

CRITICAL REVIEW ON LITERATURE ON INFORMATION ASSYMETRY, CREDIT INFORMATION SHARING AND LOAN PERFORMANCE: A RESEARCH AGENDA

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Abstract: The aim of any banking institution is to operate profitably so as to maintain its stability, growth and expansion. For all institutions in the banking industry lending is the core activity. Therefore loans are the dominant asset and also generate the largest share of the operating income and represent the industry's greatest risk exposure. The banking industry in Kenya is facing various challenges, and loan non-performance and interest rate fluctuations are key issues that are threatening the stability and growth of the industry. This paper has provided a brief background on the topic, reviewed theories such as economic theory of private credit; the information asymmetry theory; the information screening theory; the credit or debt theory of money and the theory of financial intermediation. The paper further reviewed empirical literature touching on the main theme; it further provides a platform for further research under conclusion and recommendation.

Keywords: Information Asymmetry, Credit Information Sharing, Loan Performance.

1. BACKGROUND

In economics and contract theory, information asymmetry arises in situations where decisions are being made and one party has more or better information than the other. Information asymmetry results in imbalance of power in transactions, which sometimes can end in the transactions going awry, or a market failure in the worst scenario. Examples of information asymmetry include moral hazard and information monopoly, and adverse selection. Information asymmetry is the contrast to perfect information which is a critical assumption in neo-classical economics, (Stiglitz 2001).

Credit providers including banks, credit unions and micro-finance institutions exchange information on their outstanding loans and advances through licensed Credit Reference Bureaus (CRB's) in a process known as Credit Information Sharing (CIS). This definition is by the reference bureau regulations (2013). Pagano and Jappelli (2002) defined credit information sharing as a mechanism that allows lenders to share their borrowers details with licensed CRB's who collate that data, analyze and generate reports for the credit market. Information sharing is two way; first, from the credit providers or lenders to the bureaus and; two, from the bureaus to the lenders or credit providers in form of credit reports. According to Sinare (2008), CRB's are those institutions that collect data on repayment trends and current debt of borrowers which they compile into reports for sharing with credit providers.

The problem of adverse selection and asymmetrically distributed information are inherent to lenders since borrowers have more knowledge on their activities than the lenders do. Accurate information on the financial ability of prospective borrowers and their credit history is difficult to obtain and this makes it extremely hard for lenders to assess the credit worthiness of potential borrowers and their ability to repay loans. According Brown et al (2006), lenders find it hard to price risks due to the fact that borrowing cost is different and the same should be reflected in the interest rate pricing.

The survival of any bank in the market place majorly depends on its ability to mobilize and process data professionally in vetting credit applications and monitoring of their performance. By observing the repayment behavior during a credit relationship, banks learn about their borrowers. More regulators worldwide have introduced credit information sharing systems and this has become a practice in most developed banking markets to have banks share among each other information about their borrowers (Brown, Jappelli and Pagano 2006).

Lenders routinely share information on the credit worthiness of borrowers across many countries. This either happens on a voluntary basis via credit bureaus that are set up by the credit providers themselves or independently operated by third parties, or on a compulsory basis through Public Credit Registers (PCR's) ran by central banks. Privately operated bureaus obtain data on borrowers from the respective credit providers and collate the information using additional data from other sources which may include courts, public registers, and tax authorities among others to compile a file on each borrower. Credit providers can obtain the consolidated data on a borrower by seeking a 'credit report' from the bureau (Pagano and Jappelli 2005).

2. THEORETICAL REVIEW

2.1 Theoretical Review:

This paper is hinged on various theories. These are: the economic theory of private credit; the information asymmetry theory; the information screening theory; the credit or debt theory of money and the theory of financial intermediation. In addition the paper also reviews several models as follows: pure adverse selection model; moral hazard models and effect on incentives model.

2.1.1 Economic Theory of Private Credit:

According to economic theory, there are two determinants as to how much private credit a financial system can extend to individuals and firms, (Djankov et al., 2007). According to the first view, the power of creditors is crucial for the viability of private credit. In instances where lenders can easily force repayment by gaining control of the firm, or grabbing collateral, they will be more willing to extend credit. The power theories of credit were formalized by Hart and Moore (1994, 1998), Aghion and Bolton (1992) and Townsend (1979). The second view sees lending information as very important for the viability of private credit. Where the lenders have more knowledge about the borrowers, such as their credit history or the other lenders to the firm, they will not be concerned about the lemons problem of financing nonviable projects and thus will extend more credit. The information theories of credit were pioneered by Stiglitz and Weiss (1981) and Jaffee and Russell (1976). Exchange of information about borrowers have four effects: improving banks' knowledge about applicants' characteristics and therefore reducing the problem of adverse selection; reducing informational rents which banks could have otherwise extracted from their customers; acts as borrower discipline mechanism by ensuring that insolvent debtors are cut off from accessing credit; and helps eliminate borrower's tendency to become over-indebted by simultaneously drawing credit from several banks without the banks realizing, (Pagano and Jappelli 2005).

2.1.2 Information Asymmetry Theory:

Information asymmetry arises where there is an imbalance in knowledge of the relevant factors or details between two negotiating parties (Akerlof, 1970). Typically, such a scenario means that the party with more information has a comparative advantage over the other party. Akerlof referred to such scenario as the "lemon problem"

Models on asymmetric information make the assumption that one of the parties to the transaction has better information than the other(s). Some models on asymmetric information are used where at least one party is able to enforce or retaliate for breaches of one or more parts of an agreement and the other(s) cannot. For adverse selection models, the ignorant party does not have the information when negotiating for an agreed understanding of a contract or transaction. In moral hazard models, the ignorant party does not have information on the performance of the agreed upon contract, or does not have ability to retaliate in case of breach of the contract.

2.1.3 Screening Theory:

In economics, screening refers to the strategy of reducing adverse selection, a potential complication in decision making in situations of asymmetric information by parties with inadequate information. This concept of screening was pioneered by Michael Spence (1973). Through screening, the party with less information induces the other party with the view that the other party will reveal their information. This can be achieved by providing a menu of choices such that the choice is dependent on the level of private information given by the other party. Instances where the seller has more information

than the buyer include – mortgage brokers, stockbrokers, sales people of used cars, loan originators and real estate agents. Examples of cases where the buyer normally has more information than the seller include – real estate sales as may be specified in a last will or testament, sales of old art items which have no prior professional valuation and life insurance. These situations were first brought out by Kenneth Arrow in his article on health care in 1963.

2.1.4 Credit Theory of Money:

Theories concerned with the relationship between credit and money are referred to as credit theories of money or debt theories of money. Innes (1914) as a proponent of these theories emphasizes that money and credit or debt is the same thing seen from different points of view. In eras where money is not backed by a commodity such as gold, proponents of this theory assert that the essential nature of money is credit (debt). There are two common strands of thought within the credit theory of money that the idea that money originated as a unit of account for debt and the position that money creation involves the simultaneous creation of debt and money. Money is best understood as debt even in systems often understood as using commodity money as argued by some proponents of credit theories of money. All forms of money including cash can be considered as forms of credit money in a system based on fiat money. It is in the 19th century that the first formal credit theory of money arose. For most of human history, money had been widely considered to represent debt as argued by anthropologist David Graeber. However, David Graeber concedes that even prior to the modern era, occasionally, other theories including Metallism differed. Metallism is defined as the principle of economics where the value of money is derived from the purchasing power of the commodity upon which it is based. Plato was the first known advocate of credit theory of money according to Joseph Schumpeter (1954). Henry Dunning Macleod was the earliest modern thinker to formulate a credit theory of money in his 19th century paper; the theory of credit (1889). Alfred Mitchell-Innes (1914) expanded Macleod's work in his paper titled 'the credit theory of money'.

2.1.5 Financial Intermediation Theory:

The economics of imperfect information emerged in the 1970's building on the seminal contributions of Akerlof (1970), Spence (1973), Rothschild and Stiglitz (1976) giving birth to the current theories of the economic role of financial intermediaries. Coase (1937) argued that the information and transaction costs caused by an information asymmetry between borrowers and lenders are the major reasons why financial intermediaries exist. The financial intermediaries therefore assist in improving the efficient working of the markets and any factor that affect the amount of debt channeled through them will have major macroeconomic effects. To formally understand the existence of financial intermediaries two views in literature exist; first, the financial intermediaries' provision of liquidity and second, the financial intermediaries' ability to transform the risk characteristics of assets. Clause and Grimes (2003) argued that in both cases, financial intermediation can lead to a more efficient allocation of resources by reducing the cost of channeling funds between borrowers and lenders.

2.1.6 Pure Adverse Selection Model:

Pagano and Jappelli (1993) developed the pure adverse selection model where information sharing improves the pool of borrowers, reduces the average interest rate and decreases defaults. In the model, immigrants face adverse selection due to the fact the each bank does not have any information about them as compared to local residents whom the bank has private information about their credit worthiness. Banks can lend safely to immigrants if they can exchange their private information about residents and thus decreasing the default rate. However, the effect on lending is ambiguous. The volume of credit may increase or decrease since if banks exchange information about borrowers' types, the supposed increase in credit to safe borrowers may fail to compensate for the reduction in lending to more risky types. Competition in banks strengthens the positive impact of information sharing when credit markets are contestable by reducing informational rents, increasing competition leading to greater lending.

2.1.7 Moral Hazard Model:

Through the reduction of bank's rents or via a disciplinary effect, information sharing can reinforce borrower's incentives to perform. Informational rents that banks can extract from their clients within lending relationships are significantly reduced by the exchange of information between banks. Using a two period model Padilla and Pagano (1997) emphasize on this point where banks are endowed with private information about their borrowing clients. The informational advantage gives banks market power over their clients and thus generating a hold up problem since banks are expected to charge predatory rates in the future, borrowers put low effort to perform leading to a high default rate thereby increasing interest rates which may eventually collapse the credit market. When banks commit to exchange information about their clients, they reduce their future ability to exchange informational rents. This will lead to a reduction in default by each borrower and the interest rate charged thus increasing lending.

2.1.8 Effect on Incentives Model:

Bank instead of exchanging information about client types communicated to each other with data about past defaults and this creates disciplinary effect according to Padilla and Pagano (2000). Default if treated as a signal of bad quality for other banks and will bear the penalty of higher interest rates when banks share default information. Because of this penalty, borrowers put more effort thus reducing default rate and therefore benefitting from lower interest rates and more lending. In the effect on incentive model, in contrast with Padilla and Pagano (1997), disclosing information about borrowers' quality has no effect on default and interest rates. Competition is assumed to eliminate informational rents of banks such that the interest burden on client loans cannot be lowered any further. This means that even when clients' information is shared, they have no reason to add more effort leading to unchanged equilibrium default and interest rates. Banks lose all their future informational rents making them only willing to lend when they can see a higher probability of repayment.

3. EMPIRICAL REVIEW

Jappelli and Pagano (2002), in their study on information sharing, lending and defaults – cross-country evidence, using data set on both public credit registers and private credit bureaus, found that bank credit risk is lower and lending higher where there exist a credit information sharing mechanism, notwithstanding whether such mechanism is private or public in nature. Their study also found that intervention by public normally comes in when private arrangements fail to develop spontaneously and the protection of the creditors' rights is poor. This study was on public credit registers in 46 countries and private public bureaus in 43 countries across the world.

Djankov et al. (2007), in their study, private credit in 129 countries, investigated cross-country determinants of private credit. They used data on legal creditor rights and both public credit registries and private credit bureaus in 129 countries. They found that institutions of credit information sharing and creditor protection through the legal systems were both associated with higher ratios private credit to gross domestic product. They also observed that the legal protection systems were regarded more important in the richer countries. Their analysis of legal reforms indicated that credit increases as a result of improvements in credit information sharing and creditor rights. They also observed that creditor rights were remarkably stable as opposed to the hypothesis that legal rules were converging. They also observed that for both the credit information sharing institutions and creditor rights, the legal origins were an important determinant. Further analysis indicated that French civil laws were a predominant feature in countries with public credit registries and those private credit bureaus benefited markets in developing countries.

Love and Mylenko (2003), in their study, credit reporting and financing constraints, combined data on public credit registries and private credit bureaus with firm-level data obtained from World Bank Business Environment Survey (WBES) to investigate if the presence of a credit information mechanism in a country have any relationship with higher share of financing by banks and lower financing constraints. They found that the presence private credit bureaus had a relationship with higher share of financing by banks and lower financing constraints however; the presence of public credit registries never seemed to significantly affect the perceived financing constraints. They also observed that in countries where private credit bureaus existed, small and medium firms had relatively higher share of bank financing and that more effective private credit bureaus had a relationship with stronger rule of law. Further they found that where public credit registries existed, they tended to benefit more the younger firms than the older firms. The study used a sample of 52 countries, where 28 had public credit registries and 27 had private credit bureaus.

Brown et al. (2009), in their study, information sharing and credit – firm-level evidence from transition countries, investigated if credit information sharing among banks had any effect on the performance of the credit market of the transitional countries of the former Soviet Union and the Eastern Europe. They observed that improved availability of credit and lower credit costs to firms had a relationship with credit information sharing. They noted that the correlation was higher in countries that had weak legal environments as compared to those that had strong legal environments. Also the correlation was higher for firms seen as opaque than for firms that were considered transparent. The study examined the differential impact of credit information sharing across firm types and as a mean of control of variation used only country-level aggregate variables which may have had effect on credit in their cross-sectional estimates. In panel estimates, the study controlled for the existence of unobserved heterogeneity at the level of the firm, as well as changes in the legal environment and in microeconomic variables. The cross-sectional analysis of the study was based on a large sample of firm-level data of responses by 5717 firms in 24 transition countries using World Bank Business Environment and Enterprise Performance Survey (BEEPS) 2002 questionnaire. The data set was designed so as to provide across all

countries a similar of non-agricultural firms. The sample was predominantly small firms (67%) and private firms (86%). It included firms from the manufacturing sector as well as the service sector however majority of the firms (54%) had their core activity in the service sector. The firms included in the sample were all three and above in age. The panel analysis was based on responses of 1333 firms interviewed in the BEEPS 2002 and 2005 surveys.

4. PREVIOUS FINDINGS AND DISCUSSIONS

This paper looks at Studies that have been done looking at information asymmetry, credit information sharing in respect to loan performance. The following are some of such studies reviewed and the respective criticism:

Kisengese, (2014) in her study; the impact of credit information sharing on the level of non- performing loans on commercial banks in Kenya, used a sample of only 30 banks instead a census of the entire population which was only 44 at the time of the study. Further, she interviewed respondents in five departments involved in credit acquisition in the banks but ignored critical departments involved in loan portfolio management, risk management and loan recoveries. Onyango (2015), in his study; impact of credit information sharing on commercial banks' loan portfolio: the case of Equity Bank, took a very narrow scope by focusing on only one bank and therefore the results of the study cannot be used to make inference on the impact of credit information sharing on the loan portfolio of the commercial banks in Kenya. Maina, (2015) in her study; an evaluation of the role of information sharing in mitigating non-performing loans in Kenya's banking sector, only looked at the aspect of information sharing on the non-performance of loans in the Kenya's banking sector. The scope of the study could have been broadened by looking at loan performance rather than just the non-performing loans.

5. CONCLUSION AND RECOMMENDATIONS

From the previous findings not many studies have been carried out with respect to information asymmetry, credit information sharing and loan performance in commercial banks in Kenya. However some studies relating to credit information sharing with respect to commercial banks in Kenya which have been reviewed include: an evaluation of the role of information sharing in mitigating non-performing loans in Kenya's banking sector, (Maina, 2015); impact of information sharing on commercial banks' loan portfolio - the case of Equity Bank, (Onyango, 2015); effect of credit information sharing on the financial performance of commercial banks in Kenya, (Thuo, 2016). A study on the relationship between information asymmetry, credit information sharing and loan performance in commercial banks in Kenya is yet to be carried out. This paper therefore opens up a platform for further research to be carried out in Kenya to fill this gap.

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