Lapai Journal of Economics; Volume 8, No.2; 2024
Print ISSN: 2659-028X
Online ISSN: 2659-0271
DOI: https://dx.doi.org/10.4314/lje.v8i2.18
Published by Department of Economics, IBB University Lapai, Niger State, Nigeria

Digital Micro-Credit, Financial Literacy and Households Over-Indebtedness in Niger State, Nigeria

James Obilikwu*[1] & Abdulmiminu Baba Alfa[1], & Sunday Okoroigwe Ejike[2]

[1]*Department of Economics, IBB University Lapai, Niger state, Nigeria.*
[2]*Department of Accounting, IBB University Lapai, Niger state, Nigeria.*

*Correspondence Email: jamesobilikwu@gmail.com

Abstract

The advent and increasing households' uptake of digital credit (an unsecured high interest loan provided through digital channels with little or no knowledge of the conditionality of the credit by the up takers) in recent times has been accompanied with mounting household over indebtedness. This study investigated the impact of digital micro-credit and financial literacy on households' over-indebtedness in Niger state Nigeria. Using multi-stage sampling technique three (3) Local Government Areas were selected from each of the cluster of the three senatorial districts of the state, a purposive sample size of 462 respondents was used for the analysis. Finding reveals that easy access, no collateral demanded on taking the loan, and poor financial/credit knowledge were the major causes of their over indebtedness. The study hence recommends that digital credit providers should provide financial/credit education before advancing credit to them, and that stringent conditions including provision of collaterals should form parts of digital loan agreement so that only financial/credit knowledgeable and serious deserving applicants that can repay loan have access to it.

Keywords: Financial literacy, Digital micro credit, Household over indebtedness, Niger State

JEL Classification: E51, H81, O16

1. Introduction

Digital credit which is mostly in form of an unsecure high interest loan provided through digital channels has been on the increase in recent times. The increase has been attributed to the advancement in information and financial technologies. The credit is provided mostly by banks, Mobile Money Operator (MMOs), telecom companies, and payment services providers. Digital financial operations reduce lending cost, hence expanding the availability of micro-credit to households (Wamalwa, Rugiri & Lauler, 2019).

There is no doubt, credit is important to the household as it sustains a steady consumption when there is income shock and equally serve as a readily means of fund during emergency. In addition, credit creates and promotes business opportunities for the financial industry, and ultimately promotes economic growth (Sommarat, Atchana, Krislert & Bhumjai, 2020; King & Demirgüç-Kunt et al., 2008; Clarke et. al, 2006; Levine, 1993). However, the increase in this unsecured digital credit to households has been accompanied with increase in households' over-indebtedness (Bank of Thailand, 2018; IMF, 2017; Davies, 2009), and there are empirical evidences (Parrish and King, 2009; CFPB, 2016) that digital credit exacerbate financial distress. According to IMF (2017), global household debt has been increasing faster than the size of respective economies causing rapid increase in household debt to GDP ratio.

Household over indebtedness cause household financial instability and negatively affect physical and mental health. It can reduce households' freedom of choice and ability of households to determine their lives. It can reduce households' consumption, savings, and human capital development. On macroeconomic front, it can fuel unemployment, impact negatively on financial intermediaries, stimulate instability in the financial sector and retard economic growth (IMF, 2017; Schicks, 2013; Bridges and Disney, 2010; Debelle, 2004).

Factors such as lack of financial literacy by borrowers; financial imprudence caused by inadequate knowledge of the real costs of repaying the loan, unsecured loan; unexpected events modifying the initial terms and conditions which the loan was contracted; unexpected reduction in households income; escalating consumption habits, financial innovation; aggressive marketing by lenders; lack of transparence; lax evaluation of repayment capacity due to the digital manner credit are delivered have been identified in the literatures as drivers of household's over-indebtedness (Lusardi and Tufano, 2015; BASA, 2014; Anderloni and Vandone, 2010; Keese, 2009). Among these factors, lack of financial literacy by borrowers; financial imprudence caused by inadequate knowledge of the real costs of repaying the loan, easy access to and unsecured loan effects on over indebtedness are said to be strategic drivers as they are the bases of the other driving factors.

In spite of, the critical roles of these factors in explaining the drivers of households over indebtedness, existing studies on households over indebtedness have been mostly on the constituent and measurement of over indebtedness (see; D'Alessio and Lezzi, 2013); effects of over indebtedness on households (Ditimi.; Ikechukwu; Fasina., 2020; Alter; Feng and Valck, 2018; Mohanty and Shim, 2017; Cuesta, and Budría, 2015). Despite the global concerns on the causes of households escalating over indebtedness, only few studies (Dumitrescu, Enciu, Hândoreanu, Obreja, and Blaga, 2022; Adam, 2020; Wamalwa, Rugiri & Lauler, 2019) have examined the role of digital credit and financial literacy on household over indebtedness, and none of these studies is on Nigeria. Their findings are even mixed and ambiguous. The general objectives of the study are to investigate the impact of micro digital credit on households over-indebtedness in Niger state, Nigeria. To examine the effect of financial literacy on households over-indebtedness in Niger state, Nigeria. With specific objectives to ascertain the impact of households income shock on household over-indebtedness in Niger state, Nigeria, and to ascertain the effects of macroeconomic shock on households over-indebtedness in Niger state, Nigeria?

2. Literature Review

Theoretical Framework

Several theories have provided foundations for credit up-take by individual and household. Among them are the neoclassical theories of the Life-Cycle Hypothesis (Modigliani, 1966) and Relative Income Theory (Duesenberry 1951), and the Behavioural Finance Theory (BFT).

The Life-Cycle Hypothesis formulated by Modigliani (1966) argues that an individual's consumption at a point in time is determined not only by his current income alone, but also by his expected income in future years. The Life-Cycle Hypothesis which is also known as smoothing theory stems from Fisher (1930) remarks that there is a strong relationship between household debt and consumption, Fisher (1930) suggests that a household will take credit in order to maintain a stable level of consumption subject to income that will accrue to it over a lifetime. When an individual's current income is not sufficient to support an individual's current consumption plans, the individual will borrow and brings backward some part of its income to be earned in the future for present consumption. Based, on the theory, being indebted or saving are normal individual or household behaviour because at the earliest stages of the life cycle of individuals or households, certain level of debt is inevitable as it is through debt that expenditure is shift from one cycle of their lives to another. The theory is however limited by its assumptions of rationality and perfect foresight on the part of individuals or households. The limitations of the theory prompted Hall (1978) to incorporate unexpected events or shocks like changes in macroeconomic variables, sickness, job loss, and changes in family structure into the model.

Another of the neoclassical theories that explain households debt is the Relative Income Theory by Duesenberry (1951) which contends that individuals have social pressure to keep up with the standard of living of other people they associate with (keeping up with the Jones), and to keep up to their previous peak income consumption even when they are no longer earning that previous peak income (ratchet effects). From the Relative Income Theory, keeping up with the Jones and the onward ratchet effect drive individuals and households into debt.

The Behavioural Finance Theory (BFT) disagrees with the Life Cycle and the Relative Income theories. The Behavioural Finance Theory contends that household credit demand is not rational but more driven by emotional, social and psychological factors such as low financial literacy, overconfidence, impulsivity in consumption attitudes, social comparison and myopia. These factors impede an individual's ability to evaluate the costs and benefits of consuming and borrowing. According to these strands of literature, low level of financial literacy and management results in over-indebtedness (Disney & Gathergood, 2012; Anderloni & Vandone, 2010); overestimation of the benefits and undervaluation of the costs of credit on the individuals make them to become over indebted regardless of its effects on them (Meier and Sprenger, 2007; Kilborn, 2005); and interpersonal differences about risk as risk-averse individuals are less likely to be over indebted (Brown et al., 2013). The Behavioural Finance Theory is chosen as the framework of this study as it presents the explanatory variables of the study as the determinants of over indebtedness.

Conceptualization

Digital credit refers to a loan originated, processed and delivered through digital channels such as mobile apps and the web without much of in-person physical interaction (Robinson, Park and Blumenstock, 2021). The financial institutions involve leverage digital data to make lending decisions. The credits are mostly small in amount, short in tenor and with relatively high rate of interest (Francis, Blumenstock, and Robinson, 2017; CGAP, 2017). The credit is driven by high consumer demand, lower operating costs, the greater reach of instant, automated, and remote lending methodology. Collateral provision is not involved for the loan to be taken. Borrowers credit worthiness is based on digital data records, earlier repayment of the credit, and if available past banking history data. Digital credit makes it possible and easy for households to access credit.

Financial literacy is the ability to read, analyze, manage, and communicate on personal financial conditions that affect material wellbeing (Faboyed , Ben-Caleb, Oyewo, and Faboyede, 2014). It is a set of skills and knowledge that allows an individual to make informed and effective decisions with all of their financial resources. According to the Organization for Economic Co-operation and Development financial literacy is the process by which consumers/investors improve their understanding of financial products, concepts and risks, and through information, instruction and/or objective advice, develop the skills and confidence to become more aware of financial risks and opportunities so as to make informed choices, to know where to go for help, and take other effective actions to improve their financial well-being. Financial literacy is divided into debt literacy, numeracy and money management skills (Lusardi and Tufano, 2009). Debt literacy is the ability to make simple decisions regarding debt contracts and to apply basic mathematical knowledge about interest compounding to everyday financial choices. To Loke and Hageman (2013) it is the ability to correctly assess debt contracts and compound interest when making financial decisions about loans, credit cards, interest rates, and fees. The benefit of being debt literate include access to planned savings for emergencies and retirement, and a lower debt-to-income ratio overall (Bartley, 2011). Financial literacy is a basic knowledge that people need to survive in a modern society as being financial illiterate can lead to a wrong financial decision such as poor borrowing habit that may cause financial problems, and result in lower financial well-being (Kim, 2001), and increase timely debt payments (George Lucas Educational Foundation, 2013). Individuals with low levels of debt literacy transact with higher interest rates and fees and are unable to judge whether their debt is suitable. Greater loan losses leading to poor loan performance cause greater exposure to fraud and abuse because of lack of financial literacy which might also stimulate financial brittleness borrower behaviour (Mitchell, 2005).

Debt is an amount of money borrowed by one party from another under a condition to pay back later usually with interest. Household debt consists of debt incurred by the household sector (Prinsloo, 2002). It includes consumer debt (debt outstanding on credit cards, personal and home equity lines of credit, secured and unsecured loans from banks and other institutions, and unpaid bills), mortgage debt on residences and real estate (Chawla and Uppal, 2012). A borrower who has failed to meet required payment on an outstanding credit commitment is deemed to be indebted (Disney *et al.,* 2008). Over-indebtedness is thus, when individuals are unable to pay all their debts in a timely manner, resulting in feelings of panic, stress and being overwhelmed by the number and extent of these unpaid debts (The National Credit Regulator, 2014). Corroboratory, a person is over-indebted if he or she considers that he or she has difficulties in repaying debts (Betti *et al.,* 2007). Thus the critical level of debt differs among households. To Gonzalez (2008) over indebtedness occurs when the repayment outcome of a loan contract does not correspond to the original expectations of either the borrower or the lender or both resulting from either unwillingness to repay, or inability to repay, or costly actions required to repay. A common requirement in over-indebtedness definitions is that problems exist against the will of the borrower (Korczak, 2003).

Over-indebtedness can still be seen either from objective or subjective perspectives. The objective approach views it as when a borrower total debt service is higher than his/her net income during a defined timeframe. The subjective perspective views over-indebtedness as when a borrower struggles to repay loan to the point that he/she is making frequent and unacceptable sacrifices such that is impacting on his/her living standards (Liv, 2013). Due to all these, there is no universal agreement on the indicator that best captures over-indebtedness. However, the indicators are categorized into; multiple borrowing around and in excess of four loan commitments (D'Alessio and Iezzi, 2013), making high repayments relative to income (Schicks, 2010), being in arrears (BIS, 2010; Keese, 2009), making heavy use of credit and finding debt a burden (D'Alessio & Iezzi, 2013), when a borrower's net resources, including income and realizable assets, make it persistently difficult to meet essential living expenses (Stamp, 2009).

Empirical Literature

Wamalwa, Rugiri and Lauler (2019) studied the effects of digital credit on household indebtedness in Kenya. The study reveals that households using digital credit are more likely to sale household assets to repay their loan, have a higher number of loans and lower income compared to those using conventional credit or not having credit. Studying the impact of financial literacy on household over indebtedness, Nkundabanyanga *et al.* (2014) reveals that households with higher financial literacy are likely to make effective financial choices. Narrowing the investigation to debt, Lusardi and Mitchell (2008) indicates that individuals with low-financial literacy are more likely to have problems with debt. Similarly, Seane *et al.*, (2016) reports that lack of financial literacy contributes to the risk of being indebted, and suggests that households need to have the necessary financial knowledge to avoid misusing credit. Using USA national sample, Lusardi and Tufano (2015) examine the effects of debt literacy, financial experiences on indebtedness. The study reveals that individuals with little literacy of debt underestimate the cost of consumer credit repayments and are more likely to use high-cost credit and more likely to over-borrow (and so are more likely to fall into over indebtedness). It adds that individuals with poor financial literacy do not know whether they are even over indebted or not. Chotewattanakul, Sharpe and Chand (2019) reports that households with a financial illiterate head tend not to even perceive of being over-indebted when the objective metrics suggest otherwise in a study of quantitative measurement of over-indebtedness in Thailand using data on income and debt repayments with the application of logit regressions.

Examining the effects of other determinants of household over indebtedness; Fatoki (2015) studies of South African reports both internal and external demand and supply-side factors. Dumitrescu, Enciu, Hândoreanu, Obreja, and Blaga (2022)s investigation of macroeconomic determinants of household debt in developed economies using a sample comprising 26 OECD countries reports that economic growth and inflation reduces household debt. In the same vein, Puliyakot (2017) using binomial logistic regression studies the determinants and extents of borrower over indebtedness among microfinance borrowers. The study reports that adverse economic shocks, low household income, number of credit arrangements contracted by the household and quantum of borrowing from informal sources increase the likelihood of a household being over indebted.

Despite the concerns on the causes of households escalating over indebtedness, to the best of our knowledge, no study has been conducted on Nigeria. Globally, only few studies have been conducted and the findings are mixed and ambiguous (Dumitrescu, Enciu, Hândoreanu, Obreja, and Blaga, 2022; Adam, 2020; Wamalwa, Rugiri & Lauler, 2019) on the effects of digital credit and (Chotewattanakul, Sharpe and Chand, 2019; Seane *et al.*, 2016; Lusardi and Tufano, 2015; Nkundabanyanga *et al.*, 2014; Lusardi and Mitchell, 2008) on financial literacy impacts on household over indebtedness.

3. Methodology

The Study Area

The study area is Niger state, Nigeria. Niger state is in North central zone of Nigeria. It is the largest state in the country. It has a total population of 3,954,774 (NPC, 2006) with a total number of 730,264 households (NBS, 2010). There are 1,897,141 active GSM number in the state (Sky Tech NG Integrated Services, 2020), and the all the digital credit providers in the country are accessible from the state. The state like any other state in the country is divided into three senatorial districts. It has 25 Local Government Areas (LGA) divided into wards, towns and villages. The people are predominantly farmers. There are three hydroelectric power stations in the state, several educational institutions among which are; three universities, two polytechnics, and two colleges of education.

Data Source

The study covered Niger state of Nigeria. Niger State like every other state in Nigeria is divided into three senatorial districts. It has 25 Local Government Areas (LGAs). There are 1,897,141 active GSM number in the state (Sky Tech NG Integrated Services, 2020). The study used descriptive research approach. This method enables the researchers to collect different opinions of the respondents on the research variables which helped to achieve the objectives. A structured questionnaire was administered on purposeful sampled households who had accessed digital credit to elicit information on the nature and impact of the relationship between digital credit, financial literacy and household over indebtedness

A Multi-stage purposive sampling method was used for selecting the respondents. First, based on the level of ICT usage, security considerations, and Following Adeyemi and Oyetade (2011), and Idowu, *et al.* (2013), three Local Government Areas were selected from each of the cluster of the three senatorial districts of the state. Following Andrew Fisher sample size selection formula and Sekaran (2003), 385 households are required to represent the entire households in the state using 95% level of certainty. However, the study administered a total of 540 questionnaires, while 462 (86%) of them were returned and were completed satisfactorily and used the analysis.

Data Analysis

The analysis was based on descriptive statistics employed to study the nature and extent of the effects of digital credit and financial literacy on household over indebtedness. This involves the use of cross tabulation and percentages. The study used both the Statistical

Package for Social Sciences SPSS (Version 24) and Econometric E-views 8.0 for the data analysis.

4. Results

The data on digital credit, financial literacy and household over indebtedness in Niger state are presented in Table 4.1.

Table 1: Socio-economic characteristics, digital credit and financial literacy information of the respondents on the effects of digital credit and financial literacy on over indebtedness in Niger state

Variable	Frequency	Percentage %
Gender		
Male	432	95
Female	30	5
Educational qualification:		
None	6	1
Primary	21	5
Secondary	262	56
Tertiary	173	38
What type of work do you do?		
No work	0	
Self-employed	153	33
Paid-work	95	21
Paid-work &self employment	214	46
Your estimated monthly income (₦)		
< 20000	12	3
20000 - 100000	211	45
100001- 200000	149	32
>200000	90	19
Your estimated monthly expenditure (₦)		
< 20000	5	1
20000 - 100000	194	42
100001- 200000	180	49
>200000	83	18
How many persons are in your household?		
< 4	63	13
5 to 8	134	29
9 to 10	187	41
>10	78	17
How often do you take digital credit?		
Frequently	112	24
Once a month	285	62
Once a year	38	8
Sometimes	27	6
What did you use the digital credit for?		
Feeding	204	44
School fees	97	21
Investment	65	14
Others things	96	21

Variable	Frequency	Percentage %
How many digital credit lenders you have been indebted to		
1	82	18
2	226	49
3	108	23
>3	46	10
The rate of interest (%) on the loan per month is		
1	0	0
2	14	3
3	425	92
>3	23	5
Do you take credits from non-digital sources?		
Yes	431	93
No	31	7
You prefer digital credits to other sources of credit?		
Yes	357	77
No	105	23
No collateral is an incentive for taking digital loans		
Yes	413	89
No	49	11
Easy accessibility is a reason for taking digital credit		
Yes	392	85
No	70	15
Did taking of digital credit contribute greatly to your over indebtedness		
Yes	313	68
No	149	32
Why were you not able to repay the loan as at when due.		
The rate of interest is high	62	13
Personal income shock	26	5
Macroeconomic shock (inflation)	128	28
Financial incapability to pay	246	54
Did you have financial education in a formal school?		
Yes	291	64
No	171	36
Did you used other sources of financial or credit information		
Yes	124	27
No	338	73
Have you ever used customer-care service on a loan?		
Yes	75	16
No	387	84
Have you ever used the services of a Credit Bureau?		
Yes	13	3
No	449	97

Source: Author's Computation

Based on the data as presented in Table 1, majority of the over-indebted household heads were men (95%). Most of the respondents have secondary school education as their highest educational qualification. Majority of them combined paid-work with their own business having monthly income of mostly between N20000 to 100000 per month and monthly expenditure of the same range with family's size of 9 to 10 persons mostly.

Majority of the respondents (62%) took a digital credit at least once in a month and they mostly (44%) used the loan for feeding. Though the respondents had access to non-digital sources of credit, they preferred digital credit as it was easy to access, at 3% interest rate per month and low or no collateral at all. Majority of them (68%) said that their uptake of digital credit due to its easy access and no collateral demanded contributed greatly to their over indebtedness. Financial incapacity, 54% of the respondents said is another major reason for their poor repayment of the loans, only 28% of the respondents attributed it to macroeconomic shock of inflation, 13% of them to high interest rate, and only 5% attributed it to personal income shock.

On the effects of financial illiteracy on over indebtedness, it was revealed that 65% of the respondents did not have in-depth knowledge of financial and credit management apart from their general financial education from schools, 73% of them have never used services of credit bureau and have never contacted a financial institutions customer-care service on financial and credit matters. These suggested that their poor knowledge of financial and debt contributed to their over indebtedness.

Discussion of Findings

The major findings of the study are that digital credit uptake due its easy accessibility and non involvement of collateral, and poor financial and credit literacy of the digital credit borrowers fuel households over indebted in Niger state.

The finding that digital credit propelled household over-indebtedness is consistent with the finding of Adam (2017) that digital borrower who have knowledge of interest rates and borrow digital loans for good reason are less likely to be over-indebted in Kenya, and Wamalwa, Rugiri and Lauler (2019) finding still in Kenya that households using digital credit have higher number of loans and lower income compared to those using conventional credit or not having credit. The study's finding is however inconsistence with Idris et al. (2018) finding that low financial knowledge and debt illiteracy were not the causes of over-indebtedness. This finding may be due the small sampling frame of just eight young workers in one of the public universities in Malacca, Malaysia that they used.

The study's second finding that poor financial and credit literacy of the digital credit borrowers stimulated households over indebted corroborates Lusardi and Mitchell (2008)'s finding that individuals with low-financial literacy are more likely to have problems with debt; Seane *et. al* (2016) finding that lack of financial literacy contributes to the risk of being indebted, and suggests that households need to have the necessary financial knowledge to avoid misusing credit; and Nkundabanyanga *et al.* (2014) finding that households with higher financial literacy are likely to make effective financial choices.

5. Conclusions and Recommendations

The study examined the effects of digital credit and financial and debt literacy on over-indebtedness in Niger state. The study uses primary data and undertakes descriptive analysis to assess the implications of uptake of digital credit and financial literacy on household over-indebtedness. The descriptive analysis mainly relied on primary data based on a multi-stage purposeful sampling of 462 over indebted household's heads.

The descriptive analysis shows that majority of the over-indebted household heads were men (95%). Most of them have secondary school education as their highest educational qualification. Majority of them combined paid-work with their own business having monthly income of mostly between N20000 to 100000 per month and monthly expenditure of the same range with family's size of 9 to 10 persons mostly. Majority of the respondents (62%) took a digital credit at least once in a month and they mostly (44%) used the loan for feeding. Though the respondents had access to non-digital sources of credit, they preferred digital credit as it was easy to access, at 3% interest rate per month and low or no collateral at all.

The analysis further showed that digital credit uptake due to its easy accessibility and non involvement of collateral, coupled with poor financial and credit literacy of the digital credit borrowers' fuel households over indebted in Niger state. Furthermore, the analysis revealed that the households head personal income shock and macroeconomic shocks via inflation were not significant drivers of household over-indebtedness in Niger state.

Based on the findings, the study recommends that digital credit providers should put prospective borrower through financial/ credit education before advancing credit to them. Secondly, stringent conditions including provision of collaterals should form parts of digital loan agreement so that loan uptakes will only be for serious deserving applicants that will be able to repay the loan.

6. Acknowledgement

We sincerely appreciate TETFund for sponsoring this research and supporting academic advancement. Their financial assistance and commitment to research and innovation were crucial to the success of this study. We are grateful for their contribution to knowlerge creation and national development.

Reference

Adam, K. T. (2020). Debt, literacy, attitude towards credit and digital credit over indebtedness; A research project submitted to the Institute for Development Studies, University of Nairobi in partial fulfillment for the award of the degree of master in development studies

Alter, A. Feng, A. X. & Valckx, N. (2018). Understanding the macro-financial effects of household debt: A global perspective. IMF Working Paper WP/18/76, Monetary and Capital Markets Department International Monetary Fund. Retrieved from https://www.imf.org/en/Publications/WP/Issues/2018/04/06/Understanding-the-Macro-Financial-Effects-of-H

Anderloni, L., & Vandone, D. (2010). Risk of over indebtedness and behavioral factors (Working Paper No. 2010-25). Milan: University of Milan

Bank of Thailand (2018). EC_MB_039: Loans to household. Retrieved from http://www2.bot.or.th/statistics/BOTWEBSTAT.aspx?reportID=775&language= ENG.

Banking Association of South Africa (2014). National Credit Act. From (Retrieved on 30 August 2014).

Bartley, J. (2011). "What drives financial literacy among the young?" *Undergraduate Economic Review*: Vol. 7(1) , 23.

Betti, G.; Dourmashkin, N.; Rossi, M.C.; & Yin, Y.P. (2007). Consumer over-indebtedness in the EU: measurement and characteristics, *Journal of Economic Studies*, Vol. 34 (2), 136 - 156.

BIS – Department for Business, Innovation and Skill (2010), Over-indebtedness in Britain: Second follow-up report

Bridges, S., & Disney, R. (2010). Debt and depression. Journal of Health Economics, 29(3), 388-403. doi:http://dx.doi.org/10.1016/j.jhealeco.2010.02.003.

CGAP (2017). Consumer Protection in Digital Credit available at http://www.cgap.org/sites/default/files/Focus-Note-Consumer-Protection-in-digital-Credit-Aug 2017.pdf

Chawla, R. & Uppal, S. (2012). Household debt in Canada. From (Retrieved on 7 September 2014).

Chotewattanakul, P., Sharpe, K., & Chand, S. (2019). The drivers of household indebtedness: evidence from Thailand, Southeast Asian Journal of Economics 7(1), January-June, pp. 1-40.

Clarke, G. L., Lixin, C. X. and Heng-fu, Z. (2006). Finance and income inequality: What do data tell us, Sourthern Economic Journal (72)3, 578- 596.

Cuesta, M.B. & Budria, S. (2015). The effects of over-indebtedness on individual health, IZA Discussion Paper No. 8912, Institute for the Study of Labour.

D'Alessio, A. & Iezzi, S. (2013). Household over-indebtedness: definition and measurement with Italian data. Bank of Italy Occasional Paper (149).

Davies, M. (2009). Household debt: Implications for monetary policy and financial stability (Working Paper No. 46: 19-30). Basel: Bank for International Settlements

Debelle, G. (2004). "Macroeconomic implications of rising household debt," BIS Working Papers 153, Bank for International Settlements.

Disney, R.; Bridges, S. & Gathergood, J. (2008). Drivers of over-indebtedness: report to the Department for Business Enterprise and Regulatory Reform. Essex, United Kingdom: Institute for Social and Economic Research, University of Essex

Disney, R. & Gathergood, J. (2012). Financial literacy and consumer credit portfolios (Working Paper No. 12-06). Nottingham: University of Nottingham.

Ditimi, A.; Ikechukwu, O.M. & Damilola, D. (2020). The impact of debt-servicing burden on household expenditure in Nigeria: A case of Ekiti state senatorial districts. *Acta Economica*, *18*(33), 43–63. https://doi.org/10.7251/ACE2033043D

Duesenberry, J.S. (1951). Income, saving, and the theory of consumer behaviour. The Economic Journal, 61(241): 131-134.

Dumitrescu, B.A.; Enciu, A.; Hândoreanu, C.A.; Obreja, C.; Blaga, F. (2022). Macroeconomic determinants of household debt in OECD countries, Sustainability 2022, 14, 3977. https://doi.org/10.3390/ su14073977

Fatoki, O. (2015). The causes and consequences of household over-indebtedness in South Africa, Journal Social Sciences, 43(2): 97-103.

Faboyede, O.S.; Ben-Caleb, E.; Oyewo, B. and Faboyede, A. (2014). Financial literacy education: Key to poverty alleviation and national development in Nigeria, European Journal of Accounting, Auditing and Finance Research Vol.3, No.1, pp.20-29

Francis, E.; Blumenstock, J. & Robinson, J. (2017). Digital credit: A snapshot of the current landscape and open research questions – eScholarship Publication date: July 11th, 2017 Center for Effective Global Action White Paper Digital Credit: A Snapshot of the Current Landscape and Open Research Questions Eilin Francis, Joshua Blumenstock, and Jonathan Robinson www.cega.org.

George Lucas Educational Foundation (2013). How Financial Literacy Yields Success. Retrieved from http://www.edutopia.org/stw-financial-literacy-research.

Hall, R. E. (1978). Stochastic implications of the life cycle - Permanent income hypothesis: Theory and evidence. Journal of Political Economy, 86(61): 971- 987.

International Monetary Fund (2017). Global financial stability report: Is growth at risk? Retrieved from https://www.imf.org/en/Publications/GFSR/Issues/2017/09/27/global-financialstability-report-october-2017.

Keese, M. (2009). Triggers and determinants of severe household indebtedness in Germany. Ruhr Economic Paper, 150.

Kilborn, C. (2005), Behavioral economics, over indebtedness and comparative consumer bankruptcy: searching for causes and evaluating solutions, Emory Bankruptcy Developments Journal, 22: 14-46.

Kim, J. (2001). Financial knowledge and subjective and objective financial well-being. Consumer Interests Annual, 47: 1-3.

Liv, D. (2013). Study on the drivers of over-indebtedness of microfinance borrowers in Cambodia: An indepth investigation of saturated areas. From (Retrieved on 1 September 2014).

Loke, V. & Hageman, S. A. (2013). Debt literacy and social work. Journal of Financial Therapy, 4(1): 62-82.

Lusardi, A. & Tufano, P. (2015) Debt literacy, financial experiences, and over-indebtedness. Journal of Pension Economics and Finance 14(04):332-368

Lusardi, A. & Mitchell, O. S. (2008) Planning and Financial Literacy: How Do Women Fare? American Economic Review

Modigliani, F. (1966). The life cycle hypothesis of saving, the demand for wealth and the supply of capital. Social Research, 33(2), 160-217.

Meier, S. & Sprenger, C. (2007). "Impatience and credit behavior: evidence from a field experiment," Working Papers 07-3, Federal Reserve Bank of Boston.

National Bureau of Statistics (2010). Annual abstract of statistics, Abuja, Federal Republic of Nigeria.

Nkundabanyanga, S. K.; Kasozi, D.; Nalukenge, I. and Tauringana, V. (2014). Financial literacy and youth entrepreurship in South Africa, International Journal of Social Economics, 2014, vol. 41, issue 5, 342-361.

National Population Commision (2006). National population census, Abuja, Federal Republic of Nigeria.

Prinsloo, J. W. (2002). Household debt, wealth and saving. Quarterly Bulletin, No. 226, December. Pretoria: South African Reserve Bank.

Puliyakot, Sunil, Over-Indebtedness Among Microfinance Borrowers: A Poverty Line Based Approach. (December 16, 2017). Available at SSRN: https://ssrn.com/abstract=3088917 or http://dx.doi.org/10.2139/ssrn.3088917 .

Robinson, J. Park, D. S. and Blumenstock, J. E. (2021). The impact of digital credit in developing economies: A Review of Recent Evidence.

Schicks, J. (2010). Microfinance Over-Indebtedness: Understanding its drivers and challenging the common myths. Bruxelles: Centre Emilee Bergheim, Solvay School of Business, CEB Working Paper, 10, 048.

Schicks, J. (2013). From a supply gap to a demand gap? The risk and consequences of over-indebting the under banked. In J. Gueyie, R. Manos, & J. Yaron (Eds.), Microfinance in Developing Countries: Issues, Policies and Performance Evaluation (pp. 244): Palgrave Macmillan.

Seane, S.T., Mah, G. & Saah, P. (2016). Risk, opportunities and reasons of the household debt changes: the case of an emerging economy. Risk Governance & Control: Financial Markets & Institutions / Volume 6, Issue 4, Fall 2016, Continued-1

Sommarat, C.; Lamsam, K.S. & Tangsawasdirat, B. (2020). Household debt and delinquency over the life cycle. Asian Development Review, 37(1), 61-92.

Stamp, S. (2009). A policy framework for addressing over-indebtedness: Combat Poverty Agency.

Wamalwa, p.; Rugiri, I. & Lauler, J. (2019). Digital credit, financial literacy and household indebtedness, The Kenya Bankers Association Working Papers Series