Mobile Loan Frequency of Repayment as a Predictor of the Financial Performance of SMEs in Urban Informal Settlements in Kenya

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ABSTRACT

This study explored the effect of repayment timelines on the financial performance of SMEs in urban informal settlements in Kenya. This study adopts the descriptive survey design. Data were collected from 120 SMEs in the 6 wards of Mathare Sub-County. Data was collected using semi-structured questionnaires. It was analysed using descriptive and inferential statistics. From the study findings, it is evident that repayment timelines influenced the application for mobile loans. The ability to pay mobile loans without problems due to flexible repayment times also enhanced the performance of the respondents’ businesses. While loans with short repayment periods discouraged the businesses from borrowing due to immense pressure, long repayment periods were preferable since it meant that the stock purchased could be converted to cash. Budgeting could also be made easy due to the certainty of cash flow in long and flexible repayment periods. Lastly, a long repayment period meant that the intended use of the money borrowed could be realized. The study made the following recommendation based on the study objective. In this regard, most of the various mobile loan providers should put in place flexible repayment plans to make their loans appealing. They should also market their mobile loan products to make them visible since only 4, Safaricom-Fuliza, M-Shwari, Tala, and KCB-Mpesa were the most used. Civil society organizations in collaboration with mobile loan providers should also carry out capacity building campaigns among SMEs in informal settlements.

Keywords: Loan Accessibility, Interest Rates, Repayment Timelines, Financial Performance, Small and Medium Enterprises, Urban Informal Settlements

I. INTRODUCTION

Mobile loans enhance the accessibility of loans among Small and Medium Enterprises (SMEs) with some of them having flexible repayment periods (Archer, 2019). They uptake could contributes to the financial performance of SMEs in the country. In Kenya, there has been a sharp increase in mobile phone-based lenders in Kenya in the last decade. These include M-Shwari by Safaricom, Fuliza-Safaricom, Berry, Tala, KCB M-Pesa, Timiza-Barclays, Branch, Shika, iPesa, Zenka, Zidisha, Okash, Jazika, Utunzi, Kopakash, HF Whizz, Saida, and Haraka (Onamu, 2020). These apps make it possible for individuals and SMEs to access quick unsecured loans, sometimes up to KSH. 1,000,000. The flexibility and frequency of repayment periods could have positive effects on the financial performance of SMEs in Kenya’s urban informal settlements in Nairobi City County.

Nairobi City is dotted by countless informal settlements also referred to as ‘slums’. At the dawn of the new millennium, at least 60% of Nairobi’s entire population resided in these settlements (APHRC, 2002). One of the major informal settlements in the county is the Mathare Slums. The living conditions in these slums are miserable and most survive on less than one dollar per day (Under the Same Sky Kenya, 2010). In such areas, it is usually a tall order for SMEs to access adequate financing. It is thus important to find out the level to which mobile loans and the flexibility of their repayment timelines could influence the financial performance of SMEs in urban informal settlements in Kenya.

A study by Abala (2013) shows that in Kenya’s informal settlements 84.7% of businesses cite the lack of financial assistance as a challenge facing them. Conversely, 5.1% were of the contrary opinion. This shows that there are high levels of lack of access to financing by groups in these areas. This is compounded by high levels of poverty as evidenced in Kibera, Mukuru Kwa Njenga, and Mathare slums (Tiampati, 2017). Though this challenge could be mediated by mobile loans, no documented study has investigated the level to which such loans impact the financial performance of SMEs in the area. This underlines the importance of this current study.

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A study by Mwelu on “Hidden Crisis in urban slums” shows that the Mathare Slums in Nairobi were characterized by immense socio-economic challenges. This meant that in the context of crime, diseases, unemployment, and poverty, there were few economic activities as well as a lack of financing opportunities (Mwelu, 2013). Access to financing for SMEs in these areas was thus a tall order. In this context, it is pertinent to examine how mobile loans and the repayment timelines influence financial inclusion and access to credit for SMEs in urban informal settlements such as Mathare Slums. This is particularly important since it could contribute to poverty alleviation; one of the goals of the World Bank among other international organizations.

1.1 Statement of the Problem
SMEs play a key role in the growth of any economy. In Kenya, they contribute to 18% of the GDP. They also offer employment opportunities to about 80% of Kenya’s population (Kithae et al., 2012). However, access to financing remains a tall order for most SMEs. In this regard, it is pertinent to carry out the level to which the frequency of repayment of mobile loans affects the adoption of mobile phones and the associated effects on the performance of such SMES. Seeing that the poor urban areas face immense challenges in access to finances, the importance of studies on financing options for SMEs cannot be gainsaid. However, the effects of various attributes of mobile loans such as frequency of repayment are scantily studies. This means that making informed decisions on how to make these loans more appealing to SMEs through enhanced flexibility in repayment remains a tall order. This should not be the case in a country that has limited financing options for SMEs. In this regard, this study sets out to bridge these literature gaps by investigating the effect of mobile loan frequency of repayment on the financial performance of SMEs in urban informal settlements in Kenya.

1.2 Research Objectives
To explore the effect of mobile loan frequency of repayment on the financial performance of SMEs in urban informal settlements in Kenya.

II. LITERATURE REVIEW

2.1 Theoretical Framework
The Bank-Focused Theory is founded on the “low-cost modern delivery channels by a traditional bank to provide banking services to its existing customers.” As postulated by Kapoor (2010), banks use a multiplicity of new technologies to offer financial services to customers. These include automatic teller machines (ATMs), internet banking as well as mobile phone banking. This bank-focused model is often challenged by lack of experience, identity security issues as well as poor reliability and accessibility issues in some instances. By creating branchless banking services, it is possible to mitigate these challenges by offering easy-to-use interfaces such as mobile banking platforms (Essvale Corporation Limited, 2011). In this regard, persons with bank accounts do not need to visit the bank to obtain financial services. They can get them remotely through their mobile phones.

Studies based on bank-focused theories have tended to focus on innovations pegged on the bank that offer services to customers (Essvale Corporation Limited, 2011). Within the context of this study, SMEs can obtain loans by having mobile phone operated accounts. Non-Bank-Led Theory on its part as postulated by Lyman, Ivatury, and Staschen (2006) posits that customers do not have to deal with a bank. They also do not have to maintain a bank account. In this regard, they obtain services from non-bank firms such as mobile network providers and retail agents among others. Lyman et al. (2006) further stated that customers access financial services through virtual electronic money account on the nonbank’s server.

In this regard, they do not need accounts in their name. This has been evidenced by numerous platforms that enhance access to financing to unbanked populations (GSMA, 2014). Some of the innovations that have relied on non-bank-led theories include microfinance solutions and mobile credit platforms (Amsi et al., 2017). Within the context of this current study, thus, SMEs can obtain an array of mobile loans without necessarily having bank accounts. Since urban informal settlements are home to a large unbanked population, mobile loans are a panacea to challenges related to access to financing. SMEs can thus leverage the opportunity offered by unsecured mobile loans with flexible repayment timelines to finance their businesses; leading to enhanced performance as envisaged by this current study.

2.2 Empirical Review
Langley and Leyshon (2017) in “Capitalizing on the crowd: The monetary and financial ecologies of crowd-funding” sought to find out the opportunities presented by crowd-funding platforms. The findings show that crowd-funding presented challenges to traditional funding practices such as banks and capital markets among others.
However, crowd-financing loans were often characterized by high-interest rates and short repayment periods. It is thus pertinent to investigate the level to which mobile loan repayment periods mitigated against these challenges.

Asgary, Ozdemir, and Özyürek (2020) studied “SMEs and global risks with evidence from manufacturing SMEs in Turkey.” Data was collected from systematic and meta-analysis of extant literature. Financing was found to be a major challenge facing start-up manufacturing firms in the country. Often, it was untenable for these firms due to high-interest rates and inflexible payment periods. This current study sets out to investigate the level to which challenges in financing could be mediated by mobile loans in developing countries such as Kenya.

Muli and Wachira (2019) carried out a study titled “Effect of access to finance on the financial performance of processing SMEs in Kitui County, Kenya.” Based on the descriptive research design, the study targeted 25 processing SMEs in Kitui County. In each firm the Chief Executive Officer, the finance manager, and the Chief accountant were sampled. This made a sample of 75 respondents. Data was collected using interviews and semi-structured questionnaires. The findings show that financial performance was correlated with access to finance. If the financing was characterized by low-interest rates and flexible repayment periods, the financial performance was further buttressed. This current study sets out to investigate the veracity of these findings in Kenya.

III. METHODOLOGY

3.1 Research Design
This study was based on descriptive survey design. This design is preferable since it helps explain causal relations based on various data sources such as questionnaires, interviews, and document analysis; all of which are possible to deploy in this study. The design is also able to apply multiple methods of analysis such as correlation and simple as well as multiple regression analysis to test the relationship between the study variables.

3.3 Population
Mugenda and Mugenda (2008) point out that a population is a large group of participants from which a sample is drawn. This study targets SMEs in the six wards of Mathare Sub-County namely: Hospital, Mabatini, Huruma, Ngei, Mlango Kubwa, and Kiamai. There are about 3500 SMEs in the Sub-County with turnovers of over Ksh.50,000 per month. A sampling frame is a list of the sampling units that are used in the selection of a sample (Bryman & Cramer, 1994). In this study, the sampling frame was the SMEs operating in each Ward of Mathare Sub-County. These SMEs undertake activities in various sectors such as construction, tailoring and dress-making, food and hospitality activities, health services, general supplies, vegetable sales, and transport among others. In each SME, the proprietor/manager was targeted.

3.4 Sample
Cooper & Schindler, (2014) points out that sampling is suitable where it’s not practical to study a whole population. The sample size for this study was obtained from a sampling formula by Yamane as shown below:

\[ n = \frac{N}{1 + N(e)^2} = 97.1 \]

Where:
- \( n \) = the sample size
- \( N \) = the size of the population
- \( e \) = the error of 10%

The calculation from a population of 3500 is 98.

This study used the proportionate stratified sampling procedure and snowballing techniques to obtain the sample from each Ward in Mathare-Sub County. Therefore, the sample of 98 respondents was chosen proportionately from each Ward. This ensured that the true picture of the subject under investigation in the study areas is captured. The respondents were also obtained proportionately from different kinds of SMEs using the snowballing non-probabilistic sampling method. Participants from each category were asked to refer their colleagues in similar businesses to participate in the study. This also made it easy to recruit study participants.

3.8 Data Processing and Analysis
Data was collected using semi-structured questionnaires and data collection forms. This study used descriptive and inferential statistics (Cooper & Schindler, 2014). Descriptive statistics entailed frequency, percentages, and
means. Inferential statistics involved correlation and regression analysis. The findings were presented in Tables and Figures. Diagnostic tests were carried out before inferential statistics to ascertain whether the data is properly modelled by a normal distribution included tests for normality, multicollinearity, and Heteroscedasticity.

IV. FINDINGS

4.1 Response Rate
The study sampled 98 the proprietors/managers of SMEs. Out of these, 86 responded. The return rate was thus 88% which was deemed sufficient for analysis.

4.2 Pilot Testing
The study tested the data collection tool for reliability and validity before the administration of the tool. When all the tests were successfully done then the tool was administered. In this study, Cronbach alpha values of 0.879 and 0.811 were obtained for repayment timelines and financial performance respectively as presented in Table 1. Since these were more than 0.7, the research instrument was deemed sufficient for use in data collection.

Table 1 Reliability Test

<table>
<thead>
<tr>
<th>Item</th>
<th>No. of Items</th>
<th>Cronbach Alpha (α)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Repayment Timelines</td>
<td>6</td>
<td>0.879</td>
</tr>
<tr>
<td>Financial Performance</td>
<td>5</td>
<td>0.811</td>
</tr>
</tbody>
</table>

This study utilized content validity. The respondents could easily understand and respond to the study questions. The tool was thus deemed adequate for use in data collection.

4.3 Demographic Information of the Study Participants
The study sought to find the gender of the respondents. The findings show that close to two-thirds of the respondents were female (66.3%) while males were 33.7%. This implies that both genders were significantly represented in the study. The major businesses were restaurants, shops, chemical sales, transport (rider/taxi), sales, farming, barbershop, plumbing, manufacturing, carpentry, general supplies, legal practice, cyber, mechanics shop, phone shops, outdoor films, stationery, and salon/hairdressing among others. This shows that the respondents were from divergent businesses. As such, the findings obtained could adequately represent SMEs in the study area.

The findings show that more than a third of the respondents had diplomas (36%). These were followed by close to a fifth (19.8%) who had degrees. Those who had certificates and high school qualifications followed at 15.1%. These findings show that the respondents had divergent education levels and could make significant contributions to the study.

Further, the findings show that most of the respondents (45.5%) had been in business for periods ranging between 2 and 5 years. These were followed by close to a third (32.6%) who had been in business for 6 to 10 years. These findings show that most of the respondents had been in business long enough to understand the contribution of mobile loans to the financial performance of businesses.

The respondents were asked to indicate the frequency of borrowing various mobile loans they had used. The responses were captured on a scale of 1 to 4 where 1=Often (Several times a year); 2= Always (Every Month); 3=Rarely (Sometimes in 2 years) and; 4 =Never (Never borrowed). Weighted means were used to indicate the average agreeability with the different frequencies of borrowing. The findings show that M-Shwari and Fuliza-Safaricom were used always (M=2). Other popular loans were Tala and KCB M-Pesa were where used rarely or sometimes in 2 years (M=3). These findings show that only four mobile phones were mostly used. These were M-Shwari, Fuliza-Safaricom, Tala, and KCB M-Pesa. The other mobile loans (Berry, Timiza-Barclays, Branch, Shika, iPesa, Zenka, Zidisha, Okash, Jazika, Utunzi, Kopakash, HF Whizz, Saida, Haraka, M-Co-op cash, and Equitel loans) were never borrowed (M=4). This was due to the fact that they were hard to apply for and obtain. In some cases, borrowers were turned back based on CRB ratings. Furthermore, some of the respondents had never heard about some of them.

4.4 Descriptive Statistics
4.4.1 Repayment Timelines and the Financial Performance of SMEs
The third objective of the study was to assess the effect of mobile loan frequency of repayment on the financial performance of SMEs in urban informal settlements in Kenya. This section presents the findings obtained.
The respondents agreed to a moderate extent (WM=3) to all the statements presented to them. In this regard, the respondents agreed to a moderate extent that the repayment period of loans limited access to credit by businesses in the area and that most bank loans had inflexible repayment periods and were not good for their business. This could have adverse effects on the financing SMEs since as posited by Asgary et al. (2020), inflexible payment periods are a challenge facing most firms seeking financing. They also agreed to a moderate extent that they had a flexible repayment period and this made it easy to afford credit. The respondents could also repay and borrow immediately which made it easy to raise capital. Flexible repayment of loans meant that they could service multiple mobile loans at a time. These findings agree with Muli and Wachira (2019) who posits that if the financing was characterized by low-interest rates and flexible repayment periods, the financial performance was buttressed.

Additionally, the ability to pay mobile loans without problems due to flexible repayment times had also enhanced the performance of the respondents’ businesses. The respondents were asked to point out other ways in which the repayment periods of mobile loans affected the financial performance of their business. The findings show that the repayment period was important to businesses as elicited by Muli and Wachira (2019). Some loans had short repayment periods which discouraged the businesses from borrowing due to immense pressure. This also affected the quality of the work. The short repayment period also forced one to close their business due to the inabilities to find ways of repaying.

Long repayment periods were preferable since it meant that the stock purchased could be converted to cash. Budgeting could also be made easy due to the certainty of cash flow in long and flexible repayment periods. Lastly, a long repayment period meant that the intended use of the money borrowed could be realized. It is thus evident that the repayment period had positive effects on the performance of SMEs due to the ability to actualize the intended use of the money borrowed.

### Table 2 Repayment Timelines and the Financial Performance of SMEs

<table>
<thead>
<tr>
<th>Statement</th>
<th>Mean</th>
<th>Std. Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The repayment period of loans limits access to credit by businesses in</td>
<td>3</td>
<td>1.45</td>
</tr>
<tr>
<td>the area</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Most bank loans have inflexible repayment period and are not good for</td>
<td>4</td>
<td>1.15</td>
</tr>
<tr>
<td>my business</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Mobile loans have a flexible repayment period and this makes it easy</td>
<td>4</td>
<td>1.14</td>
</tr>
<tr>
<td>to afford credit</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. I can repay and borrow immediately and makes it easy to raise capital</td>
<td>4</td>
<td>1.23</td>
</tr>
<tr>
<td>5. Flexible repayment of loans means that I can service multiple mobile</td>
<td>4</td>
<td>1.17</td>
</tr>
<tr>
<td>loans at a time</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Ability to pay mobile loans without problems due to flexible repayment</td>
<td>4</td>
<td>1.29</td>
</tr>
<tr>
<td>times has enhanced the performance of my business</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

N=86

4.4.2 Financial Performance of SMEs

The dependent variable of the study was the financial performance of SMEs in urban informal settlements in Kenya. This section presents the findings obtained.
The dependent variable of the study was the financial performance of SMEs in urban informal settlements in Kenya. The respondents agreed to a moderate extent (WM=3) with all the statements presented to them. In this regard, they agreed to a moderate extent that since they started using mobile loans, their businesses had been making more sales and that since they started using mobile loans; their business had been making more profits. Also, their businesses had moderately more assets since they started using mobile loans. Their businesses also had fewer debts since they started using mobile loans (WM=3). They had also expanded their business to other areas since they started using mobile loans. These findings show that the businesses started seeing positive performance since the start of using mobile loans.

Financial data was collected from the businesses. The findings show that there were include increases in total sales from an average of Ksh. 2.4 million to 3.336 million and Profit and loss, from Ksh. 0.6 million to 0.996 million. Debt value also increased at the same time from 0.348 million to 0.504 million. Assets (Buildings/Equipment) also increased from Ksh. 0.533 million to Ksh. 0.721 million as shown in Figure 1. The number of new branches remained at an average of 1 branch per business (Figure 2). These findings show that mobile loans among other financial sources led to increases in the performance of businesses. These findings agree with Denis and Rodgers (2007) who pointed out that increases in the size of assets and positive operating income (firm’s total assets or sales) for two consecutive years at the base year (time of measurement) indicated positive financial performance.

### 4.4.2.1 Financial Performance from Financial Records

Financial data was collected from the businesses. The findings show that there were include increases in total sales from an average of Ksh. 2.4 million to 3.336 million and Profits from Ksh. 0.6 million to 0.996 million. Debt value also increased at the same time from 0.348 million to 0.504 million. Assets (Buildings/Equipment) also increased from Ksh. 0.533 million to Ksh. 0.721 million as shown in Figure 1. The number of new branches remained at an average of 1 branch per business (Figure 2). These findings show that mobile loans among other financial sources led to increases in the performance of businesses.

![Figure 1 Amount of Figures](image-url)
Pearson correlation analysis was carried out to test the significance of the relationships between the independent and dependent study variables. The findings show that there were significant relationships between financial performance in SMEs and repayment timelines ($r = 0.874$, $p < 0.05$).

### Table 4 Pearson Correlation

<table>
<thead>
<tr>
<th></th>
<th>Loan Accessibility</th>
<th>Interest Rates</th>
<th>Repayment Timelines</th>
<th>Financial Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial Performance</td>
<td>Pearson Correlation</td>
<td>.924**</td>
<td>.879**</td>
<td>.874**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td></td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>N</td>
<td></td>
<td>86</td>
<td>86</td>
<td>86</td>
</tr>
</tbody>
</table>

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

### V. CONCLUSIONS AND RECOMMENDATIONS

#### 5.1 Conclusions

The findings show that repayment timelines influenced the application for mobile loans. The ability to pay mobile loans without problems due to flexible repayment times also enhanced the performance of the respondents’ businesses. While loans with short repayment periods discouraged the businesses from borrowing due to immense pressure, long repayment periods were preferable since it meant that the stock purchased could be converted to cash. Budgeting could also be made easy due to the certainty of cash flow in long and flexible repayment periods. Lastly, a long repayment period meant that the intended use of the money borrowed could be realized.

#### 5.2 Recommendations

The study made the following recommendation based on the study objective. In this regard, most of the various mobile loan providers should put in place flexible repayment plans to make their loans appealing. They should also market their mobile loan products to make them visible since only 4 (Safaricom-Fuliza, M-Shwari, Tala, and KCB-Mpesa) were the most used. Civil society organizations in collaboration with mobile loan providers should also carry out capacity building campaigns among SMEs in informal settlements.
REFERENCES


