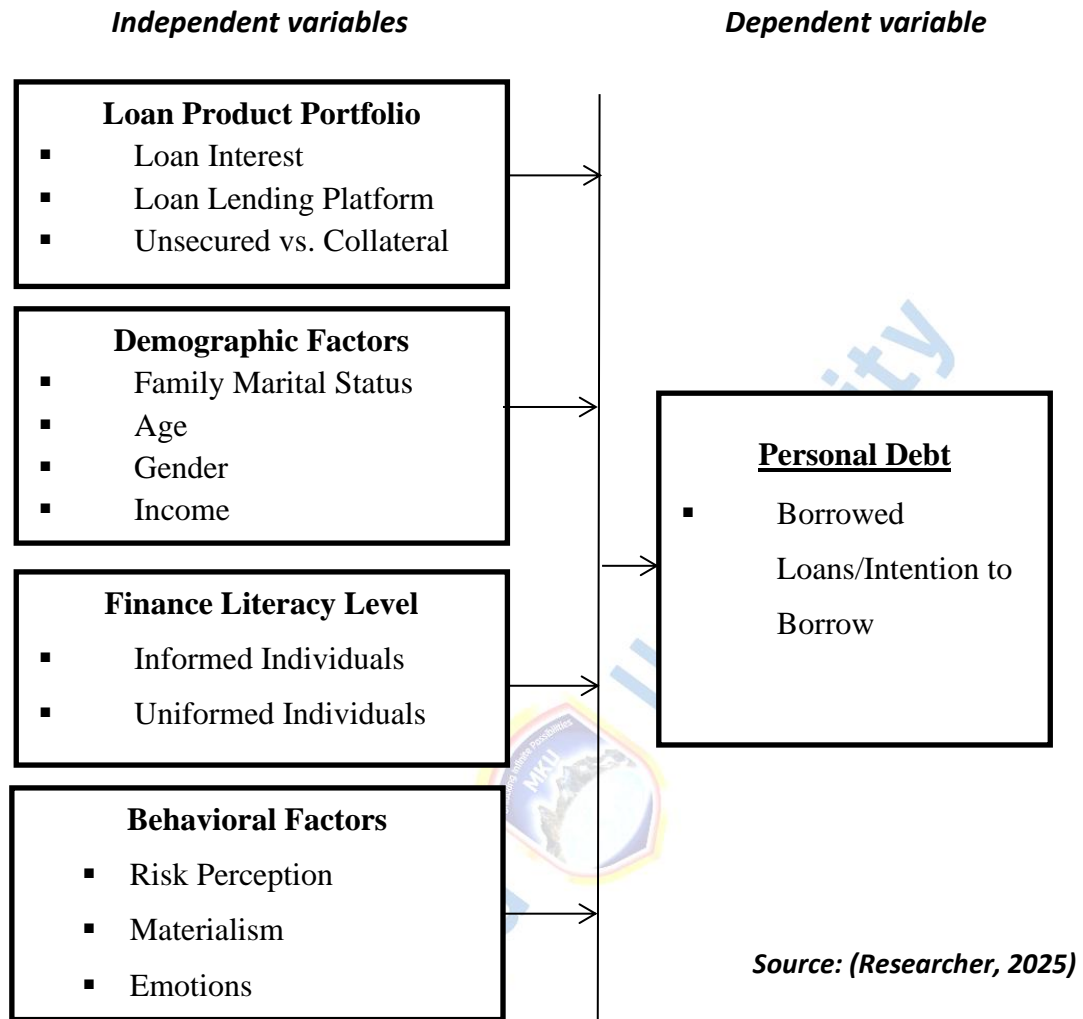


Figure 1: Conceptual Framework

2.3.1. Loan Product Portfolio

Growth in finance industry coupled with stiff industry has necessitated commercial banks and other credit institutions to come up with diverse loan products to attract clients and retain their customers. Loan products ranges from digital loans (accessed through internet and mobile applications), unsecured and secured loans and increased use of credit cards. Digital loans require less process to access and are usually unsecured. Such features are used as a strategy to win and potential retain clients as means to outshine business rivals (Young, 2020).

However, consumers need to be very careful as impulse decisions can lead them to take loans unprepared or without better plans. This may increase the likelihood of defaulting and over-indebtedness. Proper scrutiny is needed such as assessing the loan interest charges, repayment period including other terms and conditions. For example digital loans are easy to access but are criticized for being too expansive to repay within shortest repayment period (Ndege, 2021). Credit cards are also increasing used and have made purchase easy. This has also triggered impulse buying decisions and overspending behavior leading to potential risk of high debt. Since the rates are inflexible. High credit card limit may prompt the cardholder to overspend and with high interest rates, extravagance can be expensive blunder (Ndege, 2021).

2.3.2. Demographic Factors

There are main demographic elements ranging from Family Marital Status, Age, Gender and Income that influence indebtedness level. Low income group tend to spend more than what they earn and therefore they save less. To meet their basic needs, they end up borrowing from friends, family and other lending platforms. Contrariwise, this is irrational for people who earn high in come as they tend to save more. However, high income group are also indebted since they have strong desire to spend which is influenced by behavioral factors such as materialism. They are also favorites when it comes to borrowing since they have financial security and loan collaterals (Tufano, 2022).

There is also great link between gender and indebtedness level. Most females are reported to be less financially informed compared to males. However, this situation is significantly improved with education and support from spouses. Men tend to consume loan products more than women

since most men have good financial literacy then women. The level risk perception towards debt decisions also varies with education and marital status. Married families with children are favorite credit consumers compared to single cohabiting couples. Married families with children borrow to spend school tuition fee, housing and family related bills such as medication. For although single cohabiting couples tend to borrow less than married families, they have a tendency of spending much on luxury without considering the costs and benefits involved (Gouskova, 2022).

In terms of age, young generation have low risk perception over debt burden compared to older generation. Young generation has high disposable income and therefore they tend to show extravagance behavior and urge for instant gratification. They have no saving skills and debt management knowledge since they lack financial literacy. However, the level of credit accessibility varies with age. Young professionals exhibit poor credit ratings and no collaterals unlike old professionals who exhibit good credit ratings and have adequate collaterals as prerequisites for loan access (Rahman et al. 2022).

2.3.3. Finance Literacy Level

The level of financial literacy has great on personal debt of an individual across all economies of the world (Widjaja et al. 2022). Financial literacy is described as the level of comprehensiveness a person can appropriately utilize financial skills in different aspects such as loan decisions, loan management, investment, budgeting and management of personal finance (Rieger, 2022). Financial literacy enables individuals to handle debt matters by making sound decisions over loan uptake. Loan product comes with different incentives and rates meant to lure the consumers.

Great precaution is highly needed since some credit product may put the consumer in over-indebtedness situation. With financial literacy, one can make sound judgment by cautiously

conducting an evaluation on interest rates, types of interest rates (simple and compound), debt repayment and accrued benefits connected with debt product. When individual are literate in financial matters, they see through the consequences of loan burden and therefore are likely to use their loans prudently (Rahman et al. 2022).

On other end, individuals with poor financial knowhow are easily confused with financial information since enough knowledge to handle the information. They record unnecessary losses which they would have minimized if they had good knowledge of planning for their debt towards attaining their financial goals (Rieger, 2022). Poorly managed debts can lead accumulation of bad debts resulting extra expenses related to late loan repayments, interest penalties and surcharges. Therefore, financially illiterate individuals experience loan distress and over-indebtedness unlike people with intense financial skills (Widjaja et al. 2022).

2.3.4. Behavioral Factors

Behavioral factors are a pattern of human responses to external stimulus or an event (Caetano et al. 2022). They define human perception and emotions over different life situations and environmental response. With regards to indebtedness issues, behavioral factors are crucial in defining an individual's response in loan uptake. Risk perception, materialism and emotions are main behavioral factors this study uses to explore their relationship with indebtedness level. Risk perception is how individuals judge possible negative outcomes of debt decisions while materialism defines people's act of consumption and their possible responses to debt decisions (Widjaja et al. 2022). Emotions entails both long-term and short term overflow of feelings a person develops or withdraws in handling debt decisions (Betti et al. 2023; Caetano et al. 2022; Rieger, 2022).

In loan decision-making process, particular risks are involved and people perceive them differently. Some have high risk perception level while others exhibit low risk perception level. People with high risk perception level are likely to avoid taking loans compared to those with low risk perception level (Betti et al. 2023). Low risk perception level makes people have a feeling that the outcomes would be attractive which pushes individuals to take more risks. Sometimes the risks they take are higher than the expected returns and may end up making poor loan decisions that may result into over-indebtedness situation. People with high risk perception level seek fewer risks as they feel outcomes of loan decision are less attractive and would avoid extreme level of risks that may leave them over-indebted (Barros & Botelho, 2022).

On other end, extreme level of materialism may cause over-indebtedness and these individuals are very willing to depend on loans for satisfactions of their needs and acquisition of assets. Acquisition and possessions of assets is their happiness as it indicates their success in life (Watson, 2023). Richins and Dawson (2022) describe it as the greediness to live a comfortable life. Highly materialized people are high spenders while lowly materialized people are good savers. Materialized people are in pursuit of possessing assets and do not compare the cost with benefit. They borrow more to spend on luxuries and impulse purchases; and have been reported to make high use of capacity credit cards and installment plans (Frigerio et al. 2023).

Emotions are complex task in nature and directly affect a person loan decisions. Positive and negative emotions influence how people handle borrowing decisions. Positive emotions are likely to make a person take more risky loan products while people with negative emotions tend to take loan products with fewer risks (Caetano et al. 2022; Rieger, 2022). This implies positive emotions significantly associated with over-indebtedness level compared with negative emotions. Emotions

that are heavily linked with over-indebtedness are pride, shame, jealousy, and social status ego. Fear and nervousness exhibit low indebtedness level (Huy & Zott, 2023).

2.4. Recap of Literature Review

Chapter two has provided literature review and empirical studies done by other scholar to avoid duplication of work. The existing literature review was done based on three main variables of the study which included loan product portfolio, demographic factors, finance literacy level and behavioral factors in relation to personal debt. This has helped to identify the gaps in past studies which lay a basis for the researcher to conduct a study on antecedents of personal debt in Kenyan regional context, specifically Kenya commercial Banks in Nakuru County.

Studies done by different scholars such as Volpe (2023), Dunn (2023) and Thipe (2023) were in South Africa as opposed to Kenyan perspective presenting a contextual research gap. Harris's (2023) only explored one element of loan portfolio and never failed addressed other loan products leading to a contextual research gap. Sylves (2022), Ponchio (2022), Meniago et al. (2021) and Wubben (2021) study findings were done in developed world whose contextual characteristics differ from Kenyan characteristics. Noyer (2023) also focused in the global context and therefore the findings could not be generalized for Kenyan since Kenya and Philippians have varying contextual characteristics. Lyons and Kass-Hanna (2022) highlighted some of the factors leading indebtedness by an individual, they only accounted for digital lending platforms at expense of other variables hence need to conduct a study on antecedents of personal debt. Sum and Memba (2023) focused on SACCOs as opposed to commercial bank sector presenting another contextual research gap. Above empirical report clearly indicates the need to address the empirical gap in the

literature by assessing the antecedents of indebtedness level of personal debt among KCB employees in Nakuru County



CHAPTER THREE

RESEARCH METHODOLOGY

3.0. Introduction

This chapter describes the research methodology adopted in conducting the study. It also deliberates on the research design, study population, sampling methods, data collection instruments, data analysis and ethical procedures to be used.

3.1. Research Design

Research design is a general plan that the researcher intends to use in conducting the study in order to execute the objectives of a research (Kosterink, 2022). The study employed a descriptive research design to examine the antecedents of personal debt among employees of commercial banks. This research design described the state of affairs as it existed when the research was being conducted. This design helped to get more insight about the existing situations without causing any changes to it.

3.2. Location of the Study

This study was based in Nakuru County adjacent 158km and 122.7km next to Nairobi County and Narok County respectively with a population of 2,162,202 residents. It is located in the former Rift Valley province and covers approximately 7,509.5km². It is the 19th largest county out of 47 counties found in Kenya and highly populated after Nairobi and Kiambu County. In terms of well-developed financial system and enjoy three tiers of banking system with KCB, Cooperative Bank, Equity bank, Absa and Standard Chartered Bank in dominance of tier 1. Tier 2 banks that are medium size lenders entails Family bank, I&M, NIC, Diamond Trust, Prime, Bank of India and Bank of Africa. Specific tier 3 banks in the county are ABC bank, Credit Bank, Kenya Women Finance Trust, Development Bank, Sidian Bank and Jamii Bora Bank. In the area of focus of this research, the county has specifically 7 KCB branches (falling under tier 1) which include KCB Nakuru main branch, KCB Naivasha Branch, KCB Edgerton Branch, KCB Menengai Branch and KCB Flamingo Branch (Gachuhi, 2024).

3.3. Target Population

The target population is the population to which a researcher intends to examine using research instruments to get results on study variables (Morse, 2020). The target population included

employees from 7 Kenya Commercial Bank branches in Nakuru County. These branches were KCB Nakuru Main Branch, KCB Njoro, KCB Gilgil, KCB Flamingo, KCB Navasha, KCB Edgerton Branch and KCB Menengai Branch. These banks provide credit services and therefore had adequate information on debt history. These banks had 36 loans personnel, 74 relationship personnel and 77 tellers. This amounted to 187 employees of commercial banks of Kenya as the target population for this study as displayed in the table 1.

Table 1: Population Distribution

Position	Population			
	Loans Personnel	Relationship Personnel	Tellers	Total
KCB Nakuru Main Branch	9	14	13	36
KCB Njoro	6	12	12	30
KCB Gilgil	3	9	10	22
KCB Flamingo	3	7	9	19
KCB Edgerton Branch	7	13	13	33
KCB Navasha	5	13	12	30
KCB Menengai Branch	3	6	8	17
Total	36	74	77	187

Source: Bank Supervision Annual Report, (2025)

3.4. Sampling Technique and Procedures

Sampling technique and procedures are the methodologies that provide the basis for the selection of a study sample and other important aspects of the study (Murthy, 2020). In a broad context, researchers are interested in obtaining some type of information through a survey for some population of interest. The study applied Yamane's formula (cited in Kosterink, 2019) to determine the sample size and drew samples based on strata. Murthy (2020) explains that proportionate stratified sampling method ensures that members from every stratum have equal chance to represent their input in the study.

3.4.1. Sample Size Determination

A sample size is a subset of a particular population (Kosterink, 2019). This study applied Yamane's formula (cited in Kosterink, 2019) to determine the sample size for the study.

$$n = \frac{N}{1 + N(e)^2}$$

n = Selected Sample Size

N = The Whole Population

e = Error Value (0.05)

Therefore

$$n = \frac{187}{1 + 187 (0.05)^2}$$

$$n = 127 \text{ Respondents}$$

Therefore, the researcher used 127 respondents as the representative sample

3.4.2. Sampling Procedure

Sampling entails selecting a portion of an aggregate or a portion of entire population on which inferences or judgment is made. The researcher used proportionate stratified sampling method to draw samples of the population. Proportionate stratified sampling method helped to draw samples proportionate to every size of the stratum. This study used four strata which were based the job position of the employees in seven Kenya Commercial Banks in Nakuru County as in table 2 below.

Table 2: Sample Size Distribution

Strata	Population	Number of Respondents Drawn	Percent
--------	------------	-----------------------------	---------

Stratum 1 (Loans Personnel)	36	14	11.8
Stratum 2 (Relationship Personnel)	74	105	88.2
Tellers	77		
Total	187	127	100

Source: (Researcher, 2025)

3.5. Research Instruments

This study collected data using structured questionnaires. Murthy (2020) explains that questionnaires are essential in ensuring valid responses to the questions are obtained. Structured questionnaires take less time (Creswell, 2021b) and are most eligible in in busy business organizations like commercial banks. The questions were designed using a five point Likert scale distributed from strongly agree to strongly disagree with scores distributed from 5-1 respectively. The questionnaire had four parts. Section one examined bio data of the respondents to enable cross tabulation between demographic factors and personal debt. Section two examined the effect of loan product portfolio on personal debt among employees while section three examined the effect of finance literacy debt among employees.

3.6. Testing for Reliability and Validity of Research Instruments

Degree by which the sample of test items represents the content the test is designed to measure is termed as validity (Murthy, 2020). On other end, reliability is capacity of the test instrument to produce the same results if tested twice on different populations (Murthy, 2020). This study applied content validity by employing expert opinion to comment on the representativeness and suitability of questions. The instrument was revised and modified based on comments from experts. A pilot study was also conducted on a small population sample at Equity bank twice at varying times and the findings were correlated to ascertain reliability.

3.7. Data Collection Methods and Procedures

The questionnaires were distributed physically by the researcher and with help of research assistants in time. The researcher gave it a span of four weeks duration after distribution of the questionnaires to allow respondents to fill in the data. However, the researcher kept a track record of questionnaires given out and made follow ups. Reminders were sent to make track of unreturned questionnaires.

3.8. Data Analysis and Presentation

Both descriptive and inferential statistics were used for data analysis with help of version 24 Statistical Package for Social Sciences (SPSS). The data was coded into numerical figures which were then entered into SPSS for analysis. Descriptive analysis specifically entailed mean, standard deviation, frequency percentages while inferential statistics included regression model summary, ANOVA and regression coefficients and presented was done using charts and tables. Inferential statistics were computed and arrived at using the following regression model:

$$W = \mathcal{B}_0 + \mathcal{B}_1 M_1 + \mathcal{B}_2 M_2 + \mathcal{B}_3 M_3 + \mathcal{B}_4 M_4 + z$$

W = Personal Debt

M_1 = Loan Product Portfolio

M_2 = Demographic Elements

M_3 = Finance Literacy

M_4 = Behavioural Elements

\mathcal{B}_0 = Constant $\mathcal{B}_1, \mathcal{B}_2, \mathcal{B}_3, \mathcal{B}_4$ = coefficients of determination z = error term

3.10. Ethical Consideration

This study was governed by important ethical issues while conducting the survey. The research avoided intrusion by seeking authorization to carry the study from concerned authorities. The

researcher sought permit from the National Commission for Science Technology and Innovation (NACOSTI) before going for data collection. Permission and consent from commercial banks' authorities was also be sought prior the data collection. Introductory letters and consent form were attached to the questionnaires to explain the purpose of the study. This ensured voluntary participation and enabled study participants to be informed before the data collection process begins. Furthermore, the research selected study participants who were the representative of the population under the study to avoid sampling biasness.

Confidentially is another ethical matter observed in this study and therefore the respondents remained anonymous by not indicating their names in the questionnaires. This helped to maintain privacy of the respondents by protecting their personal information. Moreover, the researcher intended to use the data collected primarily for no other work but academic purpose alone. The researcher also intended to uphold data integrity by avoiding the conflict of personal interest that may have affected the findings of the research. Therefore, actual facts and figures were reported the way they were without falsifying, biasness or changing the data. The researcher also respected the Honor patents, copyrights and other forms of intellectual property. To attain this, the study acknowledged the work of other scholars' contribution through citations, references and copy pasting was also avoided.



CHAPTER FOUR

RESEARCH FINDINGS AND DISCUSSIONS

4.0. Introduction

This chapter aims at reporting research findings and interpretation of the results regarding the Antecedents of Indebtedness Level of Personal Debt among Employees of KCB in Nakuru County, Kenya. The results in this chapter have been analyzed and presented based on objectives of the study with help of descriptive and inferential statistics.

4.1. Reliability Test Results

The results of the first test and second test were compared against a threshold of >0.7 . The recommended threshold for 6 and above item questionnaire is >0.7 while 5 and below item is >0.5 (Dikko, 2021). Therefore, the reliability was evidenced as in table 3.

Table 3: Cronbach Alpha Reliability Test Results

Variables	No of Items	Coefficient
Loan Product Portfolio	5	.522
Demographic Elements	5	.541
Finance Literacy	5	.538
Behavioral Factors	4	.517

Source: (Researcher, 2025)

4.2. Response Rate

The researcher distributed questionnaires to 127 respondents and 120 respondents responded by fulfilling the questionnaires. Seven questionnaires were not returned. Therefore, the response rate of 94 % was attained which was adequate for data analysis according to Kosterink (2022).

4.3. Demographic Information of the Respondents

4.3.1. Gender of the Respondents

The study established the demographic information of the respondents as showcased in figure 2. The findings showed that 50.8% were males while 49.2% were females with a percentage difference of 1.6%. These findings imply that gender balance had been achieved by commercial banks of Kenya in terms of employee recruitment and selection. Therefore this enriched data sources from both genders.

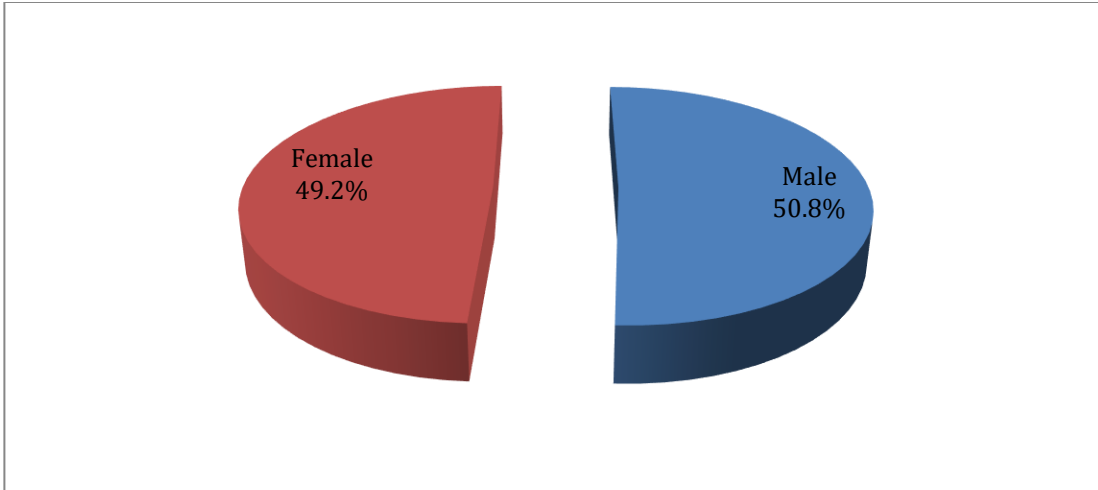


Figure 2: Respondents' Age Information

(Source: Research, 2025)

4.3.2. Age of the Respondents

In figure 3, the findings indicated that 47% of the respondents were aged between 36-49 years; 25% were aged 50 years and above while 20% had were between 25-35 years of age. Only 8% of the respondents were aged between 18-24 years. From the results, it can be concluded that most of the respondents were aged between 36-49 years. Therefore, they were at prime age of their career which improved the quality of responses collected from the respondents.

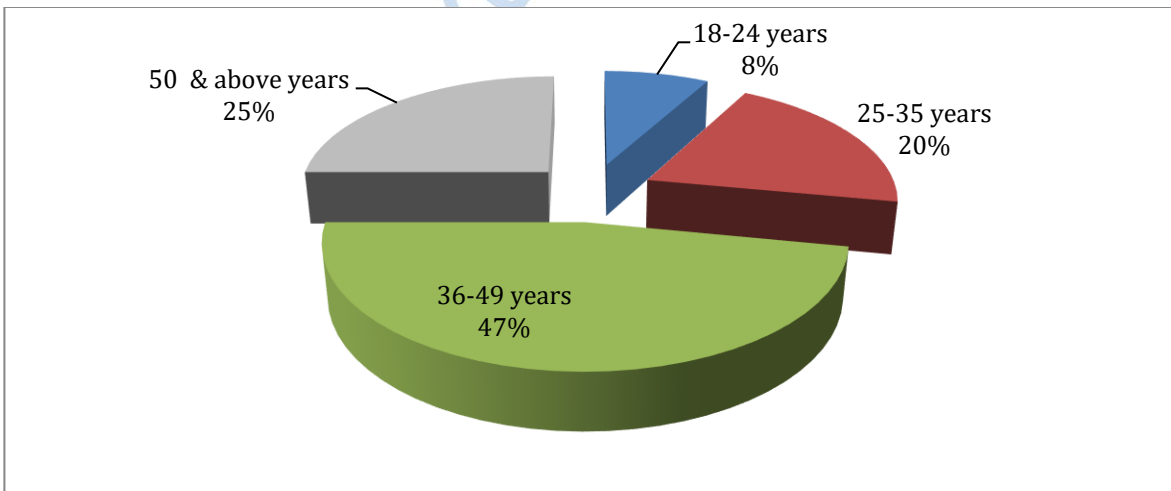


Figure 3: Respondents' Age Information

(Source: Research, 2025)

4.3.3. Marital Status of the Respondents

The study further established the marital status of the respondents. The results in figure 4 showed that 57.5% the respondents were married, 25 % were in single status while 16.7% had either divorced or separated. The above data on marital status was essential when conducting cross-tabulation assessment on the link between marital status and the indebtedness level of personal debt among employees.

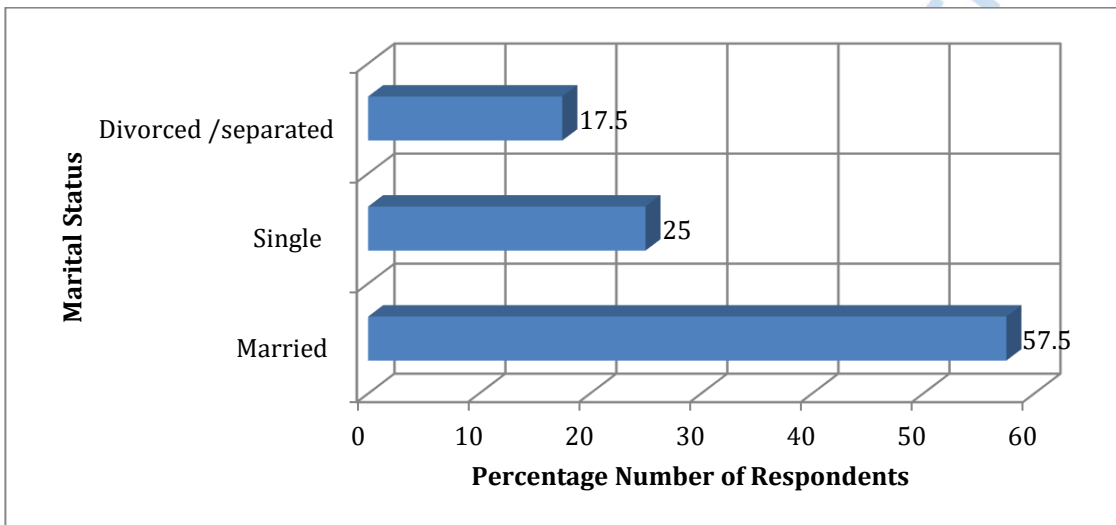


Figure 4: Respondents' Marital Status Information

(Source: Research, 2025)

4.3.4. Education of the Respondents

This section examined the education level of the respondents as provided in figure 5. Most of respondents by 50% reported to have attained undergraduate degree followed by diploma level which accounted for 25%. Twenty two point five percent of the respondents were postgraduates while the minimum level of 2.5% had merited with certificate level. These findings implies that all respondents were educated which improved the quality of responses to the questions in the data collection tool.

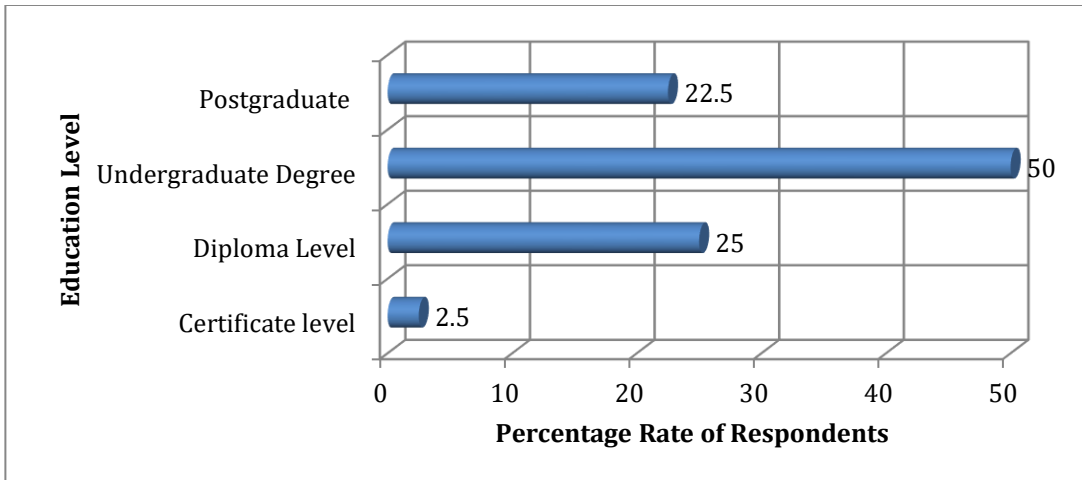


Figure 5: Respondents' Education Level

(Source: Research, 2025)

4.3.5. Income Level of the Respondents

Figure 6 showcases the respondents' level of income. The results indicated that the income for 30% of the respondents ranged of KES.100, 000 and above, followed by KES.70,000-99,000 as indicated by 27.5% of the respondents. Twenty two point five percent of the respondents earned between KES. 40,000-69,000 while the least income bracket was K.sh. below 40,000 as showcased by 20% of the respondents. The information was useful in cross-examination to establish the relationship between income level and the indebtedness level of personal debt among employees.

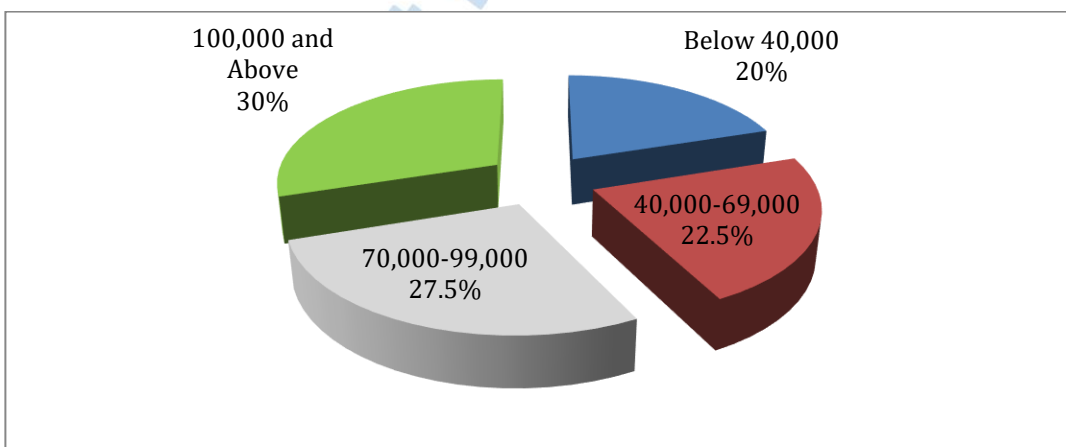


Figure 6: Respondents' Income Level

Source: (Research, 2025)

4.4. Descriptive Analysis

4.4.1. Loan Product Portfolio and Indebtedness Level of Personal Debt Among Employees

Table 4 provides different responses showing the effect of loan product portfolio on indebtedness level of personal debt among employees. The findings showcased that 95.8% of the respondents had accessed a loan in the past three years (mean 4.67, standard deviation=0.393) while only 4.2% had not used loan products in the past three years (mean 1.79, standard deviation=0.200). The results of the study also showed that 95.8% of the respondents' accessed loans from multiple loan providers. Digital loan providers were the highest ranked loan providers at 37.5% (mean 3.51, standard deviation=0.421) followed by mobile network operator at 30% (mean 3.43, standard deviation=0.355). Micro finance banks were ranked at 16.7% (mean 3.37, standard deviation=0.355); SACCOs ranked at 8.3% (mean 3.16, standard deviation=0.329); and commercial banks ranked at 7.5% (mean 3.09, standard deviation=0.321). When asked about the platform they used to access the loan, 42.5% of the respondents used mobile lending platforms such as KCB M-Pesa, MShwari and Fuliza (mean 3.14, standard deviation=0.322); 32.5% used digital applications like Zenka app (mean 3.09, standard deviation=0.319); 15% used credit card (mean 3.07, standard deviation=0.313) while 10% physically visited the bank (mean 3.03, standard deviation=0.311). The most accessed loan products had 6% to 8% rate interest per annum as evidenced by 67.5% of the respondents (mean 3.18, standard deviation=0.327); 22.5% (mean 3.12, standard deviation=0.315) and 10% (mean 3.08, standard deviation=0.302) of the respondents owed loans with interest per annum below 5% and above 9% respectively.

Table 4: Loan Product Portfolio & Indebtedness Level of Personal Debt among Employees

<i>Question: Have you accessed credit in the previous 3 years?</i>	%	M	Std. Dev
YES	95.8	4.67	.393

NO	4.2	1.79	.200
<u>Question: If yes, please indicate the loan provider</u>	%	M	Std. Dev
Digital Loan Providers e.g. Zenka Loan App	37.5	3.51	.421
Mobile network Operator e.g. Safaricom	30	3.43	.355
Micro Finance Banks	16.7	3.37	.335
SACCOs	8.3	3.16	.329
Commercial Bank	7.5	3.09	.321
<u>Question: What platform did you use to access the loan?</u>	%	M	Std. Dev
Mobile Lending Platform (KCB M-Pesa, MShwari, Fuliza)	42.5	3.14	.322
Digital Application (Zenka app)	32.5	3.09	.319
Credit Card	15	3.07	.313
Physical visit to the Bank	10	3.03	.311
<u>Question: What is the interest rate per annum of the amount you owe?</u>	%	M	Std. Dev
Between 6%-8%	67.5	3.18	.327
Below 5%	22.5	3.12	.315
Above 9%	10	3.08	.302

Source: Research (2025)

From the findings in table 4, the study deduces that there is an increased popularity for digital loan provider such as Zenka Loan App, mobile network operator such as M-Safaricom and micro finance banks due to less stringent loan access measures compared to SACCOs and Commercial Banks' loan providers. This implies that easy lending platforms are crucial determinants of indebtedness level of personal debt among employees as mobile lending platforms and digital application increased the probability of employees being indebted with personal loan. Mobile lending platforms and digital application digital loans require less process to access and are usually unsecured compared to than traditional loans from SACCOs and commercial banks. The study further infers that there is great tendency of employees being indebted with personal debt when loan rate interest per annum is below

8% and low tendency of employees being indebted with personal debt when loan rate interest per annum is above 9%.

The findings of this study also correspond to Samaratunge et al. (2021), Rose (2023), Halima (2020), Ndege (2021), Lee and Kwon (2023), and Harris (2023). Samaratunge et al. (2021) also established a strong association between digital finance and the likelihood of obtaining a loan. Rose (2023) believes that transition to digital loan products could be another breed to unsound credit decision and overspending habits. The use of digital loan products with less collateral requirements is increasingly popular and this to some extent is perceived to be among the causes indebtedness that may generate financial distress later in life.

Halima (2020) and Ndege (2021) also affirm that even though digital loan products do not need collaterals, they are linked with high interest rates which causes the potential risk of debt. Lee and Kwon (2023) also content that majority of the loan product consumers tend to be blinded by the fact that using unsecured loans may satisfy their needs immediately by enabling them to purchase things they would not have afforded. However, this has worked against consumers' expectation according to Harris (2023) as most unsecured loan consumers recorded high risk of debt and out of 100 households, 57% portrayed high impairment credit records. This was a clear implication that consumers experience financial strains and in most cases could not make rational choices because they lacked information and unable to see through the loan terms and rates.

4.4.2. Demographic Elements and Indebtedness Level of Personal Debt among Employees

The study also conducted an assessment on the effect of demographic elements on indebtedness level of personal debt among employees. Table 5 provides case summaries of relations between demographic elements and indebtedness level of personal debt among employees.

Table 5: Case classification: Demographics vs. indebtedness Level of Personal Debt

Crosstab					
Count		Cases With Loans		Cases Without Loans	
		N	%	N	%
Employees		115	95.8	5	4.2
Gender					
	Male	75	65.2	1	20
	Female	40	34.8	4	80
	Total	115	100	5	100
Age					
	36-49 years	51	44.3	5	100
	50 & above years	30	26	0	0
	25-35 years	24	21	0	0
	18-24 years	10	8.7	0	0
	Total	115	100	5	100
Marital Status					
	Married	67	58.3	2	40
	Single	28	24.3	2	40
	Divorced /separated	20	17.4	1	10
	Total	115	100	5	100
Income					
	100,000& Above	33	18.3	3	60
	70,000-99,000	31	45.2	2	40
	40,000-69,000	27	23.5	0	0
	Below 40,000	24	13	0	0
	Total	115	100	5	100

Source: Research (2025)

From table 5, there were 115 cases of employees with personal loans and only 5 cases of employees without personal loans. For those with personal loans 75 cases were male while 40 cases were females. It can be inferred that gender determined the indebtedness level of personal debt as male employees dominated female employees in securing loans while female employees showed dominance in avoidance behavior to take loans. This discrepancy can be elaborated by dynamics in relationship. For example, in most family relationships, men are family heads and are control of household finances ranging from acts such as seeking mortgages or personal loans. For women, they tend to borrow as the last alternative and therefore ladies have a tendency of cutting back on essentials and maximizing on mechanisms to avoid borrowing. Similar with other researchers,

Ponchio (2022) established that men as family heads in Australia portrayed high level of tendency to take loans to satisfy their families compared to women. Gouskova (2022) also established that Men tend to consume loan products more than women since most men have a tendency they have a tendency of spending on family education, medical bills, and clothing and food among others.

Fifty one cases and 30 cases of employees aged 36-49 years and 50 & above years reported to have personal loans respectively as indicated in table 5. Twenty four cases and 10 cases of employees aged 25-35 years and 18-24 years had personal loans respectively. All age brackets had no cases without loans except 5 case of employees aged 36-49 years. It can also be deduced from these findings that older professionals showcased more cases of indebtedness level of personal debt than young employees. In support of these findings, Lazarony (as cited in Rahman et al., 2022) argues that young professionals are unable to access loans from banks and agencies since they exhibit score poor credit standings and no collaterals unlike old professionals who exhibit good credit ratings and have adequate collaterals as pre-requisites for loan access. This implied that young professionals were in early stages of their career and therefore exhibited low income that was not enough to guarantee for loan security.

The study also established that 67 cases of married families were indebted and only 2 cases were not indebted as indicated in table 5. There were 28 cases of single families with personal debts and 2 cases without personal debt. For divorced or separated families, 20 cases had loans while 1 case had no loans. It can be inferred that although marital status across all the three cases (single, married and divorced/separate) affected the level of indebtedness of personal loan, married exhibited high cases of indebtedness level of personal debt. This can be linked with the fact that married families tend borrow to spend on family related bills such as medication, school tuition fee or housing unlike single families which have less family bills. Gouskova (2022) affirms that single families tend to overspend on

luxuries and therefore they are likely to borrow excessively to gratify their instant needs while divorced families report high level of financial distress hence are likely to indebted. Bucks et al. (2022) also reported that family structure has significant influence on financial distress as married families; single families and divorced families were linked with indebtedness status. For married couples, they were likely to borrow to finance various family obligations such as buying a family home, paying tuition fee for their kids and settling hospital bills while single families showcased tendency to overspend on luxuries and therefore they are likely to borrow excessively to gratify their instant needs. Chien and DeVaney (2023) also noted that separated/divorced families experience financial distress and would also borrow to gratify other basic family obligations.



In terms of income level as provided in table 5, high rate of indebtedness (33 cases) were recorded among employees earning between KES. 100,000 and above followed by 31 cases of employees with income range of KES. 70,000-99,000. Within the income bracket of 40,000-69,000, 27 cases were indebted and 24 cases were also evidenced for those earning below KES 40,000. There were only 3 cases of employees without personal loans under the income bracket of KES 100,000 and above and 2 cases under the income bracket of 70,000-99,000. It can be deduced that at least employees from every low income, middle income and high income groups were indebted with personal loans. Middle and high income are favorites when it comes to borrowing since they have financial security and good credit ratings unlike low income groups. As a result, high income and middle income groups exhibited high cases of personal debt compared to low income group. Rahman et al. (2022) also argued that middle and high income group was eligible to take loans

due to strong financial security and good credit ratings. This is because they people who earn high tend to save and invest more in property and can guarantee their assets to secure alone according to Tufano (2022).

4.4.3. Finance Literacy and Indebtedness Level of Personal Debt

This section examined the effect of finance literacy on indebtedness level of personal debt among employees as provided in table 6. The respondents indicated their level of agreement on how finance literacy affected their capacity to secure a loan from lending institutions.



Table 6: Finance Literacy and the Capacity to Secure a Loan

	SD	D	N	A	SA	M	Std. Dev
Statements	%	%	%	%	%	M	Dev
Computing interest rates on loans	0	0	8.3	41.7	50	4.93	.510
Managing loan repayment periods	0	0	7.5	40	52.5	4.36	.509
Choosing loans with fair interest rates	0	0	7.5	45	47.5	4.61	.511
Knowledge on planning loan usage	0	0	15	40	45	4.39	.522

Source: Research (2025)

From table 6, it was evidenced that 55% of the respondents strongly agreed disagreed that finance literacy affected their capacity to compute interest rates on loans while 8.3% were neutral (mean 4.93,

standard deviation=.510). Finance literacy also affected ability of employees in managing loan repayment periods as evidenced by strong agreement from 52.5% of the respondents, 40% disagreed while 7.5% were neutral (mean 4.36, standard deviation=0.509). Choosing loans with fair interest rates was another employees' capacity affected with financial literacy also as indicated by 47.5% and 45% of the respondents who strongly agreed and agreed respectively (mean 4.61, standard deviation=0.511). In terms of knowledge on planning loan usage, financial literacy was essential as supported by 45% and 40% of the respondents who strongly agreed and agreed respectively (mean 4.39, standard deviation=0.522). These research findings were in agreement with other scholars like Rieger (2022) and Benjamin et al. (2022). Rieger (2022) observed that loan product comes with different incentives and rates meant to lure the consumers and supports that with financial literacy, individuals can handle debt matters by making sound decisions over loan uptake. Benjamin et al. (2022) also affirm knowledgeable consumers matched with financial skills gain from wide range of financial market while those with poor knowledge are prone to make mistakes.

The researcher also introduced questions on interest computing to test finance literacy among employees as provided in table 7. Most of the respondents (88.3%) got correct answers by indicating a period of 2 years (mean 4.86, standard deviation=0.501). Most incorrect answer as indicated by 5% of the respondents was more than two years (mean 4.77, standard deviation=0.401). Four point two percent of the respondents indicated I Do Not Know (mean 4.23, standard deviation=0.399) and while 2.5% of the respondents preferred not to answer (mean 4.17, standard deviation=0.363).

Table 7: Finance Literacy among Employees

<i>Question: Assuming you take a loan of KES 20,000 at simple interest rate of 5% monthly, how long can it take for the amount owed to reach KES 44,000?</i>	%	M	Std.
	%	M	Dev
2 years	88.3	4.86	.501
Less than 2 years	0	0	0
More than two years	5	4.77	.401
Do not know	4.2	4.23	.399
I prefer not to answer	2.5	4.17	.363

Source: Research (2025)

From table 7, the study infers that most respondents exhibited mathematical skills for sound financial knowledge which improved debt borrowing and repayment behavior. This also improved their budgeting, planning loan usage and choosing loans with fair interest rates. Rahman et al. (2022) affirms that great precaution is highly needed since some credit product may put the consumer in over-indebtedness situation. With financial literacy, one can make sound judgment by cautiously conducting an evaluation on interest rates, types of interest rates (simple and compound), debt repayment and accrued benefits connected with debt product. When individual are literate in financial matters, they see through the consequences of loan burden and therefore are likely to use their loans prudently. Volpe (2023) also found also that illiterate and semi-literate individuals exhibited high debt default behavior since they were less financially informed. On other end, well informed individuals made sound decisions on debt choices and avoided highly risky loans. These findings were also echoed by Evens, (2023) who showcased that financial literate consumers in South Africa had better plans for their finances and avoided unnecessary debts.

4.4.4. Behavioral Elements and Indebtedness Level of Personal Debt among Employees

The study also examined the effect of behavioral elements on indebtedness level of personal debt among employees as presented in table 8.

Table 8: Behavioral Elements and Indebtedness Level of Personal Debt among Employees

Statements	SD	D	N	A	SA	M	Std.
	%	%	%	%	%		Dev
I'm likely to borrow at low interest rate	0	0	0	32.5	67.5	4.44	.511
I'm likely to borrow at high interest rate	50	25	7.5	17.5	0	4.51	.509
I'm likely to borrow to buy a property	0	0	17.5	37.5	45	4.41	.591
I'm likely to borrow to satisfy my status	0	0	17.5	35	47.5	4.02	.538

Source: Research (2025)

From table 8 above, employees were likely to borrow at low interest rate as evidenced by strong level of agreement from 67.5% of the respondents while 32.5% were agreed (mean 4.44, standard deviation=0.511). The data analysis results further showed that 50% and 25% of the respondents strongly disagreed and disagreed respectively that they were likely to borrow at a high interest rate. However, 17.5% of the respondents agreed to be likely borrow at high interest rate (mean 4.51, standard deviation=0.509). Forty five percent and 37.5% of the respondents also strongly agreed and agreed respectively that they would borrow to buy a property while 17.5% remained neutral (mean 4.41, standard deviation=0.591). Forty seven point five percent and 35% of the respondents also

strongly agreed and agreed respectively that they would borrow to satisfy their status while 17.5% remained neutral (mean 4.02, standard deviation=0.538).

From the above findings, it can be concluded that behavioral factors such as risk perception, materialism and emotions are crucial in influencing a person decision to be indebted by acquiring a personal loan. Similarly with other past studies, Rieger (2022) observed that materialized people are in pursuit of possessing assets and would borrow to buy a property; while positive emotions significantly pushed people to borrow for satisfaction of their social status ego. On other end, Caetano et al. (2022) noted that individuals with low risk perception level have a feeling that the outcomes would be attractive which pushes individuals to take more risks such as borrowing at high interest rate; while people with high risk perception level are likely to borrow at low interest rate.

Prior research by Betti et al. (2023); Huy & Zott (2023); and Botelho (2022) and Frigerio et al. (2023) also showed there was significant relationship between risk perception, materialism, emotions and indebtedness level. Betti et al. (2023) report that people with high risk perception level are likely to avoid taking loans compared to those with low risk perception level. Low risk perception level makes people have a feeling that the outcomes would be attractive which pushes individuals to take more risks. Sometimes the risks they take are higher than the expected returns and may end up making poor loan decisions that may result into over-indebtedness situation. Barros and Botelho (2022) also affirm that people with high risk perception level seek fewer risks as they feel outcomes of loan decision are less attractive and would avoid extreme level of risks that may leave them over-indebted.

In support of the findings of this study, Frigerio et al. (2023) contended that materialized people are in pursuit of possessing assets and do not compare the cost with benefit. They borrow more to spend on luxuries and impulse purchases; and have been reported to make high use of capacity credit cards

and installment plans. Huy and Zott (2023) also found that positive emotions were significantly associated with over-indebtedness level compared with negative emotions. Emotions that were heavily linked with over-indebtedness were pride, shame, jealousy, and social status ego

4.5. Inferential Analysis

4.5.1. Correlation Analysis

Table 9 presents Pearson correlation of antecedents of indebtedness level and personal debt among employees. The table shows that there is significant relationship between antecedents of indebtedness and the level of personal debt among employees ($r=0.361$, $p<0.05$). Loan product portfolio on has significant effect on indebtedness level of personal debt ($r=0.166$, $p<0.05$). Demographic elements are significant to indebtedness level of personal debt ($r=0.099$, $p<0.05$). Finance literacy significantly affected indebtedness level of personal debt ($r=0.090$, $p<0.05$). Behavioral elements had a significant impact on indebtedness level of personal debt ($r=0.085$, $p<0.05$). Other researches also indicate several factors correlate with increased personal debt, including demographics, proliferation diverse loan products, financial literacy and behavioral factors Bucks et al. 2022; Fatoki, 2023; Lunt, 2021; Mishra & Mishra, 2022). Rose (2023) asserted that easy access to loans and credit cards, even with minimal credit check contribute to higher debt levels. Mishra & Mishra (2022) affirms that behavioral factors such as risk perception, materialism and emotions have great influence on impersonal debt. Perceptions of risk, both positive and negative, can influence the decision to take on debt. Desire for material possessions can contribute to debt as individuals seek to acquire goods beyond their means. Emotional factors, such as impulsivity or anxiety, can also influence borrowing decisions.

Lower levels of financial literacy according to (Lunt, 2021) increased the likelihood of less informed decision-making regarding borrowing and repayment. Bucks et al. (2022) also identified

demographic perspective (income, education, age, family marital status and gender) were main antecedents to personal debt. Younger individuals perceive their debt burden as lower than older individuals, while older individuals may be more likely to have higher debts. Higher income levels generally correlate with the ability to take on more debt, while lower incomes can make it difficult to repay debt.

Table 9: Correlation Analysis for Antecedents of Indebtedness Level and Personal Debt

	Personal Debt	Antecedents of indebtedness	Loan Product Portfolio	Demographic Elements	Finance Literacy	Behavioral Elements
Personal Debt	1					
Antecedents of indebtedness	.361*	1				
Loan Product Portfolio	.166	.241*	1			
Demographic Elements	.244	.038		1		
Finance Literacy					1	
Behavioral Elements						1

Demographic	.099	.257	.176*	1		
Elements	.631	.075	.463			
Finance Literacy	.090	.046	.039	.326*	1	
	.448	.432	.767	.042		
Behavioral	.085	.044	.038	.045	.339*	1
Elements	.337	.468	.756	.765	.049	

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

Sources: Research (2025)

4.5.2. Regression Analysis

Table 10 shows the existing relationship between antecedents of indebtedness level and personal debt. The R-squared value of 0.602 reveals that nearly 63.3% of the variation in the dependent variable (personal debt level) can be explained by the independent variables (Loan Product Portfolio, Demographic Elements, Finance Literacy & Behavioral Elements) in the model. This is high value and indicates that the model fits the data very well. The adjusted R-squared of 0.825 is also very high, indicating that this value takes into account the number of independent variables in the model and penalizes for adding unnecessary variables. Therefore it can be concluded that loan product portfolio, demographic elements, finance literacy and behavioral elements were crucial aspects that determined the level of personal debt. Shapiro (2023) also noted that these factors (loan product portfolio, demographic elements, finance literacy and behavioral elements) often interact and influence each other potentially increasing the level of household debt.

Table 10: Model Summary for Antecedents of Indebtedness Level and Personal Debt

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate

1	.3133	.633	.825	.2461
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a. Predictors: (Constant), Loan Product Portfolio, Demographic Elements, Finance Literacy Behavioral Elements

Source: Research (2025)

The ANOVA tests further established statistical linear relationship between the antecedents of indebtedness level and personal debt. Table 11 showcases the ANOVA for antecedents of indebtedness level and personal debt. From the linear regression of the F statistics signifies that there exists a statistical and significant linear relationship between antecedents of indebtedness level and personal debt ($F(1, 61) = 10.923, p < .05$). This tells that the regression analysis was appropriate for the study and implied that at least one of the independent variables was significant to personal debt level. The study surmises that loan product portfolio, demographic elements, finance literacy and behavioral elements as the independent variables significantly affect personal debt level as the dependent variable.

Table 11: ANOVA for Antecedents of Indebtedness Level and Personal Debt

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	.899	1	.961	10.923	.004
Residual	2.305	61	.093		
Total	5.201	49			

a. Predictors: (Constant), Loan Product Portfolio, Demographic Elements, Finance Literacy & Behavioral Elements

b. Dependent Variable: Personal Debt Level (Source: Research (2025))

Table 12 also gives information on the results on regression coefficient tests on the antecedents of indebtedness level and personal debt.

Table 12: Coefficient for Antecedents of Indebtedness Level and Personal Debt

Model	Unstandardized		Standardized	t	Sig.
	Coefficients		Coefficients		
	B	Std. Error	Beta		
1 (Constant)	2.404	.272		6.033	.000
Loan Product Portfolio	.173	.056	.337	2.001	.005
Demographic Elements	.155	.055	.366	2.555	.005
Finance Literacy	.149	.050	.375	2.801	.005
Behavioral Elements	.140	.053	.306	2.106	.005

a. Dépendent Variable: Personal Debt Level

(Source: Research (2025))

In table 12, the linear regression of the relationship between antecedents of indebtedness and personal debt is in the form of:

$$W = \mathcal{B}_0 + \mathcal{B}_1M_1 + \mathcal{B}_2M_2 + \mathcal{B}_3M_3 + \mathcal{B}_4M_4 + z$$

$$W = 2.404 + 0.173M_1 + 0.155M_2 + 0.149M_3 + 0.140M_4 + z$$

Whereby

W = Personal Debt

M₁ = Loan Product Portfolio

M₂ = Demographic Elements

$M_3 =$ Finance Literacy

$M_4 =$ Behavioural Elements

$B_0 =$ Constant

$B_1, B_2, B_3, B_4 =$ coefficients of determination

$z =$ error term

From table 12, it can be deduced that that loan product portfolio, demographic elements, finance literacy and behavioral elements were significant to personal debt level since their p-value was < 0.05. It can also be deduced from the equation that loan product portfolio, demographic elements, finance literacy and behavioral elements impacted on personal debt level by 17.3%; 15.5%; 14.9% and 14.0% respectively. In conclusion based upon the results, the analysis indicates that that loan product portfolio, demographic elements, finance literacy and behavioral elements were statistically significant in affecting personal debt level.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.0. Introduction

The key findings of the study are summarized in this chapter. The chapter has the following sections: summary, discussions, conclusions and recommendations. The results of the study have been discussed by relating to related to past studies.

5.1. Summary of the Findings

5.1.1. Demographic Factors of the Respondents

The study established the demographic information of the respondents. The population of male and female respondents was almost similar with a slight a percentage difference of 1.6% which implied that there was gender balance in commercial banks of Kenya when it comes to employee recruitment and selection and therefore this enriched data sources from both genders. Most of the respondents in the workforce were in the middle (36-49 years) hence they were at prime age of their career which improved the quality of responses collected from the respondents. Most respondents were married while the least had separation and divorce issues. In terms of education, all respondents were educated to different levels as most reported to have attained undergraduate degree while the least had achieved postgraduate and certificate level. This was significant in terms of knowledge as it improved the accuracy level of responses provided in the questionnaire. The study also established most respondents earned from KES.100, 000 and above while the least earned below KES.40,000 which dictated the perception level towards taking a personal loan.

5.1.2. What influence does loan product portfolio have on indebtedness level of personal debt among employees of KCB in Nakuru County?

The study established that loan product portfolio was significant to indebtedness level of personal debt among employees ($\beta=0.173$, $p<0.05$). Loan interest, the tending platform and type of loan (unsecured vs. collateral significantly influenced the borrowing behavior and indebtedness level of personal debt. All these elements interact and influence each other potentially increasing the level of household debt. There is an increased popularity for digital loan providers and micro finance banks due to less stringent loan access measures compared to SACCOs and Commercial Banks' loan providers. This implies that easy lending platforms are crucial determinants of indebtedness level of personal debt among

employees as mobile lending platforms and digital application increased the probability of employees being indebted with personal loan. Mobile lending platforms and digital application digital loans require less process to access and are usually unsecured compared to than traditional loans from SACCOs and commercial banks. There is also great tendency of employees being indebted with personal debt when loan rate interest per annum is below 8% and low tendency of employees being indebted with personal debt when loan rate interest per annum is above 9%.

5.1.3. What influence do the demographic elements have on borrowing behavior of KCB employees in Nakuru County?

The study also established that there was significant association between demographic elements and indebtedness level of personal debt among employees ($\beta=0.155$, $p<0.05$). There were more cases of male employees being indebted with personal loans than female cases. Employees in prime age and old age of their professional also exhibited more cases of indebtedness level of personal debt than young employees. Although all marital families' statuses exhibited different indebtedness levels of personal loans; married families reported many indebtedness cases compared to single and separated/divorced families. Indebtedness cases were also reported across all the income brackets. However, high income and middle income bracket portrayed more cases of having acquired personal loans compared to individuals from low income bracket.

From an intensive point of view, the way gender roles shape intra-household obligations led to different paths to debt for men and women. Men take on debt for investments, family bills as heads and home purchases among others and therefore display high risk tolerance level compared to women. Marital status has also strong association with the indebtedness level of personal debt. This can be explained from the perception married individuals are generally perceived as more stable and

responsible, potentially leading to lower risk assessments and increased loan approval rates. Conversely, unmarried individuals, particularly those with unstable living situations or a history of relationship challenges, might face higher loan risks or be viewed as less trustworthy. Marriage often signals a commitment to long-term financial planning and stability, which can be reassuring for lenders. In terms of age factors such as lack of collaterals and lack of financial literacy among youth also hinder their ability to effectively manage loans or to guarantee for loan security. On other end, individuals with lower income are perceived as higher-risk borrowers by lenders potentially making it difficult for them to obtain loans. High income individuals have better credit score which makes them more attractive to lenders, potentially leading to more favorable loan terms.

5.1.4. Does finance literacy level affect indebtedness level of personal debt of KCB employees Nakuru County?

The study also established that there was significant association between finance literacy and indebtedness level of personal debt among employees ($\beta=0.149$, $p<0.05$). Majority of the respondents exhibited mathematical skills for computation of loan interest which improved their debt borrowing, repayment behavior, budgeting, planning loan usage and choosing loans with fair interest rates. In essence, individuals who are financially literate understand the interest rates, fees, and other costs associated with borrowing better leading them to take on debt they cannot afford to repay. With a

grasp of basic financial principles, individuals may not struggle to create and stick to a budget helping them to avoid overspending and the accumulation of bad debts.

Great precaution is highly needed since some credit product may put the consumer in over-indebtedness situation. With financial literacy, one is less susceptible to being targeted by high-cost lenders who offer products with deceptive terms and conditions. One can make sound judgment by cautiously conducting an evaluation on interest rates, types of interest rates (simple and compound), debt repayment and accrued benefits connected with debt product; they see through the consequences of loan burden and therefore are likely to use their loans prudently.

5.1.5. What influence do the behavioral elements have on KCB employees' borrowing behavior?

The study also established that behavioral elements were significant to indebtedness level of personal debt among employees ($\beta=0.173$, $p<0.05$). Risk perception, materialism and emotions were crucial in influencing a person decision to be indebted by acquiring a personal loan. Highly risk perception employees were likely to borrow at low interest rate avoided loans with high interest rate; while lowly risk perception employees were likely to borrow at high interest rate. Highly materialized employees were likely borrowed to buy a property irrespective of the kind interest rate that comes with the loan. On other end, employees with positive emotions obtained loans to satisfy their status while those with negative emotions avoided loans at all cost. From expansive angle of view, possessions bring happiness to materialistic individuals and therefore are more prone to impulse credit decisions and use; while emotions like inadequacy or the desire for external validation can drive excessive spending. This leads to overspending, increased debt, and financial instability. Low risk perception level makes people feel that the outcomes would be attractive which pushes them to take more risks such as

borrowing at high interest rate; while people with high risk perception level are likely to borrow at low interest rate.

5.2. Conclusion

The study concludes that loan product portfolio significantly affects indebtedness level of personal debt ($\beta=0.173$, $p<0.05$). Loan interest, the lending platform and type of loan are crucial in influencing the borrowing behavior. Individuals will borrow more when interest rate is and less stringent measures are needed to access loans. Digital loan products comes with less stringent measures has increased individuals' access to personal loans.

The study also concludes that demographic elements have significant influence on indebtedness level of personal debt ($\beta=0.155$, $p<0.05$). Financial distress is greatly determined by gender, age, family marital status and income level which push individuals to take loans so as to solve their distress. For this reason, men tend to be more indebted than women. Married families and separated/divorced families also exhibit more debts than single families due to essential family obligations. Old individuals in profession and individuals with robust incomes are tend to borrow more because of robust loan security than people who are young in their career due to poor credit standings.

The study also concludes that finance literacy enables individuals to make sound decisions on debt choices ($\beta=0.149$, $p<0.05$). Good financial knowledge enhances the capacity of individuals to compute interest rates on loans, management of loan repayment periods, planning loan usage and choosing loans with fair interest rates. As a result of financial knowledge, individuals can see through the consequences of loan burden and therefore are likely to make rational decisions.

The study also concludes that behavioral elements determined the indebtedness level of personal debt ($\beta=0.173$, $p<0.05$). Risk perception, materialism and emotions are main behavioral elements

influencing a person decision to acquire a loan. Lowly risk perception and highly materialized individuals tend make irrational loan decision and mistakes while highly risk perception and lowly materialized individuals are cautious while mankind credit decisions. Positive emotions significantly push people to borrow to satisfy their ego while people with negative emotions tend to take loan products with fewer risks or avoid loans.

5.3. Recommendations

5.3.1. Recommendations for Practice

Loan product portfolio significantly affects indebtedness level of personal debt. This study suggests the importance of consumers taking a detailed research on various loan options availed by credit provides before accessing loans. Researches can be conducted on the types of loans (either secured or unsecured), the interest rates, type of interest (simple or compound), repayment period and other hidden terms of payment. This can be attained through use of online resources, friends and relatives as well as professional help.

Demographic elements have significant role in determining a person's indebtedness level of personal debt. The study recommends the need for credit providers to consider identifying risks associated with demographic characteristics such as family marital status, gender, and age and income level. This help them tailor loan products the suitably match consumer's demographic factors for efficient administration of loans.

Although financial literacy is an enabling factor in matters of making right debt decisions, the level of literacy varies with individuals. The study recommends the need of individuals to engage with variety of sources like online reading materials, professional advisors and financial news from various media to improve their financial skills. Likewise, lending institution should also help enhance credit

consumers' financial skills through training seminars before awarding credit to the loan applicants. This can help them track their spending, plan for loans and repayment plans.

Following the aforementioned findings on indebtedness level of personal debt, behavioral factors are crucial in defining an individual's response in loan uptake. Therefore, there is the need for lending institutions to enlighten credit consumers various behavioral aspects that may impact to unsound loan decisions making leading to over-indebtedness of the loan consumers.

5.3.2. Recommendations for Further Studies

This study recommends similar studies to be done on the antecedents of indebtedness level of personal debt among employees of other commercial banks in other counties of Kenya. This will enlarge scope of the study outcomes apart from providing references sources for comparison. As a result, the findings may be generalized to other commercial banks.

REFERENCES

- Agarwal, A. (2020). Adoption of Mobile Money Transaction Platforms in Developed and Developing Nations: Diverse Connectivity effects. *Journal of Consumer Behavior*, 21-33
- Andersson, J. (2023). Digitalization Strategies in the Banking Industry. *Review of Financial Studies* , PP:34-54.
- Anderson, J. W. (2021). Henry, A. Murray's Theory: A psycho-biographical exploration. *Human Behavior Research*, 66(3), 211–323
- American Economic Report, (2023). *Regional Economic Report*, U.S.A (December).
- Azma, N., Rahman, M., Adeyemi, A., & Rahman, M. K. (2021). Tendencies of Being Indebted:

- Empirical Report from Malaysia. *Financial Behavior Review*, 30(1), 133–245
- Barros, L., & Botelho, D. (2022). Risks Associated with Finance & and Effects on Personal Debt. *Brazilian Administration Review*, 6(5), 320–399
- Beck, T., Pamuk, H., Ramrattan, R., Uras, B.R.(2023). How Finance Instruments Affects Human Behavior & Development. *Economic Growth Journal*, 133, 162–186
- Benjamin, D., S. Brown and J. Shapiro. (2022). Cognitive Capability, Behavioral & Irregular Partialities. *E. EA Review*,22(7): 1110-1668.
- Betti, T. Ruh, K. Huy. & Marc (2023). Human Behavioral response to New Loan Products. *International Journal of Bank Marketing* 37: 44–68.
- Brown, M., J. Grigsby, W. Klaauw, J. Wen & B. Zafar. (2022). The Connection between Financial training & Debt Behavior among Youths. *Journal of Financial Research*, 18(12): 550-789.
- Bucks, B., Moore, K., Kennickell, A., & Mach, T. (2022). *Alterations in U.S.A. family Finances from 20018 to 2024: Evidence from the Survey of Consumer Finances*. Federal Reserve, 81, A3-A66.
- Caetano, S., Patrinos, A., & Palacios, M. (2022). *Aversion to Debt: A Review of Loan Applicants (Students' Case)* (Policy Research by World Bank Working Paper No. 4234).
- Central Bank of Kenya, (2022). *Making Finance Kenya a better Place*. Retrieved on 22nd October 2022www-wds.cbk.org
- Chien, Y. & DeVaney, S.A. (2023). The Influence of Socio-Economic Elements on Usage of Digital Card and Loan Decisions. *J Con Affrs*, 29, 59–89.
- Cosma, S. & Pattarin,F. (2023). Individual Credit Choices in Relation to Personalities and Attitudes In MolyneuxP.(eds), *Bank Strategy, Governance and Ratings* (pp.294-321).Palgrave-Macmillan, London
- Creswell, J. (2021b). *Introduction to Research Methods*, Burns, R London, Sage.
- Demirgüç-Kunt, A., Harris K., Satwinder, K., Johan, M.T., Burns, Y., & Husl, R. (2023). Opportunities for financial inclusivity through Diversification of Financial services: 2020 Global Findex database. *J Econ Rev*, 27(1), 7-11.
- Dick, C. & Jaroszek, L. (2023). *Household Debt Choices and the Influence of Debt Literacy*. ZEW Discussion Papers, No. 13-027.
- Disney, R. (2022). *Indebtedness & Financial Knowledge Level: Empirical Report for UK*

- Consumers*. Discussion Papers, Nottingham College.
- Dunn, L. (2023). Empirical Report on Credit Card Usage, Borrowing Habits and Repayment Patterns. *Economic Inquiry*, 51(1), 394-407.
- Evens, F., (2023). Financial Literacy and Indebtedness. *The Journal of Consumer Affairs*, 44(2), 358-380.
- Fatoki, O. (2023). Over-Indebtedness Causes and the Effects among Household in South Africa. *Journal of Social Sciences*, 43(2), 97–103.
- Faulkner, S., Berry, A., Hughes, M., & Jarvis, R. (2023), ‘ *Bank lending beyond the theory* ’ , Chapman & Hall: London
- Fazzari, S.M., (2023). Household Credit and End User Education: Risks Sources & Growth. *Capitalism and Society*, 5(1), 56-78.
- Feng, X., Lu, B., Song, X., Ma, S., (2023). Financial Literacy & Household Finances: Moderating variables. *Journal of Financial Research*, 63, 100–112.
- Fin-Access Household Survey (2023). Over-Indebtedness and the Connection with Financial Literateness among Low Earning Households. *Journal Financial Analysis*, 37: 4-21
- Frigerio, M., Ottaviani, C., & Vandone, D. (2023). Assessment of Impulsivity and Household Over-indebtedness. *J. of Consum. Behav.* 42(3), 145–223.
- Gathergood, J. (2022). Financial Literacy & Self-Discipline in Household Debt. *J. Econ. Psychology*, 26(4), 544-933.
- Gachuhi, K. (2024). Nakuru’s Town long journey to city status. *The standard*. Retrieved 16 June 2021
- Gärbling, T., Erich K., Alan L., & Fred V. (2022). Credit Decisions in Financial Crises. *J. Econ. Psychol.*, 6(1), 40-44.
- Gouskova, W. (2022). Single Cohabiting Couples and Tendency of Spending. *Journal of Consumer Research*, 5(3), 7–15.
- Grable, J., Lytton, R., & O’Neill, B. (2022). Financial Prediction Biasness & Risk Tolerance. *J. of Behav. Finance*, 9(2), 19–25
- Gubbins, P. & Totolo, E. (2022). Digital credit in Kenya: Evidence from demand-side surveys. FS Kenya. *Sociological Review*, 27: 264-280.
- Halima, R., (2020). Effect of financial innovations on borrowing behavior. *IAJEF* (8), 215-292.
- Harris, E. (2023). Use of Credit Card and Variations in Consumer Buying Decisions. *Journal of*

- Consumer Research*, 6(1), 58–66.
- Hasler, A. (2023). *How Financial Literacy Varies with Gender*. Global Financial Literacy Excellence Centre. *J. of Consum. Behav.*, 7(1), 15–18
- Hilgert, J., Hogarth, L., & Beverly, S. (2023). Managing Household Finances: How Critical is Financial Knowledge to Debt Behavior? . *J. of Consum. Behav.*, 77(9), 115–167
- Huy, Q., & Zott, C. (2023). An Analysis of Dynamic Managerial Proficiencies: Managerial Regulation of Emotions & Resource Mobilization. *JSM*, 10(4), 17–23.
- Kemp, S. (2021). Students’ Debt, Perception Towards Debt, Impulsive Purchases & Management of Finances. *NZJP*, 34(3), 56-61.
- Kenya Economic Survey, (2024). Regional Economic Report (May).
- Kinyura, G. F. (2023). *Factors affecting youth loan uptake in Kenyan universities*, (Unpublished MBA Project), University of Nairobi
- Kosterink, J. G. W. (2022). *Research Methods for Business Students* (4th ed.). Boston, MA: Pearson Education.
- Kumar, S., & Goyal, A. (2021). Household Loan and the Determining Factors in Thailand. *International Journal of Economic Policy in Emerging Economies*, 13(4), 327–336.
- Kurowski L. 2021. Household Debt, Financial Knowledge, Behavior and the Contribution of COVID-19 crisis. *Journal of Risk Management*, 9(4): 1-19.
- Lazarony, H. (2024). Indebtedness Level and the Contributing Factors. *International Journal of Financial Studies*, 23(8), 6-11.
- Le. (2023). What Determines the Access to Credit by Household in UK? *Journal of Management Research*, 4(4), 90-115
- Lee, J. & Kwon, K.N. (2023). Credit Cards as Alternative Means of Payment & Financing Approaches. *Journal of Consumer Affairs*, 36(2), 239-262
- Lerskullawat, A. (2023). Household Loan Determinants in Thailand. *International Journal of Economic Policy in Emerging Economies*, 13(4), 327–336.
- Lewis, A., (2022).The Psychology of Debt; a Decision Analytics Briefing Paper from Experian. *Experian Decision Analytics*, pp.2–6.
- Lucas, R. (2022). Use of Affordability Predictions to Improve Debt Products. *Business Review*, 87(11), 22.

- Lunt, P.K. (2021). Projecting Household Credit and Credit Payment: Psychological, Economic and Social Determining Factors. *Journal of Economic Psychology*, 13, 111-134.
- Lyons, A.C. and J. Kass-Hanna (2022). A Methodological Overview to Defining and Measuring Digital; Financial Literacy. *Financial Planning Review*, 4(2).
- Meniago, K., Ottaviani, C., & Vandone, D. (2021). A meta-analytic investigation of consumer over-indebtedness: The role of impulsivity. *International Journal of Consumer Studies*, 44(4), 328–342.
- Mester, L. (2024). Credit Card Interest Rates and the Effect on Consumer Behavior. *The American Economic Review* 85(5): 1327–1336
- Meyll, T. and Pauls, T. (2022). Indebtedness and Gender Differences. *Finance Research Letters*, Vol. 31, (c): 398-404.
- Mishra, M., & Sasmita M. (2022). Financial risk tolerance among Indian investors: A multiple discriminant modeling of determinants. *Strategic Change* 25: 485–500.
- Moenjak, T., Anyarat K. & Chompoonoot, M. (2020). *Fintech, financial literacy in relation to Borrowing Rate savings Rate among consumers: The case of Thailand*. Asian Development Bank Institute Working Paper Series No. 1100.
- Moore, D. (2023). *Literacy Level in Financial Matters in Washington State: An analysis of Behavior, Experience, Knowledge & Attitudes*. Washington State University, Technical Report 03-39.
- Morse, P. (2020). Essentials of a Research. *Annual Research*, 22(8), 15-56.
- Mudida, R. (2020). *Mordern Economics*. Nairobi: Focus Publication Limited.
- Murthy, C. E. (2020). Qualitative descriptive research: An acceptable design. *Pacific Rim International Journal of Nursing Research*, 16(4), 255-256.
- Mustafa Z., Nanjero, W., Wanja, V., & Wachira, M. (2021). *Where credit is due: Customer experience of digital credit in Kenya*. Microsave.
- Ndege, K. (2024). The Link Between Financial Sustainability and Financial Innovation Among Commercial Banks in Kenya. *International Journal of Humanities & Social Sciences*, 4 (7), 10- 13.
- Ndege, K. (2021). Financial Innovation and Risk-Taking. *International Journal of Humanities & Social Sciences*, 4 (7), 10- 13.
- Nehman, J. (2023). *Payday loans and credit cards: New liquidity and credit scoring*

Puzzles? Economic Review 99(2): 412–417

- Ngugi, N., (2023). Training Sacco Members and their Credit consumption patterns. *Global Advanced Research Journal of Management and Business Studies*, Vol. 2(5) pp. 285-290.
- Nogueira, R. C. G. (2023). The Relationship between Family Status and Personal Debt Level. Pontifícia Universidade Católica do Rio de Janeiro, Rio de Janeiro, Brasil.
- Noyer, C. (2023). *Relationship between loan products portfolio and borrowing behavior; A case of commercial banks in Philippines*. (Unpublished master's thesis). Manila University
- Olima, B. (2023). *Effect of family marital status and mortgage loan uptake among Equity bank employees*: Paper presented at African International Business and Management (AIBUMA) conference, Nairobi
- Orton, L. (2020), *Financial Literacy: Lesson from International Experience*. CPRN Research Report
- Ozili, P.K., (2022). Impact of digital finance on financial inclusion and stability. *Borsa Istanbul Rev.* 18 (4), 329–340.
- Peiris, M. J. (2022). The Effect of Commercial Bank Loans Products on the Household Debt In Turkey. *Signature*, 63, 72503.
- Ponchio, M. C. (2022). Debt Pattern and Materialism Level among Low Income Earners in São Paulo City. *Tese (Doutorado em Administração)* - Fundação Getúlio Vargas, São Paulo.
- Rahman, M., Azma, N., Masud, M. A. K., & Ismail, Y. (2022). Indebtedness Level and the Contributing Factors: The Role of Demographic & Behavioral Aspects. *International Journal of Financial Studies*, 8(1).
- Ren, B., Li, L., Zhao, H., Zhou, Y., (2022). The financial exclusion in the development of digital finance—a study based on survey data in the Jingjinji rural area. *Singap. Econ. Rev.* 63 (01), 65–82.
- Richins, M. L., & Dawson, S. (2022). The Relationship between Materialism Orientation and Individual household debt. *Journal of Consumer Behavior*, 19(3), 303.
- Richins, L., & Scott D. (2022). Behavioral Elements and Indebtedness Level of Personal Debt. *The Journal of Consumer Research* 23: 317–29.

- Rieger, M. O. (2022). Financial Literacy and Propensity to Take a Loan. *Journal of Risk and Financial Management*, 13(12), 324.
- Rose, R. (2023). Consumers Perception of Loan Products and Mechanisms of Payment. *Journal of Consumer Research*, 38(6), 1129-1139.
- Samaratunge, R., Kumara, A.S., Abeysekera, L., (2021). How to Break Debt Cycle: Sri Lankan Policy Options. *J. Policy Model*. 42, 728–745
- Sassler, S. (2022). The process of entering into cohabiting unions. *Journal of Marriage and Family*, 66(May), 491–505.
- Sylves, R. (2022). *The Cost of Credit Card among College Scholars: Harm or Good? A Real-World Rhetorical Reader*. Ed. Cheryl Glenn. Bedford 506-512. Print.
- Shapiro, K. (2023). Who is ‘behavioral’? Cognitive ability and anomalous preferences. *Journal of the European Economic Association*, 11(6): 1231-55.
- Soman, D. & Amar, C. (2023). How Do the Credibility and Credit Limit Affect Expenditure Decisions Among Consumers? *Journal of Marketing Science*, 21(1), 32-53.
- Smith, M. B. (2020). Henry A. Murray (1893–1988): Humanistic psychologist. *Journal of Humanistic Psychology*, 30(1), 6–13
- Smock, P. J., Manning, W. D., & Porter, M. (2023). How Cohabitators Spend Money and Decisions To Marry. *Journal of Marriage and Family*, 67(August), 680–696
- Stafford, F. P., & Gouskova, E. (2022). *Distress caused by Mortgage Decisions: Family and financial life-cycle factors*. Working Paper 2010-225. Retirement Research Center, University of Michigan.
- Sum R., & Memba F., (2023). The Intake of Secured loans and Unsecured loans; A case of 13 SACCOs Kiambu County in Kenya. *International journal of social science and technology* 2(5), p.443.
- Thipe, G.K. (2023). *Does Credit-Card Incentive Packages Affect Borrowing Habits of Bank Customers?* (Unpublished master’s thesis). North-West University, Mafikeng Campus in Pretoria North, South Africa
- Tufano, P. (2022). Teach Workers about the Perils of Debt. *Harvard Business Review*, 87(11), 22.
- Vieira K. (2023). An examination of Individual behaviors and Inclination towards indebtedness. *Journal of Behavioral and Experimental Finance* 3: 1–10.

- Volpe, R. P. (2023). Evaluating Households and their Level of Financial Literacy. *Financial Services Review*, 11(3), 289-307
- Wamalwa, P., I. Rugiri & J. Lauler. (2023). *Digital credit, financial literacy and household indebtedness*. Kenya Bankers Association Working Paper Series 08/19.
- Watson, T. (2023). Level of Materialism and Over-Indebtedness. *Journal of Economic Psychology*, 4(11), 27–31
- Widjaja, R., Pertiwi, D., & Program, I. (2022). Behavioral Aspect Contributing to Tendencies to Take a Loan among Millennial Generation in Surabaya: Materialism, Emotions, Financial Literacy and Risk Perception. *International Journal of Financial and Investment Studies* 1(2), 85–93.
- Wilson, J.O., (2022). Financial literacy and responsible finance in the FinTech era: capabilities and challenges. *Eur. J. Finance* 26, 297–301.
- Wise, M. & Xu, W. (2022). Influence of Credit Cards on Behaviors of Card Holders. *Journal of Operations Research*, 135 (1), 261-274.
- World-Bank (2024). Review of Policy Support Instrument, *And Second Review Under The Standby Credit Facility—Debt Sustainability Analysis Update in Africa*
- Worthington, C. (2021). Households Financial Distress: What is the connection with household Debt? *Australian Journal of Consumer Studies*, 30(1), pp.2-15
- Wubben, E. F .M. (2021), Loan Products and Household Debt, *European Journal of Management* 2 (4), 12-18.
- Xiao, J. and Porto, N. (2023). Financial behavior and the Consumer Biasness. *Economic Journal of Financial Management*, 2(2): 1-14.
- Yang, J., Wu, Y., Huang, B., (2023). The Gap between Financial Knowledge and Digital Money: *An empirical Investigation of Chinese households*. In: ADBI Working Paper 1209. Asian Development Bank Institute, Tokyo.
- Young, G. (2020). Unsecured Borrowing and the Driving Factors: evidence from the British Household Panel Survey. *Management Science*, 8(3), 287-303.
- Zuckerman, M., & Kuhlman, D. M. (2022). Role of Personality in Taking Risks: What are the Common Bi-social Elements? *Journal of Personality*, 68(6), 999-1029.



APPENDICES

APPENDIX I: INTRODUCTION LETTER



DIRECTORATE OF GRADUATE STUDIES

MBA/2023/60386

6th March, 2025

*National Commission for Science Technology & Innovation (NACOSTI)
Off Waiyaki Way, Upper Kabete,
P.O Box 30623- 00100
NAIROBI, KENYA*

Dear Sir/Madam,

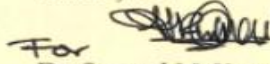
RE: BONIFACE NTENG'A MOGOI - REGISTRATION NO. MBA/2023/60386

The purpose of this letter is to introduce the above named student who is pursuing **Master of Business Administration** in the department of **Accounting and Finance** in the school of **Business and Economics**.

The title of the research is "**Antecedents of Indebtedness Level of Personal Debt Among Employees of Kenya Commercial Banks in Nakuru County, Kenya.**" It has been cleared by the University's Ethics Review Committee (Certificate attached) and now has to proceed to the field to collect data between **March, 2025 and May, 2025**.

Any assistance accorded to the student will be highly appreciated.

Thank you.



For
Dr. Samuel M. Karenga, PhD
Director, Graduate Studies
Enc.

Mount Kenya University
P.O. Box 342-01000, THIKA
Office of the Director
Graduate Studies

Main Campus, General Kago Road, P.O. Box 342-01000 Thika.
Tel: 020-2878 000, Cell: +254 709 153 000
Email: info@mku.ac.ke, Web: www.mku.ac.ke
Chartered and ISO 9001 : 2015 Certified Institution.
Unlocking Infinite Possibilities

APPENDIX II: CONSENT LETTER

Consent Form for Participation in Research

Title of Study: Antecedents of Indebtedness Level and their influence on Personal Debt among Employees of Kenya Commercial Banks in Nakuru County, Kenya

Dear Participant,

You are invited to take part in this study by the title “Antecedents of Indebtedness Level and their influence on Personal Debt among Employees of Kenya Commercial Banks in Nakuru County, Kenya.” Currently, I am a post graduate students enrolled for Masters in Finance at Mount Kenya University. Right now am under the progress writing my project as an academic requirement for the award of master’s degree in finance. The purpose of the study is to specifically look at how loan product portfolio, demographic elements, finance literacy and behavioral elements are related with the propensity of a person being indebted. Attached is the questionnaire developed to helping in data collection on the title of study as aforementioned. As the study participant, you are voluntarily required to take part in this study. You may also avoid participating in this study or leaving blank any queries you are unwilling to answer. No participation risks are known beyond those individuals encounter in daily life and the responses you provide will be kept anonymous and confidential. The data collected for the research will be held under lock and key apart from reporting it as a collective combined total. Your individual responses will only be known by the researchers and not any other party. Your participation in this study has no direct benefits to you but interestingly is of importance to the field, future researchers, individuals, and academicians with matching concerns.

If you reach a decision to take part in this research, kindly respond by answering the questions within the questionnaire to your best level as you can. The questions can approximately take 30 minutes of your take to wind up. Kindly submit back the questionnaire as soon as possible in order to make me able to accomplish project report.

Feel free to contact the people and the conduct below in case you would like to ask any question regarding this project.

INVESTIGATOR; Boniface Nteng’a Mogoi -0735121996

In case you have any issues as the participant in this study, you are kindly directed to get in touch with the chairperson, Mount Kenya University, Ethical Review Committee, P.O Box 342-01000, Thika.

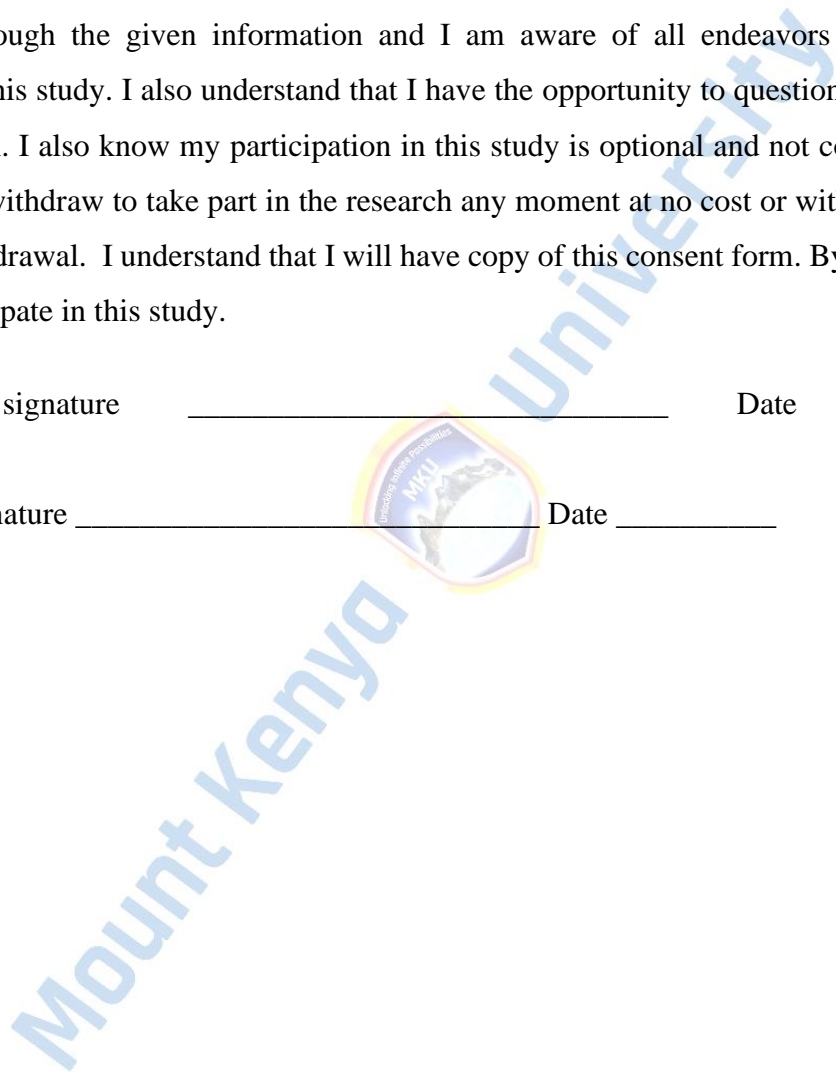
We appreciate your support in this critical endeavor.

CONSENT

I have gone through the given information and I am aware of all endeavors regarding my participation in this study. I also understand that I have the opportunity to question in areas that I need clarification. I also know my participation in this study is optional and not compulsory and therefore I may withdraw to take part in the research any moment at no cost or without providing a reason for withdrawal. I understand that I will have copy of this consent form. By my own wish I accept to participate in this study.

Participant's signature _____ Date _____

Researcher's signature _____ Date _____



APPENDIX III: RESEARCH QUESTIONNAIRE

You are part of a carefully selected group of respondents in this study; kindly help in data collection by filling the questionnaire. Tick [✓] where necessary. The data to be collected from you is meant for academic use alone and will be treated with high level of confidentiality.

SECTION A: BACKGROUND INFORMATION

1. What is your gender: Male [] Female []
2. What age group do you belong?
18-24 years [] 25-35 years [] 36-49 years [] 50 and above years []
3. Kindly show your Marital status by ticking [✓] in the boxes below
Married [] Single [] Divorced /separated []
4. What highest education level have you attained?
Certificate level []
Diploma Level []
Undergraduate Degree []
Postgraduate []
None []
5. What highest income level per month in Kenya shillings?
Below 40,000 []
40,000-69000 []
70,000 -99,000 []
100,000 & Above []

SECTION B: LOAN PRODUCT PORTFOLIO & PERSONAL DEBT

6. Have you accessed credit in the previous 3 years?

YES [] NO []

7. If yes, please indicate the loan provider

Micro Finance Bank []

Commercial Bank []

Mobile network Operator e.g. Safaricom []

Digital Loan Providers e.g. Zenka Loan App []

SACCO []

Others specify

.....

8. What is the rate interest per annum of the amount you owe?

Below 3% []

Between 4%-8% []

Above 9% []

9. What platform did you use to access the loan?

Physically visited the Bank []

Mobile phone bank loan (KCB M-Pesa, MShwari) []

Mobile money loan (fuliza) []

Digital Applications (Zenka app) []

Credit Card []

SECTION C: FINANCE LITERACY LEVEL & PERSONAL DEBT

In what ways does the level of finance literacy affect your capacity to secure a loan from lending institutions? Using the scale of 1-5, please show your agreement level whereby (5→ Strongly Agree; 4→Agree; 3→ Undecided; 2→ Disagree and 1→ Strongly Disagree).

	5	4	3	2	1
Computing interest rates on loans					
Managing loan repayment periods					
Choosing loans with fair interest rates					
Knowledge on planning loan usage					

11. Assuming you take a loan of KES 20,000 at simple interest rate of 5% monthly, how long can it take for the amount owed to reach KES 44,000?

- Two years
- Less than 2 years
- More than two years
- I don't know
- Prefers not to answer

SECTION D: BEHAVIORAL FACTORS & PERSONAL DEBT

12. The following statements examine behavioral factors and personal debt level of an individual.

Using the scale of 1-5, please show your agreement level whereby (5→ Strongly Agree; 4→Agree; 3→ Undecided; 2→ Disagree and 1→ Strongly Disagree).


	5	4	3	2	1
I'm likely to borrow at low interest rate					
I'm likely to borrow at high interest rate					
I'm likely to borrow to buy a property					
I'm likely to borrow to satisfy my status					

Thanks for your commitment

End




APPENDIX IV: RESEARCH PERMIT



NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION.

 Date of Issue: 20/March/2025


RESEARCH LICENSE



This is to Certify that Mr.. BONFACE NTENGA of Mount Kenya University, has been licensed to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev.2014) in Nakuru on the topic: ANTECEDENTS OF INDEBTEDNESS LEVEL OF PERSONAL DEBT AMONG EMPLOYEES OF KENYA COMMERCIAL BANKS IN NAKURU COUNTY, KENYA for the period ending : 20/March/2026.

License No: NACOST/MP/25/417029


Applicant Identification Number: **843767**



 Director General

NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION

Verification QR Code



NOTE: This is a computer generated License. To verify the authenticity of this document, Scan the QR Code using QR scanner application.

See overleaf for conditions

APPENDIX V: APPROVAL LETTER



REF: MKU/ISERC/4830
TO: BONIFACE NTENG'A MOGOI

Date: 06 March 2025

REG: MBA/2023/60386

Dear Sir/Madam,

RE: ANTECEDENTS OF INDEBTEDNESS LEVEL OF PERSONAL DEBT AMONG EMPLOYEES OF KENYA COMMERCIAL BANKS IN NAKURU COUNTY, KENYA

This is to inform you that **Mount Kenya University** has reviewed and approved your above research proposal. Your application approval number is **3552**. The approval period is **06/03/2025 - 05/03/2026**.

This approval is subject to compliance with the following requirements:

- i. Only approved documents including informed consents, study instruments, MTA will be used
- ii. All changes including amendments, deviations and violations are submitted for review and approval by **Mount Kenya University**
- iii. Death and life-threatening problems and serious adverse events or unexpected adverse events whether related or unrelated to the study must be reported to **Mount Kenya University** within 72 hours of notification
- iv. Any changes, anticipated or otherwise that may increase the risks or affect the safety or welfare of study participants and others or affect the integrity of the research must be reported to **Mount Kenya University** within 72 hours
- v. Clearance for export of biological specimens must be obtained from relevant institutions
- vi. Submission of a request for renewal of approval at least 60 days prior to expiry of the approval period. Attach a comprehensive progress report to support the renewal
- vii. Submission of an executive summary report within 90 days upon completion of the study to **Mount Kenya University**

Prior to commencing your study, you will be expected to obtain a research license from National Commission for Science, Technology and Innovation (NACOSTI) <https://research-portal.nacosti.go.ke> and also obtain other clearances needed.

Yours sincerely,

Dr. Alfred Owino, PhD
Chairman, Mount Kenya University ISERC



Main Campus, General Kago Road, P.O. Box 342-01000 Thika.
Tel: +254 20 287 8000, Cell: +254 709 153 000
Email: info@mku.ac.ke, Web: www.mku.ac.ke

APPENDIX VI: SIMIRARITY INDEX

ORIGINALITY REPORT

17%	16%	8%	7%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

1	publication.aercafricalibrary.org Internet Source	2%
2	journals.sjp.ac.lk Internet Source	1%
3	www.researchgate.net Internet Source	1%
4	ir-library.ku.ac.ke Internet Source	1%
5	www.coursehero.com Internet Source	1%
6	strategicjournals.com Internet Source	1%

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APPENDIX VII: NAKURU COUNTY MAP

