## Digital Lending Policies And The Uptake Of Loans By Small-Scale Businesses In Nairobi City County Kenya

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Abstract: This study aimed at establishing how digital lending policies impact on the rate at which small scalebusinesses in Nairobi utilized digital loans to meet their business needs. Specific objectives for this study included how loan limits, rate of interest, speed of access, repayment period, and credit worthiness requirements by digital lenders affect the rate at which small-scale businesses seek loans from traditional sources. The credit rationing, rational choice and Keynes' liquidity preference theoretical models, as well as, empirical literature provided insights for developing conceptual framework and result analysis. Correlational design allowed for determination of the connection between the various digital lending policies and the indicators of the loan uptake. The target population was all the 309,696 registered small-scale businesses operating in Nairobi while stratified sampling technique helped to recruit 304 to participate in answering the questionnaires. SPSS software was applied in analysing the data. A linear regression model was used to establish how the independent variable (loan limits, rate of interest, speed of access, repayment period, credit worthiness) relates with the dependent variable (rate at which the mall scale businesses borrow loans). Content validity and peer debriefing ensured the validity of the findings of the pilot study which involved 32 respondents. While test-retest and Cronbach alpha test helped to improve the study's reliability. Linearity, normality, multicollinearity and heteroscedasticity tests were first administered. It was found that the digital lending policies have positive impacts on the digital loan uptake among the small-scale businesses with the repayment period having the greatest effects. The findings indicate that rate of interest, speed of access and repayment period have significant positive effect with the uptake of loans by small-scale businesses, while creditworthiness has significant negative effect with the uptake of loans by small-scale businesses. Loan limits however has insignificant effect negative effective with the uptake of loans by small-scale businesses. The study further indicates that the small scale businesses would have recorded greater financial performance if the lenders adjusted the repayment periods in response to their liquidity needs. Consequently, the small businesses should collaborate with the digital lending platforms in addressing the borrowing policies that still limit optimization of the mutual benefits. Future researchers should examine whether the introduction of Hustlers Fund would solve the market gaps currently facing the mall scale businesses.

Keywords: Loan Limits, Rate of Interest, Speed of Access, Repayment Period, Credit Worthiness, Rate of Uptake of Digital Loans.

## I. INTRODUCTION

## A. BACKGROUND OF THE STUDY

Small scale enterprises are vital players in every economy given their contribution towards growth in GDP, employment opportunities, and innovation. Globally, the distinctions of these businesses vary as per country depending on the industry, the number of people employed, and the range of revenues (Lussier & Sonfield, 2015). In Kenya, small-scale businesses comprise the enterprises that obtain annual revenues of Ksh. 500,000 to 5,000,000 and with at least 10 and a maximum of 49 employees.

For a long time, the small-scale businesses have suffered inadequate financial inclusion from the potential traditional lenders, such as commercial banks and other formal lending institutions that include SACCOS and micro-credit facilities given their stringent requirements (Muli, 2020). In trying to bridge the gap of inadequate financial inclusion, different financial institutions came up with digital lending that was meant to provide for short-term loans (Totolo & Gubbins, 2018). However, they are characterised by policies, such as giving out of small amounts as loans that are also repayable within short durations. Such policies create doubt as to whether the borrowers can significantly rely on digital loans. Totolo and Gubbins (2018) point that other possible influencing policies on the growth in the working capital include speed of accessing the funds, repayment period, interest rates, and credit worthiness requirements.

Digital lending started after the innovation of smartphones in 2007 when the banks in America and Europe began to make customers' accounts accessible online for emergency usage, such as purchase of household commodities. This technology later evolved to became a platform of application for loans by potential borrowers from the bank in 2013 (Ramdani, Rothwell, & Boukrami, 2020). Overtime, the digital loans attracted many business people who needed money to facilitate their day-to-day transactions. Today, the worldwide digital lending industry is projected to increase from \$5.1 trillion in 2018 to over 12.1 trillion by 2023 or an annual Compound Annual Growth Rate (CAGR) of 18.7% (Gupta & Tham, 2018).

Countries differ on the extent of use of this innovation with North America dominating the global digital lending, while the growing economies being the least in exploiting this opportunity. For example, non-banking digital lending accounted for 3% and 5% of consumer and business loans respectively in 2015. The total digital borrowings were about \$25 billion and are forecasted to reach \$90 billion by 2020, though; developing economies still struggle to have the potential business people embrace the platform before they can boost their lending further (American Bankers Association, 2018).

In Uganda and Tanzania, access to these quick and reliable financial services have resulted in an increase in the small scale businesses that are a major beneficiary to the lending services (Biscaye et al., 2017). These businesses have a quick profit turnover and hence provide a ready customer base for the digital lending services that have short repayment periods. M-Pawa that is a digital loan provider had in the first two years up to 2016 provided digital loans to 4.9 million borrowers in Tanzania (Francis, Blumenstock, & Robinson, 2017). Following the launch of MoKash in 2016 in Uganda, there has been a substantial financial inclusion according to a survey report by (Baganzi & Lau, 2017). MoKash attained 1 million users within the first three months of launch in 2016 and has continued to grow (Francis, Blumenstock, & Robinson, 2017). The same scenario is experienced in Kenya where small scale businesses are significantly embracing digital loans to boost their working capital requirements (Francis, Blumenstock, & Robinson, 2017). Financial inclusion grew from 26.7% in 2006 to 82.9% in 2019. A complete exclusion has also reduced from 41.3% in 2006 to 11% in today (CBK, KNBS, & FSD Kenya, 2019). The main digital lenders in Kenya include M-shwari, Branch, Timiza, Okash, and Tala among others.

## a. DIGITAL LENDING POLICIES

The study concentrated on lending policies affecting the loan uptakes, that include the limits on loans offered, rate of interest, speed of access, repayment period, and credit worthiness requirements.

The rate of interest refers to the amount of money charged for usage of the principal amount by borrowers. Most of the digital lenders charge fluctuating interest rates depending on the repayment period (Gwer, Odero, & Totolo, 2019). The speed of accessing loan refers to the duration between application and receipt of the loan requested. The digital lenders usually give loans almost immediately after one makes an application: at most 24 hours (CBK, KNBS, & FSD Kenva, 2019; Totolo, 2018). Repayment period refers to the period one is allowed to complete paying back the loan. Digital lenders usually have the shortest repayment period that goes up to a maximum of one month (Gwer, Odero, & Totolo, 2019). Businesses who seek, such loans would consider the appropriateness of the repayment period. Credit worthiness requirements refer to the factors that determine whether one should qualify for the loan applied. The digital lenders want those who have no current listing at the CRB as well as those have in the past repaid their loans as per the stipulated deadlines (Mwangi, 2016). The requirements are a deviation from the traditional lenders who mostly considered collateral security and cash flows to determine suitability of a loan applicant.

## b. RATE OF UPTAKE OF DIGITAL LOANS

The rate of seeking digital loans refers to the percentage of micro and small-scale businesses who would always consider applying for digital loans whenever they need funding (Lore, 2019). In Waari and Mwangi's (2013) view, the uptake is a function of availability of cash, interest rate charges, access reliable financial institution and the borrowers' ability to pay or provide collateral. There are different indicators of loan uptake. For example, Central Bank measures the loan uptake using metrics such as growth in loan portfolios, changes in number of loan applicants and approvals (Gichuki et al., 2019). Consequently, this study adopted similar approaches. The rate of uptake was determined by calculating the increase in the proportion of studied SMEs relying on digital loan to fulfil their financial obligations, as well as, comparing the percentage of the financial needs settled by the digital loans as compared to finances obtained from other sources.

## c. SMALL-SCALE BUSINESSES

The study focused on Small-Scale Businesses from Nairobi City County, a region lying within the geographic areas Nairobi City, Kenya. It has 309,696 registered Small-Scale Businesses that undertake different kinds of businesses (Nairobi County Licensing Office, 2019). The SMEs rely on loans from various digital lenders. As KEPSA (2021) cites, there are over 49 digital lenders all regulated by CBK. The leading banks and communication companies such as Safaricom Limited, Equity Bank Limited, Cooperative Bank, KCB limited and ABSA bank are some of the top players in the industry. Other popular digital lenders include Branch, Tala, Okash, Opesa, and many others.

## B. STATEMENT OF THE PROBLEM

A survey by the CBK revealed that micro and small-scale businesses are part of the Small-Scale Businesses that constitute 98% of all business in the country. The enterprises account for 30% of employment opportunities, as well as, 3% of the GDP (African Review of Business and Technology, 2017). This aspect makes the information about their usage of digital loans important to the economy in terms of policy making. Totolo & Gubbins (2018) indicates that micro and small-scale businesses use digital loans as part of the funding for their operations. Currently, 37% of digital credit borrowers in Kenya take the loans to cater for short-term business needs. Almost a similar situation happens in Tanzania, a neighboring country where 1/3 of the borrowers use it as working capital (CBK, 2021). The freedom to borrow from multiple digital lending institutions has made the loans popular among smallscale business. Unlike the bank loans that conducts comprehensive on the credit worthiness of their potential clients, the digital lenders award loans to any applicant irrespective of their credit worthiness (Njenga and Kavindah, 2021). Consequently, the SMEs are at higher risks of taking multiple loans that affect their overall operational expenses; thereby necessitating the study of how their policies influence the uptake of such funds by small scale-businesses is necessary.

## II. LITERATURE REVIEW

## A. CREDIT RATIONING THEORY

Stiglitz & Weiss (1981) proposed credit rationing theory and it refers to the limiting of credit to the borrowers of funds by the lenders even when willing to borrow at high interest rates. This situation connotes a market imperfection or failure since the price mechanism cannot cause equilibrium in the market. The central bank and other lending institutions often undertake this measure whenever there is a shortage of institutional credit that could be given to the business sector (Wu, 2017). Moreover, it can be based on credit worthiness, information asymmetry, and too much loan demands.

## B. RATIONAL CHOICE THEORY

Adam Smith developed the ideas of rational choice theory in the 18<sup>th</sup> century; it posits that individuals undertake rational calculations to achieve results within their objectives (Slaughter, 2019). This theory creates a framework for understanding social and economic behaviours of individuals such as those in business. In the context of funding for entrepreneurs, such persons exercise rationality in choosing the financing sources that allow them to minimize costs and maximize returns from the sources of finance for their organizations. The borrower often chooses the lenders offering the most commercially favourable terms of loan (Slaughter, 2019). In relation to this research, rational choice theory influences the decisions of the borrowers regarding digital lending sources. In as much as potential borrowers may not act rationally, they are likely to consider the interest rates charged, repayment period, loan limit, collateral requirements, and speed of accessing loans and compare them with other alternative sources of loans, such as banks before settling on that accord them maximum benefits in terms of costs and convenience (Slaughter, 2019). Lore (2019) notes that ease of access to digital loans has been critical in making them popular among the SMEs that operate within the Nairobi CBD.

## C. EMPIRICAL REVIEW

## a. LOAN LIMITS AND UPTAKE OF DIGITAL LOANS

Bharadwaj and Suri (2020) explored the influence of digital borrowing in attaining financial inclusivity, particularly in obtaining credit services by individuals and SMEs. The research aimed at establishing whether digital loans that include M-Shwari contributed to financial inclusivity in Kenya. Mixed methods of study were utilized, where data was collected from 10,000 users of M-Shwari loan service and Central banks of Africa was obtained. Study participants were selected randomly to avoid bias. Findings included ascertainment of the rise in mobile loans, an instance that was associated with the marketing efforts by Safaricom Limited and the Central bank of Africa. Further, the lenders were discovered to be using the borrowed funds to meet individual and business needs. Therefore, it is evident that digital loans have positively contributed towards financial inclusivity in Kenya. Meanwhile, the smaller loan limits than the amounts offered by the traditional loan providers is a concern given that it makes it difficult to borrow funds for business activities requiring large capital.

Bharadwaj, Jack, and Suri (2019) studied the influence of financial technology on the growth of digital loans in Kenya and its contribution to households and SMEs. The research aimed at establishing reasons for uptake of such digital loans and factors reasons some individuals shied away. The study used mixed methods, where data from more than 6,000 users of M-Shwari loaning services from Safaricom Limited, with data being collected using telephone interviews. The collected data indicates that users accessed M-Shwari loans for individual needs such as rent, food, school fees, and other domestic purposes. One of the reasons M-Shwari loans were not taken for business purposes is that the service offered a lower loan limit that could not meet most SMEs run by the interviewed individuals. Such limitations were evaluated using the user's transaction history - primarily the use of M-Pesa and other Safaricom services like calls, texts, and data. The study concludes that M-Shwari is just among platforms that deliver digital loans, where over 34% of users are eligible. However, the research did not explore other factors affecting digital loans' accessibility like high-interest rates.

Talom and Tengeh (2020) explored the impacts of digital loans on the performance of SMEs in Douala, Cameroon. The research aimed at adding new knowledge of money transfer in Cameroon by reviewing the implications of payment made

through mobile money in Douala. The study utilized mixed methods and conducted quantitative and qualitative research by administering questionnaires to a sample of 285 SMEs in Doula. Data were analysed using SPSS statistical software. From the analysis, 73% of the total turnover of the SMEs resulted from mobile money. The authors find that SMEs are cash dependent as they need to transact with suppliers and pay for labour and other costs. Thus, they are discouraged by the transaction costs, long queues, charges, documentation, and costs of using commercial banks. However, they have been unwilling to use digital lenders. Most have lower loan limits that cannot provide the necessary liquidity. The authors find that the SME owners in Douala use commercial banks instead of digital lenders, despite the lack of collateral requirement, ease of access, and timely disbursement. The research failed to discuss the impact of interest rates on the reluctance to use digital lenders, despite the rates being a key factor.

## b. DIGITAL LENDERS' RATE OF INTEREST AND UPTAKE OF DIGITAL LOANS

Ndirangu (2021) concentrated on the impacts of interest rates on the loan tendencies of SMEs in Nairobi City County. The research focused on the Wakulima Market in Nairobi. Convenient sampling technique was used given that the market has numerous SMEs that require credit facilities. It was established that the loans by digital lenders were highly charged with interest rates going up to 43% while the repayment period was also short. In addition, the interest rates went up daily whenever those who borrow the funds default. Moreover, aggressive collection methods like contacting family members and friends were used in an effort to force the borrower to repay. Consequently, such negative publicities have led to potential SMEs borrowers avoiding digital loans.

Lukonga and Joshi (2020) investigated the potential of leveraging digital technology in financing business to enhance the advancement of SMEs in the MENAP region. The research aimed at establishing how financial technology can be used to enhance the success of SMEs in the region. The study examined various aspects of the region, starting with structure, policy, SMEs, and banking systems. The study found that the region has limited coverage of credit facilities due to weak insolvency, underdevelopment of private equity. Besides, restrictive regulations have also prevented growth in the non-banking sector. SMEs also have high credit risks, while banks have weak risk management practices. These factors make access to credit facilities by SMEs in the region limited. As a regular, SMEs had cash flow challenges that affected profitability. Thus, the study suggests that digital technology bridges the financial gap experienced by SMEs in the region. However, the authors note that uptake of such loans would be hindered by factors like high-interest rates and short repayment period charged by digital lenders. The study notes that such lending terms are due to risk factors of SMEs and inadequate risk management controls by digital lenders. Thus, the study recommends leveraging digital technology to enhance the funding of SMEs, with regulations on interest rates and repayment periods required.

## c. DIGITAL LENDERS' SPEED OF TRANSACTION AND UPTAKE OF DIGITAL LOANS

Disse and Sommer (2020) find that SMEs face various challenges, especially access to external credit, even though SMEs is essential for economic development in multiple countries. The research objective was to discuss opportunities and challenges of digitising financing instruments to close the financing gap that existed for SMEs in Sub Saharan Africa. Thus, the study explored how digital credit facilities promoted the performance of SMEs in the region and the opportunities and challenges of the new development. The study used mixed methods and surveyed SMEs in the selected region. Findings indicate that over 90% of businesses in Sub Saharan Africa are SMEs, thus essential to the region's economic development. However, access to credit facilities has remained challenging for SMEs, mainly due to collateral requirements, lengthy and cumbersome processes, and the long time it takes to disburse loans. Thus, the study finds that digital technology has been harnessed to provide credit facilities for SMEs, sealing the gap in financing. The study finds that small businesses have access to credit from digital lenders, with the growing uptake due to ease of access and faster processing. The authors find that digital technology has enabled the disbursement of such loans in minutes, thus increasing uptake. However, the study did not explore hindrance factors like high-interest rates and limited repayment periods explored in other studies.

Ayanyemi-Adeboje and Adeboje (2020) examined factors contributing to frequent use of mobile loans in Lagos, Nigeria. The project's objective was to explore aspects that promote or hinder the acceptance of digital loans by SMEs. It employed mixed methods and collected primary data through questionnaires administered to 329 owners of SMEs in Lagos selected using convenience sampling. The study found that 84% of the sample used digital loans services to obtain credit due to efficiency in processing speed. From the study, the ease and speed of access were among promoting factors. The majority of the SMEs preferred such loans due to short disbursement time and the easy use of lending apps and USSDs. Thus, the speed of access to loans from digital lenders increases SMEs' uptake of such loans. While the study recommends that unpopular providers of digital loans increase their awareness and processing speed to attract borrowers, the study did not research on the influence of interest rates charged by the unpopular digital lenders on the uptake of their loans by SMEs.

## d. DIGITAL LENDERS' LOAN REPAYMENT PERIOD AND UPTAKE OF DIGITAL LOANS

Ebong and Babu (2020) explored the rising demand for digital credit facilities in Kampala, Uganda. It aimed at establishing different factors affecting the uptake of digital loans by SMEs. The study utilized mixed methods and questionnaires and interviews were administered to 6,266 retailers dealing with fast moving goods like fruits, vegetables, meat, and grains. According to the study, the businesses require additional capital for inventory, debt management, and operating expenses. It was also found that short repayment periods and related restrictions negatively affected the taking up of the loans. The study further pointed out that the short repayment period arising from short term loans pose the highest risks for obtaining the digital loans.

Gathu (2020) studied the relevance of employing alternative data to establish the credit score for mobile lending. The study used quantitative methods by conducting descriptive surveys. Questionnaires were sent to a sample of 350 respondents - 230 individuals and 120 SMEs. The sample involved users of mobile lending applications, sampled through non-probabilistic and scientific sampling methods. From the study, one of the rating factors was adherence to repayment periods. In most cases, the repayment period for the mobile lenders was one month. The study also indicated that the minority of SMEs and individuals are not active users of digital mobile loans. The reason for the inactiveness was the short repayment period and high interest rates. Thus, the study concludes that digital lenders should extend repayment periods to improve the uptake of loans and acquire accurate credit rating data. However, the study recognised the need to use digital loan lenders as respondents. This information is key to explaining reluctance to take mobile loans by SMEs.

## e. DIGITAL LENDERS' CREDIT WORTHINESS REQUIREMENTS AND UPTAKE OF DIGITAL LOANS

Randa and Atiku (2021) examined the need to achieve financial inclusivity for SMEs, especially in the wake of the coronavirus pandemic. Their study aimed at exploring factors affecting the significance of digital loans on SMEs success rates. Rand and Atiku (2021) employed interpretive research methods by using existing literature, reports, and data on the performance of SMEs in Namibia. Based on reports and past studies, the digital loans have been key to financial inclusivity in Namibia, especially during the coronavirus pandemic. The research finds that digital lenders' lack of collateral requirements has been a key factor for the growing uptake of digital loans in the country. As a result, SMEs have access to credit facilities amid the growing financial difficulties during the pandemic. Thus, the study concludes that achieving financial inclusivity for SMEs should involve tackling prohibitive factors for the uptake of digital loans, such as short repayment periods.

Lore (2019) concentrated on factors affecting the use of digital loans among Nairobi SMEs. The study used both quantitative and quantitative data gathered from the 385 participants. According to the results, the small businesses mostly used the digital loans in taking care of emergency operational costs, such as repairs. The digital lenders relied on past history to determine the credit worthy applicants instead of the high collateral requirements demanded by commercial banks. Consequently, SMEs often turn to digital platforms to obtain money for growth and emergency needs. However, Lore (2019) the study did not explore the concern surrounding reluctance in taking up such loans even when they do not have a collateral requirement.

## D. CONCEPTUAL FRAMEWORK

This study conceptualizes how the independent variables loan limits, rate of interest, speed of access, repayment period, and credit worthiness requirements influence the dependent variable, (the rate of uptake of digital loans by micro and small-scale businesses). The independent variables are among the digital lending policies that borrowers have to take into concern and adhere to as they apply for the digital loans. These policies help the lenders to maximize their profits and minimize risks of default. At the same time, they influence borrowers' decisions, such as the amount to borrow and level of reliance on a particular lender.

## III. METHODOLOGY

Descriptive and correlation research design were utilized. In this case, a descriptive study approach is appropriate for collecting data from study subjects following a set of questions concerning their current status. Correlational design enabled the identification of the relation of one variable to another as well as identifying the frequency of co-occurrence in two or more natural groups. It further drew inferences about relationships of given variables and the analysis can be achieved through liner regression analysis (Miksza & Elpus, 2018).

The target population was the registered 309,696 small scale businesses operating in Nairobi City County (Nairobi County Licensing Office, 2019). The study adopted sample size determination formula by Cochran (1977). According to the model, sample size

$$=z^2p\frac{(1-p)}{e^2}$$

That is, empirical data gathered by Mugenda and Mugenda (2008) showed that 30% of group of respondents in a population of more than 10,000 is adequate to yield the data required to conduct a satisfactory statistical analysis. Therefore, by applying the formula as shown in the calculation below the sample size for the study was 323.

$$= z^2 p \frac{(1-p)}{e^2}$$
  

$$n = [(1.96^2)(0.3)(1-0.3)]/0.05^2$$
  
Some having 222

Sample size = 323

While the sample size per strata are as depicted in table 4 below.

| Strata/Category    | Proportion | Calculation          | Sample<br>size |
|--------------------|------------|----------------------|----------------|
| Hospitality        |            | (20,976/309,696)*323 | 22             |
| (Accommodation,    | 20.976     |                      |                |
| Catering and       | 20,970     |                      |                |
| Restaurant)        |            |                      |                |
| Industrial Firms   |            | (19,007/309,696)*323 | 20             |
| (Workshops,        | 10.007     |                      |                |
| Manufacturing and  | 19,007     |                      |                |
| Factories)         |            |                      |                |
| General Trading    |            | (197,182/309,696)*32 | 206            |
| (Wholesale and     | 197,182    | 3                    |                |
| Retails)           |            |                      |                |
| Private Education, |            | (7,640/309,696)*323  | 8              |
| Health and         | 7,640      |                      |                |
| entertainment      |            |                      |                |

| Totals               | 300 696 |                      | 323 |
|----------------------|---------|----------------------|-----|
| Communication        |         |                      |     |
| Warehousing and      | 13,652  |                      |     |
| Transport,           |         | (13,652/309,696)*323 | 14  |
| Technical Services   | 50,527  |                      |     |
| Professional and     | 50 227  | (50,327/309,696)*323 | 52  |
| Resources            |         |                      |     |
| Forestry and Natural | 912     |                      |     |
| Agriculture,         |         | (912/309,696)*323    | 1   |

Table 1: Sample Size per Strata

The study identified the existence of correlation between digital loan limits, rate of interest, speed of access, repayment period, credit worthiness and the rate at which small-scale businesses seek loans from the traditional sources using correlational coefficients obtained from correlational matrix.

The expression was as follows;

 $Y = f(X_1, X_2, X_3, X_4, X_5)$ 

Y: rate at which small-scale businesses seek loans

X<sub>1</sub>: loan limits

X<sub>2</sub>: rate of interest

X<sub>3</sub>: speed of access

X<sub>4</sub>: repayment period

X<sub>5</sub>: credit worthiness

The linear relationship from the above function was as follows:

 $Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \varepsilon$ 

Where;  $\beta_0$  – Constant

 $\beta_{1, 2, 3, 4, 5}$  = beta coefficients that measure the percentage of responsiveness of the dependent variable to changes in the independent variables.

 $\hat{E}$  = error term; it is assumed to be independently normally distributed with a zero mean and constant variance [N (0,  $\sigma^2$ )]. The error term represents other aspects that may affect the performance but are not captured in the model of this study.

#### IV. RESULTS, ANALYSIS AND DISCUSSION

## A. DESCRIPTIVE STATISTICS

## a. RESPONSE RATES

The research targeted 323 respondents. However, 304 individuals answered and submitted the questionnaires giving a response rate of 94.12%.

## b. THE RESPONDENTS' GENDER

Out of the 304 respondents, 131 (43.0%) were female while 173 (57.0%) were male. This means that the responses reflected on the opinions of both the genders.

## c. LEVEL OF EDUCATION

The results summarized in figure 4, indicates that majority of the respondents have KCSE certificates (46%), 32% reached tertiary level, 17% are degree holders while 5% did not proceed with education past primary level. The respondents, therefore, were well educated hence were qualified to provide information relating to the effects of digital lending and uptake of loans by the SMEs.

## d. NATURE OF BUSINESS

The study also sought to determine the business models or the categories of the surveyed firms as per the strata in table 1. It was found that virtually all types of businesses participated in the study as indicated.



#### (Researcher, 2023)

## Figure 1: Nature of Business

| Amounts Borrowed | No. of Firms |
|------------------|--------------|
| 0                | 10           |
| 1 to 10,000      | 205          |
| 10,000 to 20,000 | 43           |
| 20,000 to 30,000 | 37           |
| 30,000 to 40,000 | 3            |
| 40,000 to 50,000 | 2            |
| 50,000 to 60,000 | 3            |
| 60,000 to 70,000 | 1            |

(Researcher, 2023)

Table 2: Averaged Amounts borrowed Monthly

The table shows that most respondents borrowed between 1 and 10,000 shillings. The number of businesses borrowing higher amounts decreased significantly with 60,000 to 70,000 being the least borrowed amount. This was likely due to the costs of borrowing the higher amounts such as interests charged. Similarly, with the high costs of doing business, few businesses are in a position to comply with the monthly financial obligations associated with loans of Ksh.30, 000 and above. Some firms' creditworthiness has declined due to failure of paying back the loans in time.

#### **B. DIGITAL LENDING POLICIES**

#### a. LOAN LIMIT POLICIES

The responses to the statements in regards to the effects of loan limits on the uptake of digital credit facilities are as summarized in table 3 below.

|     | S.<br>Disagree | Disagree | Neutral | Agree | Strongly<br>Agree | Mean | Standard deviation |
|-----|----------------|----------|---------|-------|-------------------|------|--------------------|
| Q1. | 13             | 56       | 11      | 188   | 36                | 3.59 | 1.053              |
| Q2. | 11             | 51       | 11      | 181   | 50                | 3.68 | 1.049              |
| Q3. | 7              | 29       | 18      | 247   | 3                 | 3.69 | 0.751              |
| Q4. | 2              | 127      | 14      | 161   | 0                 | 3.1  | 0.983              |
| (P. | searchar       | 2023)    |         |       |                   |      |                    |

(Researcher, 2023)

Table 3: Mean and SD for Loan Limit Policies

#### h **INTEREST RATES POLICIES**

The interest rates influence on the borrowing trends are shown in table xxxxx below.

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|     | S.<br>Disagree | Disagree | Neutral | Agree | Strongly<br>Agree | Mean | Standard deviation |
|-----|----------------|----------|---------|-------|-------------------|------|--------------------|
| Q5. | 13             | 56       | 11      | 187   | 37                | 3.59 | 1.056              |
| Q6. | 3              | 122      | 31      | 145   | 3                 | 3.08 | 0.977              |
| Q7. | 1              | 125      | 19      | 152   | 7                 | 3.11 | 0.969              |
| Q8. | 2              | 120      | 13      | 164   | 5                 | 3.12 | 0.983              |

(Researcher, 2023)

Table 4: Mean and SD for the Responses to the Interest Rates Policies

## SPEED OF ACCESS POLICIES

Removal of the constraints to accessing speedy loans leads to rise in frequency and the amounts of loans processed by the SMES as depicted in table 5 below.

|      | S.<br>Disagree | Disagree | Neutral | Agree | Strongly<br>Agree | Mean | Standard deviation |
|------|----------------|----------|---------|-------|-------------------|------|--------------------|
| Q9.  | 18             | 47       | 20      | 198   | 21                | 3.58 | 1.056              |
| Q10. | 17             | 115      | 12      | 148   | 14                | 3.06 | 1.094              |
| Q11. | 1              | 33       | 10      | 252   | 8                 | 3.77 | 0.686              |
| 012. | 4              | 39       | 9       | 242   | 10                | 3.69 | 0.768              |

(Researcher, 2023)

Table 5: Mean and SD for Speed of Access Policies

#### d. REPAYMENT PERIOD

The time required to pay back the borrowed amounts also impacts the frequency and amounts of borrowing.

|      | S.<br>Disagree | Disagree | Neutral | Agree | Strongly<br>Agree | Mean | Standard deviation |
|------|----------------|----------|---------|-------|-------------------|------|--------------------|
| Q13. | 7              | 67       | 14      | 210   | 6                 | 3.46 | 0.933              |
| Q14. | 13             | 66       | 9       | 181   | 35                | 3.52 | 1.084              |
| Q15. | 0              | 28       | 10      | 247   | 19                | 3.85 | 0.664              |
| Q16. | 11             | 53       | 7       | 17    | 63                | 3.73 | 1.087              |

(Researcher, 2023)

Table 6: Mean and SD for Repayment Policies

### CREDIT WORTHINESS POLICIES

The firms' ability to repay the borrowed amounts in time was also found to increase the uptake of the loans. As figure 7 below shows:

|      | S.<br>Disagree | Disagree | Neutral | Agree | Strongly<br>Agree | Mean | Standard<br>deviation |
|------|----------------|----------|---------|-------|-------------------|------|-----------------------|
| Q17. | 26             | 84       | 15      | 152   | 27                | 3.23 | 1.194                 |
| Q18. | 5              | 71       | 14      | 186   | 28                | 3.53 | 1.001                 |
| Q19. | 13             | 65       | 8       | 181   | 37                | 3.54 | 1.086                 |
| 020. | 30             | 91       | 21      | 144   | 18                | 3.1  | 1.183                 |

(Researcher, 2023)

Table 7: Mean and SD for Credit Worthiness

## C. UPTAKE OF DIGITAL LOANS

The responses reveal that the uptake of digital loans has risen steadily over the recent past.

|      | S.<br>Disagree | Disagree | Neutral | Agree | Strongly<br>Agree | Mean | Standard<br>deviation |
|------|----------------|----------|---------|-------|-------------------|------|-----------------------|
| Q21. | 7              | 60       | 14      | 181   | 42                | 3.63 | 1.023                 |
| Q22. | 3              | 141      | 31      | 126   | 3                 | 2.95 | 0.979                 |
| Q23. | 17             | 92       | 15      | 168   | 12                | 3.22 | 1.093                 |
| Q24. | 8              | 57       | 23      | 208   | 8                 | 3.5  | 0.916                 |
| Q25. | 11             | 56       | 18      | 185   | 34                | 3.58 | 1.028                 |

(Researcher, 2023)

Table 8: Mean and Standard Deviation for the Uptake of Digital Loans

### D. CORRELATION ANALYSIS

Pearson correlation was further administered to access the strengths of correlation between digital loan limits, rate of interest, speed of access, repayment period, credit worthiness and the rate at which the SMEs borrow loans. Ideally, Pearson's r varies between +1 and -1, where +1 indicates a perfect positive correlation, and -1 is a perfect negative correlation. 0 means there is no linear correlation (Obilor & Amadi, 2018). The results are as displayed in table 14 below.

|                |                        | Loan   | Rate of  | Speed  | Repayment | Credit     | Y   |
|----------------|------------------------|--------|----------|--------|-----------|------------|-----|
|                |                        | Limits | Interest | of     | Period    | Worthiness |     |
|                | -                      |        |          | Access |           |            |     |
|                | Pearson<br>Correlation | 1      |          |        |           |            |     |
| Loan<br>Limits | Sig. (2-<br>Tailed)    | .000   |          |        |           |            |     |
|                | Ν                      | 304    |          |        |           |            |     |
| Pata of        | Pearson<br>Correlation | .572** | 1        |        |           |            |     |
| Interest       | Sig. (2-<br>Tailed)    | .000   |          |        |           |            |     |
|                | Ν                      | 304    | 304      |        |           |            |     |
| Speed of       | Pearson<br>Correlation | .575** | .272**   | 1      |           |            |     |
| Access         | Sig. (2-<br>Tailed)    | .000   | .000     |        |           |            |     |
|                | N                      | 304    | 304      | 304    |           |            |     |
| Donaumont      | Pearson<br>Correlation | .521** | .306**   | .367** | 1         |            |     |
| Period         | Sig. (2-<br>Tailed)    | .000   | .000     | .000   |           |            |     |
|                | Ν                      | 304    | 304      | 304    | 304       |            |     |
| Credit         | Pearson<br>Correlation | .547** | .370**   | .414** | .270**    | 1          |     |
| Worthiness     | Sig. (2-<br>Tailed)    | .000   | .000     | .000   | .000      |            |     |
|                | Ν                      | 304    | 304      | 304    | 304       | 304        |     |
|                | Pearson<br>Correlation | .482** | .477**   | .482** | .668**    | .202**     | 1   |
| Y              | Sig. (2-<br>Tailed)    | .000   | .000     | .000   | .000      | .000       |     |
|                | N                      | 304    | 304      | 304    | 304       | 304        | 304 |

\*\*. Correlation Is Significant At The 0.01 Level (2-Tailed). (Researcher, 2023)

## Table 9: Results of Pearson Correlation

A very strong positive relationship was established between the rate of uptake of digital loans and Repayment period as indicated by the Pearson's r = 0.668. While speed of access and rate of interest have moderate positive correlation with correlation coefficient of 0.482 and 0.477 respectively. In contrast, credit worthiness had the weakest positive relationship with uptake of digital loans (r = 0.202).

## E. REGRESSION ANALYSIS

The predictor variables (loan limits, rate of interest, speed of access, repayment period, and credit worthiness) and their influence on uptake of digital loans were determined using a multiple regression analysis that was conducted by the study. The model summary was as indicated in table 18 below.

| Model | R                 | R Square | Adjusted R Square | Std. Error of the |
|-------|-------------------|----------|-------------------|-------------------|
|       |                   |          |                   | Estimate          |
| 1     | .771 <sup>a</sup> | .594     | .587              | .304418           |

a. Predictors: (Constant), credit worthiness, repayment period, rate of interest, speed of access, loan limits (Researcher, 2023)

## Table 10: Model Summary

The results indicate that the loan policies help to predict the uptake of the digital loans by the small-scale businesses. The R and R squared values were 0.771 and 0.594 respectively meaning that the independent variables explain 59.4% of the rate at which the SMEs seek for loans. The ANOVA in table 19 below further confirms the suitability of the model in exploring the relationship between digital loan policies and borrowing trends by the upcoming businesses.

ANOVA<sup>a</sup>

|   | Model      | Sum of  | df  | Mean   | F      | Sig.              |
|---|------------|---------|-----|--------|--------|-------------------|
|   |            | Squares |     | Square |        |                   |
|   | Regression | 40.414  | 5   | 8.083  | 87.220 | .000 <sup>b</sup> |
| 1 | Residual   | 27.616  | 298 | .093   |        |                   |
|   | Total      | 68.029  | 303 |        |        |                   |

a. Dependent Variable: Y

b. Predictors: (Constant), credit worthiness, repayment period, rate of interest, speed of access, loan limits (Researcher, 2023)

## Table 111: ANOVA

The F statistic was 87.220 while the p value is 0.000 which was < 0.05. This means that predictor/independent variables explain the variation in uptake of digital loans. In other words, the model was a good fit for studying the correlation between the loan policies and use of the digital credit facilities and the data thereof can be relied upon to make conclusive inferences. Table 20 provides the beta coefficient for all the independent variables and their p values.

*Coefficients*<sup>a</sup>

| Model |                   | Unstandardized<br>Coefficients |               | Standardized<br>Coefficients | t      | Sig. |
|-------|-------------------|--------------------------------|---------------|------------------------------|--------|------|
|       |                   | В                              | Std.<br>Error | Beta                         |        |      |
| 1     | (Constant)        | .277                           | .166          |                              | 1.668  | .096 |
|       | Loan Limits       | 058                            | .044          | 079                          | -1.329 | .185 |
|       | Rate of Interest  | .248                           | .034          | .330                         | 7.264  | .000 |
|       | Speed of Access   | .290                           | .044          | .302                         | 6.550  | .000 |
|       | Repayment Period  | .510                           | .041          | .538                         | 12.369 | .000 |
|       | Credit Worthiness | 113                            | .035          | 146                          | -3.270 | .001 |

a. Dependent Variable: Y

(Researcher, 2023)

## Table 12: Beta Coefficient

The beta coefficients for loan limits, rate of interest, speed of access, repayment period and creditworthiness were – .058, .248, .290. 510 and -.113 respectively. Consequently, the overall regression model for the study was:

 $Y = 0.277\text{-}\ 0.58X_1 + 0.248X_2 + 0.290X_3 + 0.510X_4 - 0.113X_5 + \text{E}$ 

# V. SUMMARY, CONCLUSION AND RECCOMENDATIONS

## A. SUMMARY

The study demonstrated that the loan limits set by the lending platforms have significant impacts on the digital loans borrowed by the studied Small-Scale Businesses. The loan limit policy had a beta coefficient of -.058 meaning that increase in loan limit restrictions reduces the uptake of loans by about 5.8%. Rates of interest scored beta coefficient of 0.24 indicating that the changes in interest rate lowers the borrowing rate by almost 24%; meaning that majority of borrowers are not induced to borrow excessively by the fall in interest rates instead they base their borrowing behavior on the demands for liquidity and its impact on profitability in the long run. Ease of accessing loans are enhancing financial inclusivity; as shown by beta coefficient of 0.290. The introduction of prompt loan processing technologies is enabling the SMEs to apply for more loans thereby significantly influencing their loan portfolios. Repayment period has the highest rates of uptake of loans with a betacoefficient of 0.510. Lowering repayment period reduces uptake of loans since defaulting the digital loans leads to lower interest rates and decline in creditworthiness. Creditworthiness had negative beta coefficient of 0.113 meaning that lowering the changes in measures for accessing creditworthiness does not necessarily lead to proportional fluctuations in uptakes of loans.

## B. CONCLUSION

Digital lending policies are impacting greatly on the uptake of loans in Nairobi City County. The regulations are increasing financial inclusivity based on the players attempt to serve the needs of the firms that had been underserved for many years. The policies are favorable to the Small-Scale Businesses that cannot afford collateral security. At the same time, there have been influx of digital lenders leading to competition in implementing favorable interests' rates, repayment periods, as well as, policies regulating access for loans and creditworthiness of the targeted clients. As a result, there have been positive correlations between the digital policies and uptake of the loans.

## C. RECOMMENDATIONS

Financial regulators should introduce more restrictive policies to limit the behaviors of lenders based on their past borrowing history that have led to crises, such as the 2008-2010 global financial crisis that led to the collapse of many upcoming and established businesses throughout the world. There should be changes in borrowing behaviors among the digital credit facility users call for new finance models for evaluating the large appetites for unsecured loans. Researchers should therefore employ the empirical data to customize the existing theories such as liquidity preference in line with the latest changes in the business environment. The lenders should introduce more flexible long term digital facilities that can extend from three months to one year. Entry of the government-sponsored digital loans known as Hustler Fund sets a new precedence, as far as, regulations and access of mobile based loans are concerned. The loans were lunched by the new government targeting the struggling small businesses hence is designed to eliminate the restrictive policies such as creditworthiness. However, the political debates surrounding the release imply that Hustler Fund may negatively disrupt the financial ecosystem with a high number of firms failing to fulfill their financial obligations. Therefore, future research should focus on the difference between the Hustler Fund and other digital loans and their impacts on the sustainability of the growth of the entrepreneurial environment both in the short and long-run.

## REFERENCES

- African Review of Business and Technology (2017). SMEs are growing Kenya's economy. Retrieved on 13th August, 2019 http://www.africanreview.com/finance/ business/smes-are-growing-kenya-s-economy-3
- [2] Ayanyemi-Adeboje, M.D. and Adeboje, T., 2020. Predictive Factors in Mobile Loan Acceptance and Use by Micro, Small and Medium Enterprises in Lagos, Nigeria.
- [3] Baganzi, R., & Lau, A. K. (2017). Examining trust and risk in mobile money acceptance in Uganda. Sustainability, 9(12), 2233.
- [4] Biscaye, P., Callaway, K., Greenaway, M., Lunchick-Seymour, D., McDonald, M., Anderson, C. L., Klawitter, M., & Reynolds, T. (2017). Review of Digital Credit Products in India, Kenya, Nigeria, Tanzania, and Uganda. University of Washington, Evans School Policy Analysis and Research (EPAR).
- [5] CBK (2021). Bank supervision annual report 2020. Central Bank of Kenya.
- [6] CBK, KNBS, & FSD Kenya (2019). The 2019 FinAccess household survey. FinAccess.
- [7] Cochran, W. G. (1977). Sampling Techniques: 3d Ed. Wiley.
- [8] Ebong, J. and Babu, G., 2020. Demand for credit in highdensity markets in Kampala: Application of digital lending and implication for product innovation. Journal of International Studies, 13(4), 295-313.
- [9] Francis, E., Blumenstock, J., & Robinson, J. (2017). Digital Credit: A Snapshot of the Current Landscape and Open Research Questions. Bureau for Research and Economic Analysis of Development Working Paper, 516.
- [10] Francis, E., Blumenstock, J., & Robinson, J. (2017). Digital credit: A snapshot of the current landscape and open research questions. CEGA White Paper, 1739-1776.
- [11]Francis, E., Blumenstock, J., & Robinson, J. (2017). Digital Credit in Emerging Markets. Bill and Melinda Gates Foundation.
- [12] Gathu, A., 2020. The Role of alternative data in accurately determining credit score for mobile lending on digital wallets in Kenya (Doctoral dissertation, Strathmore University).

- [13] Gichuki, E. M., Mwaniki, G., & Ogolla, D. (2019). Interest rate capping by the central bank of Kenya on loans uptake. International Academic Journal of Economics and Finance, 3(5), 33-44.
- [14] Gupta, P., & Tham, T. M. (2018). Fintech: The New DNA of Financial Services. Boston; Berlin: De|G Press.
- [15] Gwer, F., Odero, j., & Totolo (2019). Digital credit audit report: evaluating the conduct and practice of digital lending in Kenya. Financial Sector Deepening Kenya.
- [16] Lore, M.O., 2019. Factors Affecting the Growth of Mobile Phone Loan Uptake among Small and Medium Traders in Nairobi Central Business District (Doctoral dissertation, United States International University-Africa).
- [17] Lukonga, M.I., 2018. Fintech, Inclusive Growth and Cyber Risks: Focus on the MENAP and CCA Regions.
- [18] Lussier, R. N., & Sonfield, M. C. (2015). "Micro" versus "small" family businesses: a multinational analysis. Journal of Small Business and Enterprise Development. Journal of Small Business and Enterprise Development 22(3), 380-396. https://doi.org/10.1108/JSBED-02-2015-0029
- [19] Mwangi Z. (2016). The 2016 national micro, small and medium establishment (MAME) survey highlights of basic report. KNBS.
- [20] Nairobi County Licensing Office. (2019). Registered Business. Retrieved from https://nairobiservices.go.ke/
- [21] Njenga, M. W., & Kavindah, L. (2021). Credit management strategies and sustainability of digital lending applications in Kenya. International Academic Journal of Economics and Finance, 3 (6), 423, 446, 2.
- [22] Obilor, E. I., & Amadi, E. C. (2018). Test for significance of Pearson's correlation coefficient. International Journal of Innovative Mathematics, Statistics & Energy Policies, 6(1), 11-23.
- [23] Ramdani, B., Rothwell, B., & Boukrami, E. (2020). Open Banking: The Emergence of New Digital Business Models. International Journal of Innovation and Technology Management, 17(05), 2050033.
- [24] Slaughter, S. (2019). G20 and international relations theory: Perspectives on global summitry. Cheltenham, U.K: Edward Elgar Publishing
- [25] Talom, F.S.G. and Tengeh, R.K., 2020. The impact of mobile money on the financial performance of the SMEs in Douala, Cameroon. Sustainability, 12(1), p.183.
- [26] Totolo, E. & Gubbins, P. (2018). Digital credit in Kenya: Evidence from demand side surveys. FSD Kenya.
- [27] Totolo, E. (2018). The digital credit revolution in Kenya: an assessment of market demand, 5 years on. FSD Kenya.
- [28] Waari, D. N., & Mwangi, W. M. (2015). Factors influencing access to finance by micro, small and medium enterprises in Meru County, Kenya. International Journal of Economics, Commerce and Management, 3(4), 1-15.
- [29] Wu, Y. (2017). An analysis of credit and equilibrium credit rationing. Abingdon, Oxon: Routledge.