Digital credit for economic development, a case of ISBI's model of lending to micro-entrepreneurs in the Eastland's of Nairobi

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Abstract

It is evident that more people are connected continue to be connected the Internet than ever before. There are various digital devices that are used nowadays to connect to the internet for work and other aspects of life. Broadband connectivity is one of the means of transforming and achieving the three pillars of sustainable development through digital credit. Even though there is a rapid growth in connectivity, it is estimated that 2.9 billion people are not connected, most of them in developing countries.

Digital credit is a promising form of financial inclusion for low income earners in developing countries because of low access to formal credit and the limitations of the semi-formal credit options. Digital credit is becoming popular because of its remote, instant and automated protection against the traditional consumer and microenterprise credit models. This paper discusses the ISB-KIVA model of digital credit where a total of $32,325 was borrowed by 72 micro-entrepreneurs within a period of 24 months. The data for this research was compiled from the Kiva website. A systems theory is used in this research.

Key words; digital credit, broadband, micro-entrepreneurs, loans

1.0 introduction

While there is need for loans for development, facts suggest that there is unmet demand for credit. There is need for the take-up of microfinance, in the cases where it has been taken up, its impact have been very modest (Banerjee et al. 2015). Digital finance has the capability of accelerating financial inclusion in the low income countries and in the emerging markets. From the 2014 Findex world consumer survey, it is reported that 2.0 billion adults are unbanked. From the same survey it is estimated that there are over 3.6 billion mobile phone users in the whole world. It is also estimated that by the year 2020, about 80% of the adult population in the world will be using smart phones (Alliance for Financial Inclusion, 2015). Delivery of small loans by digital credit, creates significant potential benefits to the lower-income consumers. It creates gains in financial deepening and broad-based economic development. For the digital platforms and delivery channels to be effective for fostering full financial inclusion, there has to be ability to go beyond money transfer and payment services. The majority of the world's poor people are locked out of the formal financial systems. They have little or no access to formal financial services that can help them raise their incomes and better their lives (World Bank, 2013)

One of the major impediments to development in low income countries is lack of access to finance. This lack of finance is characterized by binding liquidity constraints which include high marginal returns (Tarozzi et al. 2013; Devoto et al. 2011). These facts point to an unmet demand for credit, the take up of microfinance has been very low (Banerjee et al. 2015). These observations have led to the doubt as to whether microfinance is valuable in development. The other issue which has been raised is whether the microfinance resources should be put elsewhere for more returns. One of the reasons why microcredit has not been effective is that the existing set of products are not suitable for micro-entrepreneurs. Microcredit products involve large transaction costs besides the inconveniences of travelling to the nearest bank and imposing loan terms (Eilin et al, 2017).

In the recent few years, digital credit has become an option for providing short-term loans to micro-entrepreneurs. In a typical set up, a mobile telecommunications operator will partner with a financial institution to offer digital credit by providing small, short term loans over some existing money eco-system. This method has several advantages over bank credit. Among them is the low transaction costs since money is disbursed through mobile phone which is converted into cash through agent networks. The other advantage is that loans are disbursed immediately without a requirement of in-person vetting which is common with financial institutions. The digital credit providers normally use nontraditional data to come up with alternative credit scores and therefore making it possible to give credit to large groups of people without collateral (Eilin et al, 2017). For instance in Kenya it is estimated that about 4.5 million people are using Safaricom's M-shwari as of 2015 (Cook and McKay, 2015).

2.0 Basic digital skills

Basic digital skills are necessary for people to function at a minimum level in any society. They serve as foundational skills for the performance of basic tasks. It is also accepted that basic digital skills correspond to a foundational literacy, alongside traditional literacy and numeracy. The basic digital skills that are necessary are ; using a keyboard, ability to operate a touch-screen technology, word processing, management of files on laptops, management of privacy settings on mobile phones, email, searching for information online, filing online forms. The United Nations estimates that globally there are 2.9 billion people who are not connected. The mobile service play a great

role in digital connectivity. The affordability of the mobile services, side by side with network coverage, digital literacy skills and content that is locally relevant are the main barriers to connectivity in many countries (GSMA, 2016a).

It is projected that mobile broadband will reach 90% (7.7 billion) of the world's population by the year 2021, down from 11.7% (1billion) in 2010 (South Pole group, 2016). To achieve the great target of the achieving the 17 Sustainable Development Goals (SDGs) by 2030, most countries have to put an effort so that the global community achieves this ambitious project. The use of ICT will be paramount (GeSI, 2017). ICT presents a critical platform in addressing the SDGs and its challenges, it offers opportunities that will accelerate human progress by connecting various people with vital services, and it also facilitates exchange of knowledge of critical ideas and provides solutions thus spurring innovation (South Pole Group, 2016).

3.0 Digital credit

Digital credit is a promising form of financial inclusion to low income earners who have less access to formal credit especially in most developing countries (GSMA, 2016a). The current digital revolution has enabled many people to make financial transactions from the comfort of their homes/localities without disrupting their business or work operations (Mugo and Kilonzo, 2017). Digital loans are very helpful for liquidity strained customers by supplying cash in times of great want (i.e. Karlan and Zinman 2010; Morse 2011). Digital credit can also be harmful as it may lead to too much borrowing due to the easiness of accessing loans which may lead to insolvency (Skiba and Tobacman, 2009) and may make it hard for micro-entrepreneurs to pay their bills. Moreover, consumer protections for regulations for these digital loans is still at its infancy, there are very few protections for borrowers that exist and evidence shows that many borrowers do not fully understand the terms of these digital loans (McKee et al 2015).

4.0 Digital credit in Kenya

In Kenya, more than 70 percent of the adults have mobile money accounts. Kenya's financial sector and the development organizations have progressively refocused their endeavour away from financial access to improving account use. As more and more people gain access to mobile money, the issue of how this access can be used to improve the lives of the poor has turned out to be more critical. Development of products like digital investment, credit and savings are necessary for moving low-income earners from basic transaction accounts to services that meet financial inclusion's broader promise of lifting people out of poverty (William Cook, 2017)

In the last few years, the Kenyan government has implemented many groundbreaking financial solutions that have transformed Kenya's financial, economic and social landscape. Some of these innovations include the mobile-phone financial services introduced in 2007 (which led to the legalization of MPesa), the microfinance banking act enacted in 2006, the agency banking rolled out in 2010 among many others. These legislations offer immense possibilities towards achieving an inclusive economic growth, sustainable development, and poverty reduction (Mugo and Kilonzo, 2017).

Since the launch of M-pesa by the Kenya telecom company Safaricom, mobile money has proliferated rapidly in the developing world. It is estimated that there are more than half a billion

registered mobile money accounts worldwide. There are mobile money accounts in 270 mobile money services in 90 countries across the globe (GSMA, 2016a). Even though bank accounts are more common than mobile money, in Africa this is not true, mobile money account ownership exceeds bank account ownership in many African countries. The introduction of mobile money has been linked to improved risk-coping (Jack and Suri, 2014) and also reduction in poverty (Jack and Suri, 2017). Many policy maker view the mobile financial services as the future of improving financial services to the poor in poor countries (GSMA 2016a; Lauer and Lyman, 2015).

For the last Five years since Kenya launched the first digital credit solution, the digital credit marked has rapidly in Kenya and in many other low-income countries (Totolo, 2018). A research by the FSD-Kenya in 2017 in partnership with the central bank Kenya (CBK), the National Bureau of Statistics (KNBS) and CGAP conducted a national survey through a phone survey and established that over 6 million Kenyans have gained access to microloans through technology. Data from this survey show that 27% of Kenyan adults have taken at least one digital loan. Micro entrepreneurs using technology can build a credit history which will enable them access larger and cheaper loans in the future (Totolo, 2018).

Digital credit in Kenya comes in a variety of ways, there those digital credit models that use mobile phone apps, payroll lending and mobile money wallets. There are other types that work though other money providers like banks, savings and credit cooperative institutions (SACCOs) and mobile operator networks. Most of the lenders are not regulated, they work outside the current regulation, and their services are normally short term loans. To determine the creditworthiness of a client, they use a customer's mobile phone data i.e sms records, mobile money transaction history and social media data (Kaffenberger and Chege, 2016). A question that arises often is whether the consumers of digital credit are fully informed of the costs of credit. The other question is whether informing the digital credit customers about the cost of the digital credit will reduce the demand for these high-interest rate loans. In Kenya about 2 million M-Shwari customers have been reported to the Kenyan Credit reference bureau for defaulting (Eilin et al, 2017).

There are concerns about excessive borrowing due to easy availability of digital loans. This may lead to over-indebtedness among micro-entrepreneurs which comprise many small many low-income households. Digital loans are available from many banks and non-bank institutions, they are easy to obtain, short-term, carry a high-interest rate. The FSD-2017 survey found that 14 percent of those who took digital loans were repaying multiple loans from more than one provider at the time of the survey. This translates to 800,000 Kenyans who were servicing multiple digital loans from several suppliers (Totolo, 2018)

5.0 Systems theory

Systems theory from a science perspective is a comparative study of systems as an object. There are many types of systems, the cognitive mechanisms in an organism are seen as systems and machines more so a computer is a system. A System has an interdepended of parts with a structure and processes adaptable to the environment of the system (Rudolf Stichweh, 2000). There are three key concepts in the definition of a system; elements, interconnections, and a function or purpose. In the case of Kiva-ISIBI, there are micro-entrepreneurs, technology, institutions (ISBI and KIVA) every person we encounter, every organization, every animal, garden, tree, and forest is a complex system (Donella Meadows, 2009). A digital ecosystem in a business is the combination of all

relevant digital touch points, the people that interact with them, and the business processes and technology environment that support both. (Ryan McCormack, 2011). Particularly the idea by Shannon and Wiener (1948) definition of information as choosing from many alternative possibilities has ended up being a generalization that transcends heterogeneous systems and indicating that the systems theory is a kind of general selection theory.

6.0 Kiva

Kiva is a San Francisco international nonprofit NGO which was founded in 2005 with a focus to help connect people using technology to lend soft loans as low as $25 to alleviate poverty. The money Kiva gets through donations goes to funding loans. The operational costs are covered through optional donations and grants from sponsors. Kiva operates in 85 countries worldwide and so far has loaned 2.9 million people USD 1.17 billion from 1.7 million lenders. From the Kiva statistics, 81% of the borrowers are women and the repayment rate is 97%.

In 2012, Kiva partnered with the Informal Sector Business Institute (ISBI) which works with Micro-entrepreneurs from the informal settlements in the Eastlands of Nairobi. This partnership to help unemployed youth from the informal settlements of Nairobi was meant to help these youth to improve their micro-businesses whose turnover is usually below $400. ISBI trains these disadvantaged youth in basic Accounting, Management, Marketing, Business Ethics and Business English. ISBI also helps them to incubate their businesses.

Table 6.0

75	150	50	125	150	200	375	375	375	375	375	250	575	550	325
75	150	100	150	150	125	250	250	250	375	250	250	350	325	525
75	150	100	150	150	200	250	250	375	375	250	375	350	325	325
75	250	75	75	100	375	250	250	375	250	300	375	250	325	
50	75	300	75	75	250	250	375	375	375	375	375	250	325	
50	300	75	125	250	125	250	375	375	375	125	250	250	550	
75	50	75	150	250	250	250	250	250	375	250	350	350	550	
75	75	75	150	375	125	250	250	375	250	375	350	350	525	
100	75	75	75	125	250	125	375	375	250	375	575	225	325	

Micro-loans loaned micro-entrepreneurs by KIVA in terms of USD in a chronological order of borrowing from June 2012 to September 2015

The initial amounts taken by the micro-entrepreneurs were smaller, the subsequent loans were higher than the previous ones. The giving of a smaller amount initially was to test the reliability of the micro-entrepreneurs. The least amount of loan given was $75 and the highest is $550. Those who borrowed many times were getting a bigger amount the subsequent loan they took. It is noticeable from the data that cumulatively they got the highest amount of money from the loans they took from Kiva. The total number of loans taken were 149, out of which 20 loans were defaulted resulting in 89% repayment rate.

Table 6.1

	Total amount in $	**No. of borrowers**	**Average amount**
1 loan	10,525	41	256.71
2 loans	3,850	12	320.83
3 loans	8,025	11	729.55
4 loans	3,375	4	706.25
5 loans	2,650	2	1325
6 loans	0	0	0
7 loans	1,700	1	1,700
8 loans	2,200	1	2,200
Total	32,325	72	**448.96**

Summary of the number of loans taken by the micro-entrepreneurs

From the data in table 5.1, the micro-entrepreneurs were loaned small amounts initially (ranging from $ 75 to 100). The loans increased gradually as the micro-entrepreneurs borrowed more. A total of 72 micro-entrepreneurs borrowed $ 32,325 from Kiva in 38 months. The majority of the entrepreneurs borrowed only once representing an average of $ 256.71 per micro-entrepreneur. While 12 of the micro-entrepreneurs borrowed three times and accumulating their total amount borrowed at $ 3,850 equivalent to $ 320.83 per micro-entrepreneur. Four micro-entrepreneurs borrowed four times a total of $ 3,375 ($706.25 per micro-entrepreneur). It seems the small time borrowers were interested in a one off loan to jump start their businesses. Two micro-entrepreneurs borrowed five times a total of $ 3,850(an average of $1325 per micro-entrepreneur). The micro-entrepreneurs borrowed seven and eight times a total amount of $ 1,700 and 2,200 respectively, these two micro-entrepreneurs cumulatively borrowed a lot more than the other micro-entrepreneurs.

Table 6.2

2	6	3	3	6	5	5	6	6	6	9	6	12	12	6
2	1	3	6	6	3	6	3	6	6	4	6	9	6	12
2	4	3	6	3	5	5	6	6	6	4	6	6	9	9
2	12	3	3	3	9	4	6	9	6	6	9	6	9	
2	3	9	3	3	2	6	6	6	6	9	6	6	9	
2	8	3	3	6	3	4	4	6	9	3	9	6	12	
2	3	3	6	6	2	3	3	4	9	4	9	7	12	
2	3	3	6	9	3	6	3	8	3	6	9	9	12	
1	3	3	3	3	2	3	9	6	9	6	12	6	9	

Summary of the number of months the loans were to paid back by the micro-entrepreneurs

Most of the initial amounts were repaid back over a short period (one to three months) of time and were increased in the subsequent loans. Most of the subsequent loans were repaid in six months with a few being paid in 12 months (41 loans in total). Eleven loans were repaid in 2 months, thirty loans were repaid in a period of three months, eight loans were repaid in fourth months, twenty loans were repaid in nine months, seven loans were rapid in seven months and one loan was repaid in seven months.

Table 6.3

No. of Months for repayment	No. of loans	Amount repaid in USD	Repayment per month
1	1	250	250
2	11	1,300	118.18
3	29	3,700	127.59
4	8	2,025	253.13
5	2	825	412.5
6	39	12,225	313.46
7	1	350	350
8	2	675	337.5
9	20	6875	343.75
10	0	0	0
11	0	0	0
12	8	4100	512.5
		32,325	

Summary of the number of months the loans were to paid, number of loans and the average amount that was to be back per month by the micro-entrepreneurs

The amount repaid per month range from $118.18 to $ 512.5, those who took more loans on average had a higher repayment amount per month cumulatively. Though most of the micro-entrepreneurs only once, the repayment period for most of them was six months.

Conclusion

Most of the micro-entrepreneurs only borrowed once (a cumulative figure of $10,525) an amount representing 32.6% of the total amount let out by Kiva and only 8 micro-entrepreneurs borrowed more than four times. It is probable that those who borrowed once were not ready for this money and likely they did not have business plans to guide them on how they were to spend the money and the repayment of the loan over some time. There is need to follow-up these micro-entrepreneurs to establish whether they continued borrowing on other platforms and as to whether their business still thrive after the stop of the Kiva-ISBI collaboration. The takers of many loans could be allowed to take big loans at once and repay them with a longer period of time because of the confidence thy build in repaying their loans in full.

It is probable that most the micro-entrepreneurs did not have business skills and therefore there is need to train them before starting to take loans. In future, the micro-entrepreneurs should be trained on the importance of taking more loans gradually increasing them with increase in their business. More research needs to be done on these micro-entrepreneurs to establish how they continued to borrow and what the factors that influence their borrowing habits are.

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