

**Digital Credit Over-Indebtedness, Debt Literacy and Attitudes:  
*Financial experiences of youth digital credit users in Kenya***

*Khalid Adam and Radha Upadhyaya*

**Key Findings**

- Overall debt literacy is moderately high among youth digital credit borrowers but specific aspects of debt literacy such as ability to calculate interest payments is lower.
- Delinquency on digital loans differ across employment status, attitudes towards digital credit, income, education levels and number of outstanding loans.
- Youth borrowers are ‘attracted’ to digital loans because of ease of access, privacy, and convenience.
- Over indebtedness is higher when borrowing is unplanned.

**Policy recommendations**

- Policy measures are needed to improve financial capabilities for youth borrowers including ensuring that borrowing is used for planned purposes.
- Regulation needed for consumer protection for digital loan borrowers with particular emphasis on providers ensuring ability of borrowers to understand the true cost of borrowing.

**Key words:** Debt literacy, digital credit, Kenya, youth

## **1. INTRODUCTION**

While the rise of mobile/ digital payments in Kenya- popularly known as M-Pesa - and its impact on reducing poverty and helping marginalized groups improve their ability to manage risks have been written about extensively, there has been much less attention paid to more recent developments in the rise of digital credit for mobile banking users popularly known as “digital loans” or “digital credit”. Since the launch of the first digital loan product in Kenya - M-Shwari - by Safaricom and the

Commercial Bank of Africa (CBA) in 2012, the country has experienced a significant increase in the size of the digital credit for mobile banking market, both in terms of providers and the total amounts of loans disbursed. For instance, as of 2018, a total of KES 230 billion have been disbursed by the M-Shwari platform alone. It is estimated that there were over forty-nine other digital platforms in 2017.

This brief focuses on youth borrowers as they have been identified as the major users of digital loans in the FinAccess 2019 study (FSD Kenya,

2019). Furthermore, there have been concerns relating to late repayments, loan defaults and increase in the debt burden amongst the youth. This has been documented across all users of digital borrowers but rife among young users (ibid). Consequently, this study focused on understanding the reasons behind the over-indebtedness among the youth in Kenya. The research on which this policy brief is based is one of the first to estimate the levels of over-indebtedness and financial capabilities among youth digital loan borrowers in Kenya to give a detailed understanding of the sources of over-indebtedness.

## **2. DIGITAL LOANS: Contextualising the Problem**

### **2.1. Difficulties around Digital literacy**

Digital loans are recognized as having the potential to have a welfare enhancing impact by bridging gaps for day-to-day needs of borrowers, boosting small enterprises' cash flows, and meeting unexpected shocks. However, the increasing evidence of over-indebtedness among borrowers can derail these benefits. Over-indebtedness can result in devastating outcomes at both macro and individual

level. At the macro level, over-indebtedness has been associated with reduction in aggregate demand and reduced overall economic growth. At the individual level, over-indebtedness has been observed to trigger adverse health-related outcomes including reduction in food consumption, declining overall wellbeing, and increasing in emotional afflictions (Gathergood, 2012).

A recent case of suicide demonstrates the negative aspects of digital lending apps.<sup>1</sup> Policymakers have suggested that digital lending has led to reduced social cohesion, family breakdowns, and lower self-esteem.<sup>2</sup> Demand-side literature has concentrated on the difficulties that digital credit borrowers experience when it comes to debt stress (FSD Kenya, 2020).<sup>3</sup> Research on understanding the level and causes of debt stresses is still scarce and this brief aims to fill this gap.

Studies have shown that borrowers of digital loans have had difficulty in understanding the terms and borrow from multiple sources. Also, research has identified a wide range of factors influencing the likelihood of consumer over-indebtedness (for a review, see

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<sup>1</sup> See <https://citizentv.co.ke/news/man-kills-self-in-kakamega-after-constant-nagging-by-a-local-digital-lender-348164/>

<sup>2</sup> See <https://www.bloomberquint.com/onweb/kenya-lawmakers-to-investigate-social-menace-of-loan-apps>

<sup>3</sup> See [https://fsdkenya.org/wp-content/uploads/2020/07/Focus-Note-Digital-Credit-in-Kenya\\_Updated.pdf](https://fsdkenya.org/wp-content/uploads/2020/07/Focus-Note-Digital-Credit-in-Kenya_Updated.pdf)

Kamleitner and Kirchler, 2007). Among others, these factors include low financial literacy (e.g., Lusardi, 2008), and positive attitudes towards credit (e.g., Wang et al., 2011).

Recently a new approach focusing on debt literacy specifically rather than broad financial literacy has been examined to explain consumer use of credit and their over-indebtedness (Lusardi & Tufano, 2009). Empirical findings in these studies show that general literacy on financial matters is not adequate to participate in debt markets (Van Ooijen & Van Rooji 2014). Furthermore, studies on attitudes towards credit such as those of Lachance (2012), Wang et al., (2011), Castellani & DeVaney (2001) and Chien & DeVaney (2001) show that positive attitudes to credit can lead to over-indebtedness. However, none of these studies are based on digital loans in a developing country context. Our brief builds on these studies and investigates the role of debt literacy and attitudes to digital loans as sources of over-indebtedness among youth digital loan users in Kenya.

## **2.2. Financial and Debt Literacy**

Financial capabilities and attitudes are viewed as crucial to ensure that borrowers can utilize credit towards improving their welfare outcomes (World Bank 2013). The financial capability model suggests that individuals who possess such

capabilities (the knowledge/literacy, right attitudes, skills, and behavior) are most likely to achieve their financial goals, improve their welfare and hedge against financial risks and shocks over-indebtedness (ibid).

Financial education and literacy are important in improving peoples' ability to use financial services and make effective decisions with regards to present and future welfare. Houston (2012) connotes that people with a higher stock of human capital (financial literacy) stand a better chance of making effective borrowing choices. Additionally, financial literacy education positively impacts consumer financial attitude as discussed by Lyons (2008).

Thus, financial capability needs also to focus on people's attitudes, such ability to understand how to save for the future (Mundy, 2011). Financial literacy and improved financial attitudes are key to participating in the digital credit market, however young it has been noted that young people generally possess lower levels of debt literacy (Lusardi et al., 2010). It has also been shown that positive attitudes towards credit lead to loan stacking/multiple borrowing (Chien & DeVaney, 2001). As such could lack of debt literacy and poor attitudes towards digital credit explain the debt stress (over-indebtedness) experienced among digital credit borrowers? To understand this we operationalise and

investigate the relationship of the variables next.

The brief relies on a conceptual model developed under our previous study<sup>4</sup> to understand the impact of and aspects of financial capabilities including debt literacy and attitudes to digital loans debt (independent variables) on over-indebtedness (the dependent variable). The study comprehensively operationalised the following key variables to examine its objectives in relation to youth digital loan borrowers in Kenya:

- To determine debt literacy levels
- To determine the level of attitude towards digital loans
- To determine the level of over-indebtedness
- To understand the relationship between debt literacy and over-indebtedness
- To understand the relationship between attitude towards digital loans and over-indebtedness.

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<sup>4</sup> The study used a mixed-method design that combined qualitative and quantitative instruments to determine the links between debt literacy and attitudes and over-indebtedness. The literature showed that most digital credit users were found in urban places such as Mombasa and Nairobi, the study focused on Ruaraka Constituency as it is considered one of the most urbanised areas in Nairobi County. The study began with a thorough mapping exercise of youth digital credit users to build a population for sampling. A total of 318 individuals were mapped and subsequently 150 individuals were surveyed to

Within the literature on developing countries, there is no accepted standard definition of over-indebtedness for either conventional or digital credit. Till the rules changed when the COVID-19 pandemic hit, registered credit reference bureaus (CRBs) in Kenya, would list all digital loan defaulters. A positive listing of a borrower takes place after 30 days of payment of loans and a negative listing placed after ninety days of non-payment of an amount of more than KES 1000. However, simply being listed in the CRB cannot be considered a good definition of over-indebtedness.

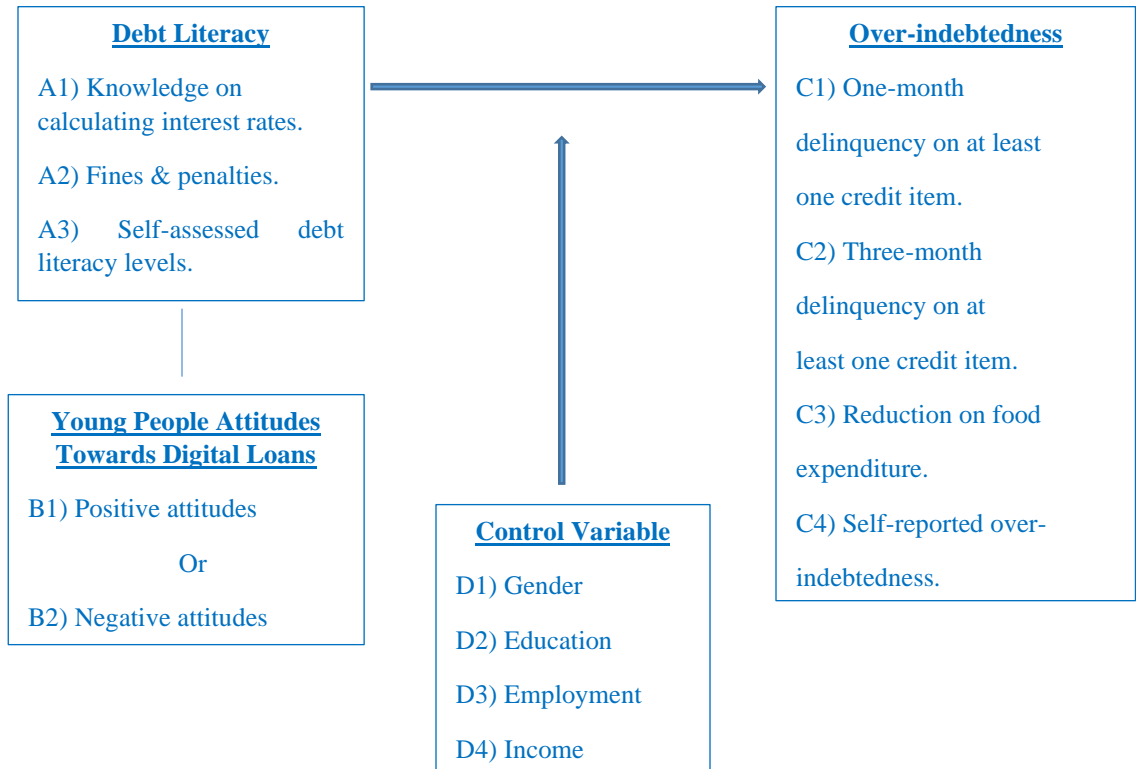
This brief considers the debt stress that borrowers undergo to pay their loans to operationalize over-indebtedness. Reduced food expenditure is one of the critical measurements introduced to understand borrowers' sacrifices. We thus operationalised over-indebtedness using three variables - digital loan delinquencies of one and three months,

collect quantitative data and 4 case studies were conducted to collect qualitative data. Analysis was carried out including descriptive statistics, regression for the quantitative data and thematic analysis for the qualitative data. See Adam (2002) at [http://erepository.uonbi.ac.ke/bitstream/handle/11295/153832/Adam\\_Debt%20literacy%2C%20attitudes%20towards%20credit%20and%20digital%20credit%20over-indebtedness..pdf?sequence=1&isAllowed=y](http://erepository.uonbi.ac.ke/bitstream/handle/11295/153832/Adam_Debt%20literacy%2C%20attitudes%20towards%20credit%20and%20digital%20credit%20over-indebtedness..pdf?sequence=1&isAllowed=y)

reduction in food expenditure among digital credit users and self-report over-indebtedness. Our conceptual

framework is shown in the diagram below.

**Figure 1. Conceptual Framework of the Study**



For the independent variables, the aspects of debt literacy and attitudes were adapted to suit the Kenyan context. Debt literacy was operationalized as considering three aspects - knowledge of calculating interest rates, fines and penalties paid and self-assessed levels of debt literacy. For attitudes, we sought to establish views on digital credit debt behavior and usage among the youth borrowers. Positive attitudes towards digital credit were hypothesized to be correlated with over-indebtedness - increased debt appetite increases the risk of defaulting, thus over-indebtedness. On the other hand, negative attitudes denoted by lack of comfort in holding digital credit and less

frequent usage of digital credit is hypothesized to be negatively correlated with over-indebtedness. We control for other factors including - gender, education, employment status and level of income – that are known to affect the operationalized variables of debt literacy and attitudes towards digital credit.

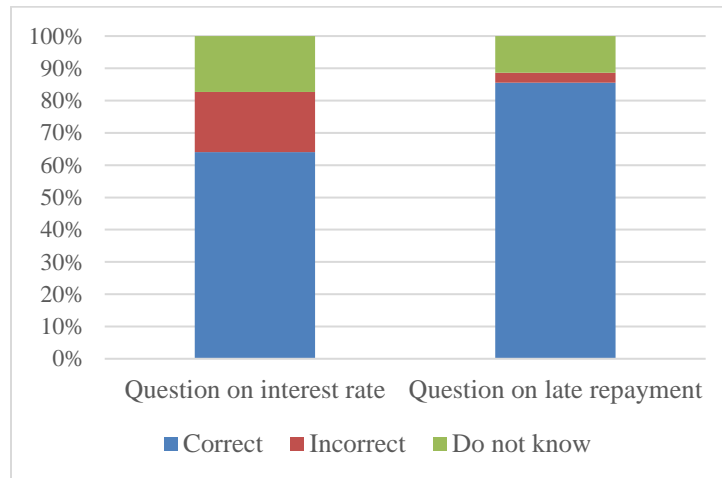
### **3. DIGITAL LOANS: Identifying the Problems**

Our previous study’s findings are summarized in this section with a view to drawing out policy recommendations under this brief. Most youth digital credit users are

men (54%), with tertiary level of education (80%) and are not married (86%). In our sample, 44% of the respondents had a monthly income of KShs.10,000 and less with mean monthly income being KES 17,690. The overall debt literacy amongst the sample was moderately high. However, we found that debt literacy was low among

certain groups including women and the younger youth (under 25 years), and students. Regarding the specific aspect of debt literacy in relation to calculation of loan costs (simple interest rates), we found that more than a third of youth borrowers cannot answer a question on simple interest rates.

**Figure 2. Debt Literacy Levels Among Youth Digital Credit Borrowers**



On attitudes towards digital credit among the youth borrowers, a factor analysis results indicated that youth attitudes towards digital loans are moderately positive. Additionally, the youth are ‘attracted’ to digital loans because of how the products are offered; ease of access, privacy, and convenience. However, there were divergent views on their experience with digital credit over-indebtedness. The level of over-indebtedness using the three measures of 1- & 3-month delinquency, self-reported over-indebtedness and reduction in food expenditure reveal the following:

- Quantitative measures show 24% of the sampled population had 1-month

delinquency, while 9.3% of the population had a 3-month delinquency.

- On self-reported over-indebtedness, 18% of the sampled population considered themselves over-indebted and faced difficulties in servicing their loans or paid them under difficult conditions.
- Lastly, 54% of the sampled population indicated that they reduce their food expenditure or skip meals or forgo certain foods to pay off their digital loans.

As seen in the conceptual framework, our measure of over-indebtedness has both quantitative and qualitative measures. We find that individuals who had 1-month delinquency (C1) and self-reported over-indebtedness (C4) was 1.3% of the sample population, while 3-month delinquency (C2) with self-reported over-indebtedness (C4), was 5.3% of the population. Additionally, there were youth borrowers who reduced their food expenditure (C3) and had loans arrears at 1 and/or 3 months (C1 & C2) was 12.6% percent of the sample. The total level of over-indebtedness using the combined results of at least one of the four measures stood at 25.8% of the sampled youth. In our population, a quarter of the youth who take digital loans show signs of debt stress.

Delinquency on digital loans differs across employment status, attitudes towards digital credit, monthly income, level of education and number of outstanding loans. The result mean that youth borrowers who are educated, have stable sources of income and have a few outstanding loans and have the right attitudes towards digital credit products are less likely to be over-indebted by them. Lack of knowledge on interest rates significantly correlated with over-indebtedness is a significant quality for a youth borrower to possess key to participate in the digital credit market. Furthermore, borrowing without a good reason had a significant relationship with digital credit over-indebtedness, showing the importance of borrowing to be planned to have welfare enhancing benefits. Both variables had a confidence level of 95%.

#### **4. CONCLUSIONS AND RECOMMENDATIONS**

The promise of digital loans to help borrowers cope with shocks or make investments is being eclipsed by evidence of over-indebtedness. The Central Bank of Kenya (Amendment) Act of 2021 which requires licensing of digital credit providers will reign in some of the more egregious lenders but more needs to be done to ensure that consumer protection is prioritized. Debt literacy and attitudes to debt are significant explanatory factors in explaining over-indebtedness of youth but other market factors including ability to have multiple loans also contributes of over-indebtedness. As a result, the brief proposes the following recommendations:

- a)** Collaboration between government and private sector to introduce interactive debt literacy programs tailored towards helping borrowers understand digital loans products and calculation of interest rates.
- b)** Strong regulation and consumer protection to ensure that digital lenders are transparent about interest rates and repayment periods and to reduce aggressive marketing by digital loan providers.
- c)** Regulation needs to limit cross lending without sharing of credit reports among service providers.
- d)** More research needs to be done on other factors leading to over-indebtedness and how digital loan products can be tailored to consider unexpected adverse life events faced by borrowers.

## References

- Castellani, G., & DeVaney, S. A. (2001). Using credit to cover living expenses: a profile of a potentially risky borrower. *Family Economics and Nutrition Review*, 13, 12-30.
- Chien, Y. W., & DeVaney, S. A. (2001). The effects of credit attitude and socioeconomic factors on credit card and installment debt. *Journal of Consumer Affairs*, 35, 162-179.
- FSD Kenya (2019). Digital Credit in Kenya: facts and figures from Fin Access 2019. Focus Note. Nairobi: FSD Kenya.
- Gathergood, J. 2012. Self-control, financial literacy and consumer over-indebtedness. *Journal of Economic Psychology*, 33, 590-602
- Houston, J. (2012). Financial literacy and the cost of borrowing. *International Journal of Consumer Studies*, 36, 566-572.
- Lachance, M. (2012). Young adults' attitudes towards credit. *International Journal of Consumer Studies*, 36, 539-548.
- Lusardi, A., & Tufano, P. (2009). Debt Literacy, Financial experience and Over-indebtedness. National Bureau of Economic Research Working Paper No. 14808. Cambridge: Massachusetts.
- Lusardi, A., Mitchell, O., & Curto, V. (2010). Financial Literacy Among Young. *Journal of Consumer Affairs*, 44, 358-359.
- Lusardi, A., & Tufano, P. (2009). Debt Literacy, Financial experience and Over-indebtedness. National Bureau of Economic Research Working Paper No. 14808. Cambridge: Massachusetts.
- Lyons, A. C. (2008). Risky credit behavior of college students. In J. Xiao (Ed.), *Handbook of Consumer Finance Research* (pp. 208-285). New York: Springer.
- Mundy, S (2011). Financial Capability: Why it is Important and how it can be improved. CfBT Education Trust, Reading.
- Van Ooijen, R., & Van Rooji, M. (2014). Mortgage Risk, Debt Literacy and Financial Advice. DNB Working Paper 449, Amsterdam: De Nederlandsche Bank.
- Wang, L., Lu, W., & Malhotra, N. K. (2011). Demographics, attitude, personality and credit card features correlate with credit card debt: a view from China. *Journal of Economic Psychology*, 32(1), 179-193. doi:10.1016/j.joep.2010.11.006
- World Bank (2013). Why Financial Capability is important and how surveys can help. Retrieved From <http://documents.worldbank.org/curated/en/693871468340173654/pdf/807670WP0P14400Box0379820B00PUBLIC0.pdf>

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### Authors Bio:

Khalid Adam is a project management consultant, researcher, and writer. An alumnus of the Institute for Development Studies, University of Nairobi. His research interests are in financial inclusion, governance, entrepreneurship, and project management.

Dr. Radha Upadhyaya is Research Fellow at University of Nairobi - Institute for Development Studies (research) and Dept. of Economics & Development Studies (teaching). Radha has over 15 years of teaching experience with particular focus on research philosophy & methods and finance & development. She has written on the Kenyan banking sector, banking regulation in East Africa, African firms, African entrepreneurs, and informality.