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How financial regulation promotes financial inclusion in less developed countries

Programme: Master of Science in Accounting and Financial Management

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Abstract

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Title: How financial regulation promotes financial inclusion in the less developed countries.

Aim: This thesis aims to examine how bank regulation reduces financial exclusion in Uganda.

Methodology: A qualitative content analysis method was used to examine the Annual supervisory Reports of the Bank of Uganda and Journals about Microfinance institutions in Uganda to examine how banks regulation reduces financial exclusion. After grouping financial regulatory instruments like the minimum capital requirement, consumer protection, deposit protection, anti-money laundering, and regulations about microfinance institutions in Uganda, content analysis was used to determine how such regulations reduce financial exclusion in Uganda.

Findings and conclusion

Bank regulation in the form of minimum capital requirement may limit the barrier to entry for commercial banks, reducing the supply of banks that can provide financial services. This challenge was addressed by enacting the Tier Iv Financial Regulation (2016) that allows the survival of microfinance institution in rural areas by instructing them to pay licences instead of minimum capital contribution. Deposit insurance schemes played an essential role in ensuring confidence in financial institutions but may not increase financial inclusion in the non-deposit taking microfinance institutions. Consumer protection regulation made mobile money services safer to be used in both urban and rural areas of the country. Mobile money services ensured that people could access financial services through their mobile phones. Furthermore, agency banking regulation ensured that both microfinance and commercial banks accessed their customers in the less accessible area of Uganda.

Contribution: This study highlights the importance of bank regulation in causing financial inclusion in less developed countries. Furthermore, it helps in highlighting the importance of aligning financial regulation in both microfinance institutions and commercial banks with the objectives of each country to avoid stringent regulation that may cause financial exclusion.

Keywords: Bank regulation, Financial inclusion, Commercial and Microfinance regulation. Information asymmetry.

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Abbreviations.

AMFIU Association of Microfinance Institutions in Uganda

UMRA Uganda Microfinance Regulatory Authority

SACCOS Savings and Credit Co-Operative Society

KYC Know Your Customer

1. Introduction

Financial institutions play an essential role in the offering of savings, payment and credit to firms and individuals (Čihák, Martin, Demirgüç-Kunt, Feyen, and Levine, 2013). These services are vital for many households with unstable cash flows stemming from precarious employment opportunities. Saving services are essential for helping families to plan for emergencies. Furthermore, access to credit help individuals obtains health and education services that improve their living standards (Demirgüç-Kunt, Beck and Honohan, 2008). Despite the said importance of financial services, studies have shown that some households are financially excluded and stand more significant disadvantages because of financial exclusion. For example, Ghosh (2013) states that such households incur higher credit costs when using informal financial service providers like money lenders**.** Therefore, countries should reform the financial sector to address the constraints that limit both households and businesses from accessing financial services (Ayyagari, Demirguc-Kunt, and Maksimovic. 2006). At the World Bank Group-International Monetary Fund's Spring Meeting held in 2013, the World Bank leader called for the need to achieve Universal Financial Access by 2020 (Cheng and Divanbeigi, 2019). The World Bank made this urgent call on behalf of the 1 billion people who are not part of the formal financial system. It essential for them to have access to transactional accounts to send, save, and receive payments (Cheng and Divanbeigi, 2019).

Several countries have started creating avenues for encouraging financial inclusion through enacting financial regulation to remove barriers to non-traditional financial service providers, encouraging consumer protection and enhancing financial literacy (World Bank 2012). Financial regulation that followed the financial crisis was credited with ensuring a stable financial system. Concerns, however, surround how financial institutions respond to such regulation as minimum capital requirements may hinder the supply of credit as few banks may be unable to lend to more impoverished people as they are deemed unprofitable (Dermine, 2017). Furthermore, stringent financial regulation may also increase the entry barrier for smaller banks that cannot meet the restrictive regulatory thresholds (Triki, Kouki, Dhaou and Calice 2017).

According to FinScope (2013), 76% of adults in the urban areas use formal financial institutions like banks, microfinance deposit-taking institutions, or non-bank financial institutions like savings and cooperative credit organisations in the rural part of Uganda, 49% used informal financial services. Furthermore, the rural population are twice as likely to subscribe to informal financial companies as the urban population. They are however 1.7% more likely to be financially excluded than the urban settlers. There is a need to address the problem of financial exclusion in the country, to bring the 71.5% of the Ugandan population who reside in the rural areas (Fins Scope, 2013). Therefore, the Ugandan government aims to decrease financial exclusion from 15% to 5% by 2022 (Bank of Uganda, 2017). Consequently, it is interesting to study such efforts to ensure financial inclusion in Uganda through financial regulation.

1.1 Problem discussion

Financial exclusion remains a challenge to the global financial system because half of the world's population does not have access to formal banking services (World Bank, 2014). This hinders the people in the less developed countries from attaining economic development because they cannot obtain financial services to aid in different entrepreneurial ventures. According to Allen, Demirgüç-Kunt, Klapper and Peria (2016), the financially affluent have better access to financial services like bank accounts. Furthermore, the possibility of borrowing from financial institutions increases for the highly educated, accelerating the challenge of financial exclusion. Financial illiteracy can also exacerbate financial exclusion. For example, research conducted in South Africa indicates that the decision to access formal financial services depends on the level of financial literacy within the population (Kostov, Arun and Annim, 2015).

Gender also plays a role in financial exclusion, as posited by, Demirgüç-Kunt, Klapper and Peria (2013). They found that women have a lower likelihood of accessing formal bank accounts, saving and credit services. Most banks require the borrower to have collateral security to access loans. Often, borrowers who cannot mobilise the necessary collateral will be addressed by countries to allow global financial inclusion. A suggestion offered by Allen, Demirgüç-Kunt, Klapper and Peria (2016) points to the need to have a robust legal system and strong institutions to tackle the challenge of financial exclusion.

Globally, financial regulation is being streamlined to address the challenge of financial exclusion. For example, according to the World Bank (2012), two-thirds of countrywide regulation is being aimed at addressing this challenge by promoting consumer protection and improving financial literacy, encouraging more people to access formal financial services. Efforts are also directed to improving the electronic money regulation to allow banks and non-banks institutions to offer electronic money to the financially excluded (Chen & Divanbeigi, 2019). The importance of addressing financial exclusion cannot be overlooked for helping less developed countries to alleviate poverty and attain economic development. Against this background, this study is directed towards the financial regulation of commercial and microfinance banks in the less developed countries to examine how such financial regulations address financial exclusion. Hence the research question is: How is bank regulation used to promote financial inclusion in developing countries? The reason for focusing on Uganda is because according to FinScope (2013), most people in the rural areas who subscribe to informal financial institutions are 1.7% more likely to be financially excluded. Furthermore, financial inclusion is pertinent in promoting economic development. It is therefore essential to examine how Uganda is enacting regulation to address financial exclusion to promote economic development in Uganda as one of the developing countries.

1.2 Research aim

The aim of this research is to find out how bank regulation is used to promote financial inclusion in the less developed countries.

1.2.1 Research question

How is bank regulation used to promote financial inclusion the less developed countries?

1.3 Background of the Ugandan banking sector

Uganda is a landlocked country covering 93,263 square miles (241,550 km2) with 37.5 million people (Uganda Bureau of Statistics, 2013). According to the Association of Microfinance Institutions in Uganda (2015), as of 2014, 70 % of the population lives in rural areas and are engaged in agriculture as a form of livelihood (AMFIU, 2015). The country has registered a steady increase in the gross domestic product of 26.31 billion dollars as of 2014. According to AMFIU (2015), Uganda has also recognised a stable economic development encouraged by investment in infrastructure development and encouragement in manufacturing and export coupled with a stable security situation.

The Ugandan financial sector has formal, semi-formal, and informal sectors. The formal sectors include Credit institutions, Insurance companies, Development bank, Pension Funds, and the Capital markets (Bank of Uganda, 2015). The semi-formal financial institutions include the

Savings and Credit Cooperative Associations and the Microfinance institutions. Informal finance institutions include saving and loan associations (Bank of Uganda, 2015). The formal financial institutions offer services mostly in urban areas. In rural areas, they serve only 14 % of the rural populace. The informal financial institutions are responsible for serving rural areas with deposit and loan services, and they serve 12% of the rural population(ibid).

The Bank of Uganda regulates commercial banks through instruments like the Financial Institutions Act (2004), the Micro Deposit-Taking institutions' Act (2003), the Anti-Money Laundering Act and the Deposit protection regulation. Uganda still has the challenge of adapting its regulatory instruments to create new financial services (Bank of Uganda, 2015). A streamlined regulation may be used to curb opportunistic behaviour like unlawful seizing of customer assets (Cons and Paprocki, 2008). Such incidences fuelled the need to protect borrowers, hence the establishment of the Uganda Microfinance Regulatory Authority.

2. Literature review

2.1 Financial inclusion

It is pertinent to define financial exclusion to understand financial inclusion. The term financial exclusion means conditions that prevent social groups and individuals from gaining access to appropriate, affordable, fair, and safe financial services provided by mainstream financial providers (Shehu, 2012). The inability to access such financial services may result from self-exclusion or exclusion by financial institutions (Ramji, 2009). Being financially excluded leads to lost opportunities for financially excluded groups because such groups cannot access capital for investments (Shehu, 2012). Thus, financial inclusion is defined as access to a portfolio of financial services with a piece of clear information to meet such demands under an appropriate regulatory framework. Financial inclusion has gained prominence since it is one of the tools of poverty eradication, and thus, it has become an objective of many central banks (Demirgüç-Kunt, Beck, and Honohan 2008).

2.1.1 The barriers to financial inclusion

These are divided into the supply side and the demand side factors. On the supply side, it includes the ability of the mainstream banks to provide financial services to low-income households and small to medium scale enterprises (Yoshino and Morgan, 2018). These are further divided into market-driven, regulatory, and infrastructural limitations (ibid). Under the market-driven factors, these include aspects like high maintenance costs of providing small scale loans and deposits, for example, in small towns, the cost of building up more branches and employing bank tellers, lack of information on credit information on low-income households and lack of collateral that for accessing credit (Yoshino and Morgan, 2018).

Among the regulatory barriers, capital adequacy and supervisory rules also lead to financial exclusion (Yoshino and Morgan, 2018). Furthermore, stringent requirements about setting up bank branches and ATMs further decreases the ability to provide financial services in rural areas (bid). The law directs banks to identify their customers through the know-your-customer initiatives that can limit the access to financial services by poor households that do not have proper identification or from countries that do not have Universal Individual Identification systems (Yoshino and Morgan, 2018).

The infrastructure barriers cited as factors leading to financial exclusion include limited access to payments and settlement systems. Furthermore, the limited availability of telephone and communication networks also leads to financial exclusion in rural areas. The availability of transport facilities to the bank branches also limits the rural areas from accessing the ATMs and bank branches (Yoshino and Morgan, 2018). The demand-side barriers to financial inclusion include limited funds and knowledge of financial services and lack of trust in the banking sector. This results from little or no supervision of financial institutions. Limited consumer protection programs also lead to financial exclusion. Consumer protection programs are meant to ensure that customers can afford the loan repayments or that financial institutions do not mislead them. Therefore, the lack of consumer protection services discourages customers from accessing banking services, causing financial exclusion. Furthermore, the lack of collection procedures regulation and dispute resolution system prevents access to financial institutions (Yoshino and Morgan, 2018).

2.1.2 The importance of financial inclusion

Financial inclusion alleviates poverty among the financially disenfranchised. Most of the excluded population in the less developed countries are located where banks are not physically accessible to the local population (Financial Action Task Force Report, 2013). Unaffordability is also one of the causes of financial exclusion. Addressing the cost of opening and maintaining a bank account can encourage 500 million people to enter the financial system (G20, Financial

Inclusion Action Plan, 2014). According to the Financial Inclusion Action Plan (2014), expanding bank branches in rural areas leads to poverty alleviation as banking institutions offer financial services like loans, savings, and payment services essential for meeting daily financial obligations. This finding was also corroborated by Bruhn and Love (2014), who posited that encouraging access to financial services leads to economic development by creating employment opportunities.

Financial inclusion promotes stability in the banking sector because banks with a large pool of customers develop a high deposits base (Allen et al., 2016). Furthermore, Collins et al. (2009) indicate that the significant number of savers in banks originates from poor households. Moreover, Han and Melecky (2013) posited that increasing the number of people to bank deposit services by 10% reduces the deposit withdrawal rate by between 3 to 8 %. Thus, financial inclusion is beneficial to the savers and the banks, promoting financial stability within the banks.

2.2 Financial regulation as a tool for promoting financial inclusion

The financial crisis of 2007 to 2008 heightened the need to stiffen and even enact new laws to restore confidence in the financial system. One such avenue to restore confidence was enacting the laws to promote financial inclusion (G20 Financial inclusion Action Plan 2014). Such regulations are, however, better suited for the developed countries in the Northern hemisphere while stagnated economic growth meanwhile financial exclusion still affect the less developed countries (Ibid). To address this, the Toronto summit of June 2010 introduced further improvements endorsed by the G20 countries (G20 Innovative Financial Inclusion, 2010). Such efforts led to improvements in financial inclusion where 700 million people worldwide could finally access financial services like opening bank accounts, but there are still aspects that need improvement. This is because 2 billion people worldwide remain unbanked. Furthermore, businesses are also still excluded from financial services. The value of such companies ranges to the tune of 200 million globally (G20, Financial Inclusion Action plan, 2014).

Agent banking regulation is vital in providing financial services in rural areas on behalf of mainstream banks. They can facilitate individuals in rural areas with economical options to access banking services (Barasa and Mwirigi, 2013). The legislation encourages a positive experience that builds trust in the financial system, encouraging more people to use various financial services providers like agent banks around them. Therefore, a streamlined agent banking regulation promotes banking by building the minimum operating standards of qualifications to operate as agents (Chen & Divanbeigi, 2019).

Electronic money issuers also provide financial services like payments, transfers, and savings for the financially excluded in the informal financial sector (Lauer and Tarazi, 2012). Supervision is required for the electronic money issuers to protect against liquidity risks; regulation also improves the standards of operation like minimum operational standards to safeguard funds collected by non-bank e-money issuers (Chen & Divanbeigi,2019). The minimum operation standards further help promote trust and stability in the electronic money transfer service providers.

Gutierrez and Singh (2013) show that regulation can support a mobile banking system known to be highly used by people in developing countries. Therefore, it is essential to streamline the laws regarding contracting, e-signature usage, consumer protection, interoperability, KYC (Know Your Customer) /CDD (Customer Due Diligence). Prudential bank supervision is also essential to ensure regular reporting and for ensuing that supervision requirements are followed. On the profitability of microfinance institutions and their outreach, the regular onsite supervision is positively associated with the average loan size and negatively associated with the number of loans offered to women. Furthermore, bank supervision is not significantly associated with profitability (Cull, Demirguc-Kunt and Morduch, 2009)

3. Regulations in the banking sector

3.1 The deposit insurance regulation

According to Ognjenov (2017), deposit insurance is a legally established and recognised system of explicit protection of selected categories of deposits with a bank, up to a prescribed amount, in case of a bank failure. In most jurisdictions, the trigger for the deposit insurance authority's liability to execute a payout to depositors is a formal recognition of the bank's failure through some form of insolvency proceedings or resolution process (ibid).

The deposit insurance schemes exist in two forms, which are explicit, where formal deposit agreements exist between the deposit-taking institutions and governments. And implicit where there is an implied duty of the governments to guarantee deposits during a crisis

(Ognjenov,2017). Deposit insurance is meant to reduce the anxiety that the government may not guarantee deposits. Fech &Weber (2019) posit that most citizens worry about the ability of the government to protect their deposits during an economic crisis. This anxiety may force the bank customers to shift their deposits to countries with better protected financial institutions (Bénassy-Quéré et al., 2018). An example of such an action is where many bank customers shifted their deposits to countries in the European Union that were presumed to be having better deposit insurance schemes, encouraging the European Commission to establish the European Deposit Insurance Scheme in November 2015 until 2024 (European Commission, 2015).

The deposit insurance scheme was also connected to market discipline by Demirgüç-Kunt& Huizinga (2004). The primary importance of deposit insurance is to ensure that banks do not take high risks, leading to bankruptcy. However, deposit insurance may encourage moral hazard because banking institutions are guaranteed their deposit by the government. To this light, Febrian and Herwany (2011) found that bank customers are also less sensitive to banks' risk appetite after the introduction of deposit insurance schemes. Hall, king and Mejer (2004) posit to the contrary about deposit insurance and moral hazard; they find that increasing the deposit insurance limit does not increase the level of moral hazard, they assert that the ability of governments to provide deposit insurance prevents customers from withdrawing all their savings from the bank. Therefore, availing banks with funds to lend to other businesses and private individuals.

3.2 Microfinance institutions regulation

Microfinance institutions thrived as a source of financial inclusion partly due to limited regulation (Pouchous, 2012). However, there is a growing need for these financial institutions to be regulated because of the high prevalence of new microfinance companies that are being set up in the developing countries, as asserted by Chen, Rasmussen, and Reille (2010). Regulation in the microfinance sector is vital because it protects the country's financial system by ensuring soundness through regulation which sets operating procedures to be followed. This has made countries to subscribe to stringent regulatory regimes like the Basel III regime after the financial crisis (Chen, Rasmussen, and Reille (2010)

Microfinance regulation also shields small depositors from losing their savings. As the microfinance institutions gain clients, they shift focus from offering credit and include saving services. Regulation is vital in protecting such savers (Pouchous, 2012). Microfinanice regulation further plays a role in ensuring that lenders do not charge high interest rates however, Helms and Reille (2004) posited that the practice of regulating interest rates by policymakers might discourage sustainable credit growth, which will reduce the pace of financial inclusion as the interest rates regulation may discourage the entry of new lenders in the market. Mobile banking is an example of such services which has increased the provision of services to the unbanked however, these services are not without shortcomings. For instance, some customers in rural areas lack information technology skills and financial literacy, which has affected the microfinance sector (Pouchous, 2012). Microfinance regulation therefore plays a vital role in curbing these challenges.

3.3 Capital requirement regulation

The objective of capital requirement is to ensure that banks have enough capital to absorb risk (Ozili, 2016). Theoretically, banking regulation in the form of minimum capital requirement leads to improved banking efficiency and performance because the higher capital requirement is an incentive to control risks and monitoring which improves banking profitability (Mehran and Thakor, 2011). Other strands of the literature suggest that banking regulation may lead to agency costs. Empirically Klomp and DeHaan (2011) posit that stringent capital requirement reduces risks which encourage banks to reduce the level of non-performing loans. Stringent capital requirements in developing countries signal high interference by the government which leads to insufficient credit allocation. Furthermore, the stringency in capital requirement leads to increased barriers of entry hence reducing the amount of competition (Triki et al., 2017).

Capital adequacy regulation may lead to financial exclusion because it may compel banks that are not financially stable to merge, which may lead to barriers of entry hence limiting the availability of banks that should provide financial services to individuals (Anarfo, Abor, Osei and Dako, 2019). Furthermore, banks may be forced to lend only to a few successful loan applicants because of the low credit volumes resulting from credit rationing (Kodongo, 2018). Furthermore, banks may make risky choices because of the too big to fail mentality. Sarma and Pais (2011) further assert that capital assets ratios harm financial inclusion because highly capitalised banks may not lend out sufficiently by limiting the amount of credit issued.

After studying the relationship between financial inclusion and prudential regulation, Anarfo et al. (2019) found that tightening of bank regulation reduces access to financial services, which is against the sub-Saharan African financial inclusion goals. Underserved groups could use such financial services to alleviate poverty by starting small businesses like farming activities. This is because regulation such as capital adequacy requirements leads to credit rationing. Further, Anarfo et al. (2019) suggest that for Sub-Saharan Africa economies to gain from financial inclusion, regulatory requirements of financial institutions should be adjusted according to the banking needs of the African populace. Ugwuanyi (2015) shows the contrary; for example, their research shows that in Nigeria, stringent capital regulation increases risk-taking behaviour, which leads to an increase in the rate of financial inclusion.

3.4 Anti-money Laundering regulations

According to Stanley and Buckley (2016), Financial systems are subject to misuse. To curb this, countries introduced anti-money laundering regulations. This is done majorly by the Financial Action Task Force that was established in 1989 to maintain the integrity of the international financial system (Financial Action Task Force,2013). One of the financial action task force recommendations is the risk-based approach to anti-money laundering legislation (ibid). This directs banks to identify and mitigate money laundering and terrorist financing risks (Financial Action Task Force Recommendation Report, 2012). It, however, led other banks to introduce stringent rules to manage the high-risk customers; the simplified approach has not been introduced for the low-risk customers (Stanley and Buckley,2016). This leads to financial exclusion because the law indiscriminately affects customers who pose a lower risk of money laundering. Such organisations include Money transfer organisations. Thus, the Financial Action Task Force announced new guidelines in June 2015 of fairly applying the risk-based approach to banks and other money transfer organisations, which will solve the problem of financial exclusion. This is because the problem of financial inclusion is essential to implement anti-money laundering laws as it is easier to implement reforms if all people and organisations can be observed through the banking system (Financial Action Task Force, 2016).

3.5 Consumer protection regulation

Because of the innovative services developed by the financial institutions, there is a need to protect the consumers of such services (Ellinger, Lomnicka and Hare, 2011). The urgency to protect the consumers of financial services was exacerbated by the global financial crisis, which awakened scrutiny of the activities of the banking sector. Furthermore, the group of 20 countries referred to as the G20 in 2011 supported the introduction of initiatives to protect consumers of financial services stating that such consumers should be treated equitably, fairly, and honestly. The providers of financial services also had to pay attention to the special and vulnerable groups (G20 Financial Consumer Protection (2018). In developing countries, banks may therefore take extra steps to simplify regulations and rules by explaining their duties and rights to the customers (Uzokwe, and van Heerden, 2018).

The extra education is to ensure fair treatment of the financial service consumers. Furthermore, the World Bank (2018) posits that financial service providers are prohibited from using terms and conditions that are deemed unbalanced and abusive to the customers. Other unfair treatments that are important to the policymakers are deceptive and unfair selling practices under such circumstances; the regulators may restrict deceptive advertising, predatory lending, and abusive debt collection (Gaganisa, Galariotisb, Pasiourasc, and Staikouras, 2020). Duke (2009) states that there must be an adequate measure to protect the consumers for the trust in the financial system to increase.

Consumers of financial services also have a right to making an informed decision about the products consumed. Thus, information about the said products and their characteristics are essential (Gaganisa, Galariotisb, Pasiourasc, and Staikouras, 2020). However, there is evidence that financial service providers have been offering less transparent mortgage services, which are difficult for consumers to understand. Furthermore, credit terms are also challenging for consumers to understand. According to Duke (2009), it makes customers make uninformed choices that lead to default or foreclosures. Disclosure of information to the customer is crucial in avoiding foreclosure for easy comparison of banking services, making it easy for consumers to switch to providers of fairer prices leading to efficient operation (ibid). On the downside, disclosure will increase costs associated with designing disclosure documents. (Consumer Financial Protection Bureau, 2013).

4. Theoretical framework

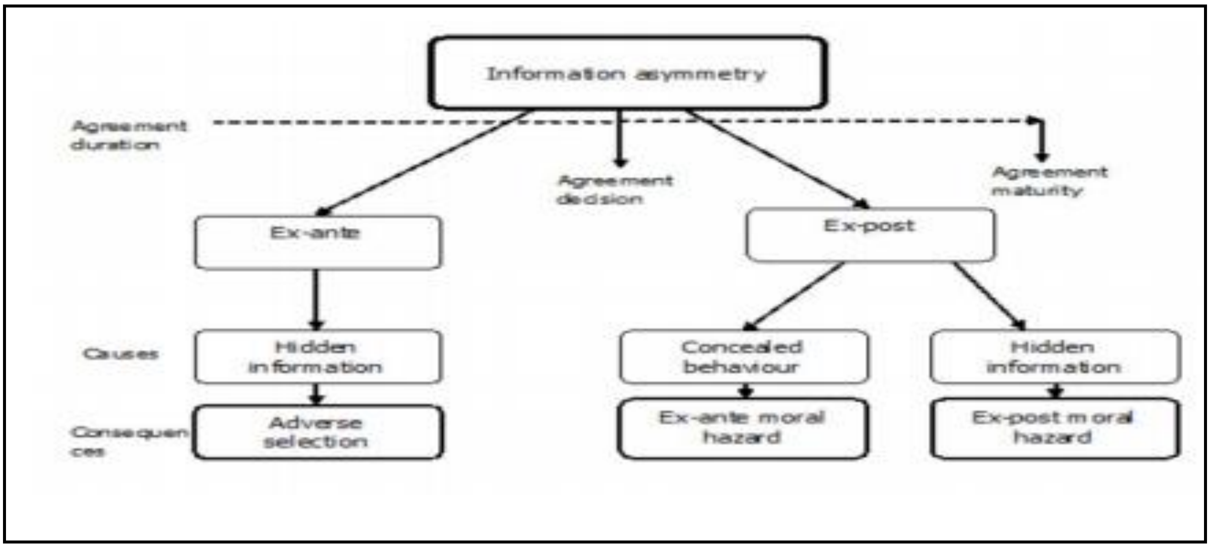
Aga and Rilley (2011) state that access to credit services in developing countries is limited due to information asymmetry between lenders and borrowers. This assertion was confirmed by Moro, Fink and Maresch (2015), in which they state that information asymmetry presents a difficulty for small to medium scale enterprises in obtaining short term financing. The reasoning behind this is that banks are reluctant to extend credit facilities to borrowers without information to protect themselves against credit risks. Against this backdrop, information sharing agencies can provide financial intermediation and credit information on the borrower (Asongu, Roux, Nwachukwu and Pyke 2019).

Information sharing has an essential role in reducing moral hazard and adverse selection. The latter is when the lender is not able to differentiate the credit risk of various borrowers since some of the borrowers invest in risky projects instead of safer ones as expected by the lender, the former is when borrowed funds are used for other reasons other than what had been borrowed initially (ibid). Moral hazard is an opportunistic behaviour by the borrower, as asserted by Berger et al. (2011); this occurs when the information about the borrowers' project is lacking and when the bank lacks resources to observe the borrower's actions.

Information-sharing, therefore, serves to encourage market discipline by the borrower, thereby reducing moral hazard and adverse selection. Furthermore, information sharing helps banks make a quick decision when on the creditworthiness of a specific borrower, as stated by (Bennardo et al. 2015). This allows the bank to predict the profitability of a given borrower more efficiently.

A reduction in information asymmetry increases the number of loans and decrease its interest rates as the sharing of information helps in the reduction of credit risk and also mitigates funding costs as stated by Kusi and Mensah (2018) this is because when information on the borrowers is shared, banks spend fewer resources researching on a specific borrower and hence saves on the information cost furthermore, the borrower is assigned an accurate interest rate which is commensurate with the risk profile. Information sharing is, therefore, crucial for both the borrower and the lender (Aga and Rilley, 2011). Information sharing in the financial markets through credit registries may encourage the banks to collect information that is not disclosed to the information sharing offices, as stated by (Karapetyan and Stacescu, 2014a, b). Solving the problem of information asymmetry should be a significant aim of financial institutions to reduce adverse selection and moral hazard.

Figure 4. Major issues under information asymmetry



Source: Tupangiu, (2017).

According to the chart above, parties in the credit market need information from borrower during the signing of a credit agreement. The borrower may conceal information like unpaid debt claims to appear attractive to the lender leading to Information asymmetry problem (Tupangiu, 2017). When the loan agreement is signed, the borrower may willingly fail to pay the lender, causing an ex-post moral hazard or investing the borrowed funds in a riskier project than one stated in the loan application creating an ex-ante moral hazard problem (Burger et al. (2011). The banks can mitigate the information asymmetry challenge by offering an interest rate that may be high for some borrowers to protect themselves from high-risk borrowers (Stiglitz and Weiss 1981). Furthermore, borrower assessment may also be costly for the banks to inform of expertise needed to analyse such information. Thus, both parties in the credit agreement must disclose information to each other to efficiently allocate credit.

5. Methodology

5.1 Research approach

This thesis aims to study how bank regulation promotes financial inclusion in less developed countries with a focus on Uganda. During the literature review phase, academic articles were downloaded from the Gothenburg University Library website. The articles obtained were read to gain insight into bank regulation and financial exclusion. Furthermore, the academic articles also helped in studying information asymmetry as a theoretical framework and the methodology of this thesis. A qualitative research method was used in this thesis because of the lack of interest by the financial institution regulators and banking institutions to respond to interviews as they did not want to disclose any sensitive information.

5.2 Theoretical framework development

Information about financial service providers is pertinent for attaining financial inclusion; the financial service providers also need information about their customers, as observed in the theoretical framework. The challenge of information asymmetry may be addressed by enacting laws to enable sharing information among the stakeholders in the financial service market to ease financial intermediation (Asongu, Roux, Nwachukwu and Pyke, 2019). However, stringent financial regulation may lead to financial exclusion. To counter this challenge, the regulation that aligns capital regulation and bank supervisory rules should be enacted. Examples include regulation that promote the building of more bank branches and setting up automated teller machine access points (Yoshino and Morgan, 2018).

5.3 Data collection

Information was collected from the regulatory authorities such as the Bank of Uganda and Uganda Microfinance Regulatory Authority. Bank of Uganda is a regulator of all commercial banks, and all microfinance institutions are regulated by the Uganda Microfinance Regulatory Authority. Journals about microfinance institutions regulation were also obtained to supplement the knowledge about financial exclusion. The nature of the information that was collected had to be relevant and reliable; hence the collection of such information was done from the regulator’s home page. The challenge with this research mode is that the researcher was not part of the primary data collection, so the research bias from the field could have been transferred to this study; this concern was highlighted by Boslaugh (2007). This was addressed by corroborating using NVIVO software for analysis further, the statistical information obtained from the bank of Uganda were used to corroborate these findings.

5.4 Data collection procedure

Information about bank regulation was downloaded from the Annual Supervisory Report of the Central Bank of Uganda using the website; Bou.org.ug. Regulatory information about the

Microfinance institutions was also obtained from the umra.go.ug. The next stage that followed was identifying the major tools used in the regulation of both Microfinance and Commercial banks. These were grouped into themes derived from the previous literature about bank regulation. The regulatory themes were named regulatory initiatives.

Statistical information was also obtained from the Bank of Uganda, for example, statistical information about the status of financial inclusion in Uganda. This was useful in measuring bank regulation's impact on financial inclusion. Such information aided the researcher to gain a comprehensive analysis of the regulatory initiatives used to promote financial inclusion. The use of regulatory reports and statistics information provided by the Bank of Uganda helped ensure the credibility of the research. The regulatory themes that were highlighted in the Supervisory reports included the following:

- Deposit insurance regulatory initiatives
- Anti-money laundering initiatives.
- Consumer protection regulatory initiatives
- Minimum capital regulatory initiatives
- Microfinance regulatory initiatives

5.5 Analysis and description

This thesis aims to determine how bank regulation can promote financial inclusion. This was done on commercial and Microfinance institutions in Uganda. Data analysis was conducted using content analysis with the aid of the NVIVO software. The regulatory information that was obtained focused on the laws introduced in a specific year. Such information was grouped into nodes organised using the major regulatory themes that can be analysed to obtain answers on how bank regulation can promote financial inclusion. The words associated with each regulatory instrument were highlighted from each of the supervisory reports. Such highlights were automatically analysed using NVIVO and presented in graphs. The steps that were carried out during the research are explained below.

- Step 1. The knowledge to develop the regulatory themes were informed by the extensive reading about bank regulation obtained from the previous literature.

- Step 2. The themes were grouped under the software known as NVIVO, which helped in the highlighting of the regulatory initiatives from annual regulatory documents.
- Step 3. The documents were analysed by identifying the words that fall under each regulatory initiative and explaining what the regulators are doing under such themes. This is important for examining the regulatory changes and highlighting how bank regulation is being used to promote financial inclusion.
- Step 4. The percentage of the words occurring under each regulatory theme were plotted in the graph that NVIVO automatically generated. This helped to highlight the efforts employed to amend the specific regulations.
- Sep 5. Statistical information was also obtained from the Bank of Uganda publication regarding the state of financial inclusion in Uganda. This helped determine if there was an improvement in financial inclusion after the amendment of financial regulations.

5.6 Research quality

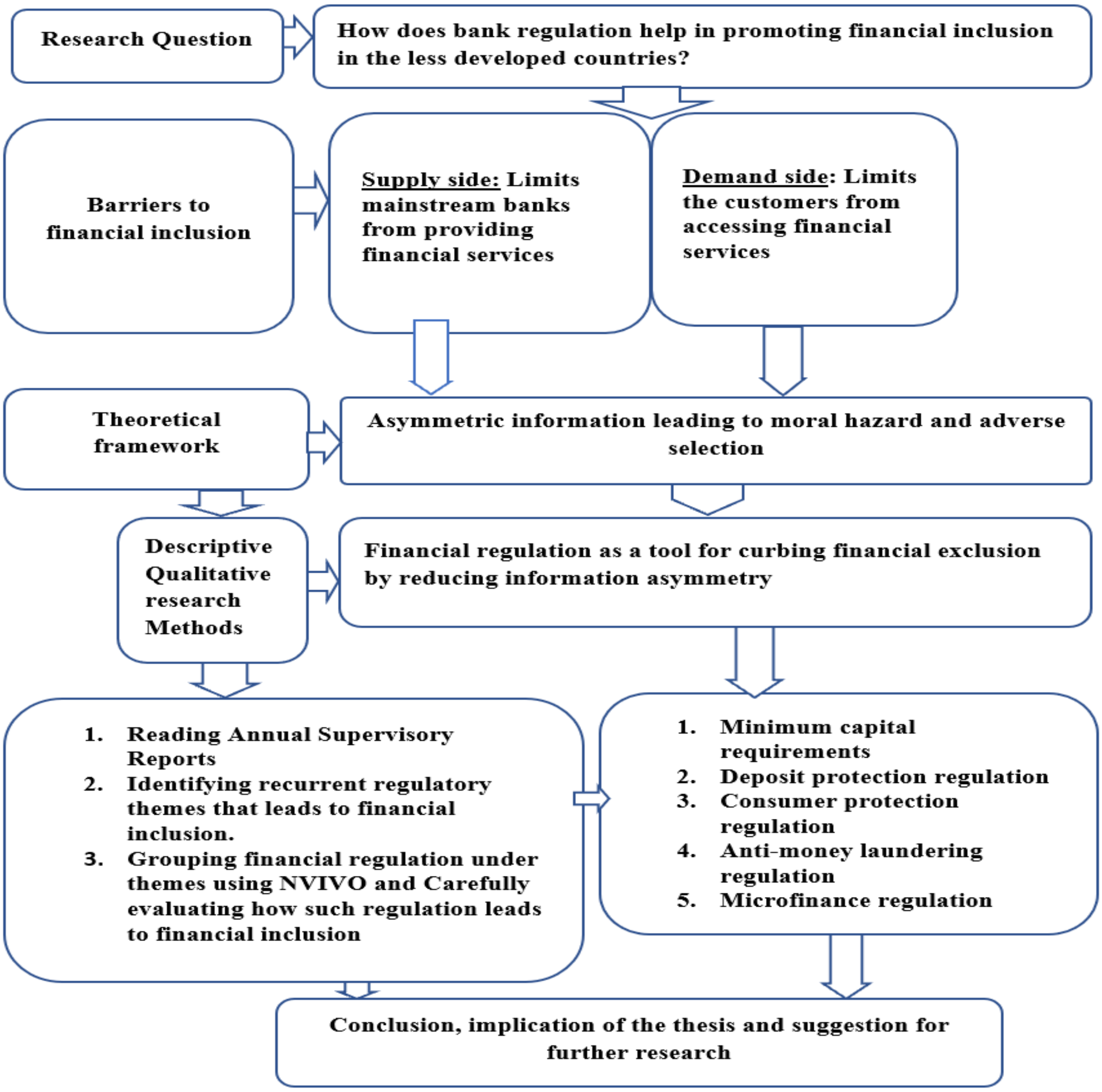
For the research to be of quality, it should be valid and reliable. The former is achieved when both readers and researchers employ judgment (Nicholas and Catherine, 2000). The latter is achieved when the research can lead to confidence and when the findings can collaborate under different settings from which they were initially obtained (ibid). The concern for the reliability of qualitative research is questionable, as asserted by Collis and Hussy (2013). However, the researcher has ensured that the findings were reliable by using scientific literature on bank regulation and by using the aid of NVivo software to aid in the analysis of the annual supervisory documents. Furthermore, the author used statistical information that was published by the Bank of Uganda.

5.7 Limitations of the methodology

The limitation of this study comes from the use of secondary data from the annual supervisory documents; the regulatory documents that were downloaded are not current because most regulations are still under review. For example, there is a proposed regulation for the agents of the mobile providers to pay fifty million Ugandan shillings on annual licences in the year 2021. Furthermore, there are also proposed changes to separate the mobile money companies from the telecommunication companies implying that the mobile money agents will operate as separate entities. The effects of such changes on financial inclusion are still early to know.

New regulations under review also include the regulation about the large savings and credit cooperative organisations currently supervised by Uganda Microfinance Regulatory Authority; these are to be regulated by the Central Bank of Uganda (Annual Supervisory Report, 2020). It will be interesting to examine the effects of such regulations in future. The reviewed regulations, however, demonstrate the ability of regulation in encouraging financial inclusion in the less developed countries.

Figure 5.7 The stages followed during the research



Source: Author's Grouping. `

While conducting this thesis, a research question was determined. This aimed to find out how bank regulation can lead to financial inclusion in the less developed countries. The barriers to financial inclusion were explored; these involved the supply and demand sides. A theoretical framework bases on the use challenge of information asymmetry was used to investigate the challenge of financial inclusion. Content analysis method was used to determine how bank regulation can lead to financial inclusion. Findings, discussion, and conclusion were then presented.

6. Findings

The role of financial regulation in solving the problem of financial inclusion presented interesting findings for both microfinance and commercial banks and these are explored below.

6.1 Anti-money laundering regulatory initiatives

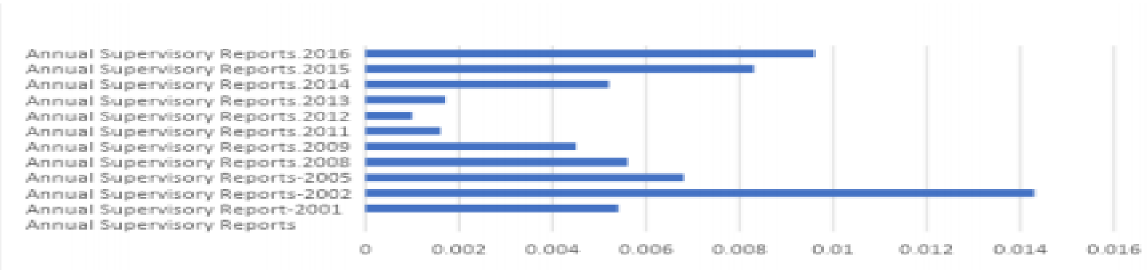
The efforts to curb that challenge of financial exclusion was witnessed by the strengthening of the anti-money laundering capacity through various ways, among them was the signing of a memorandum of understanding in August 1999 with the members of the East and Southern Anti-Money Laundering group to set up the Anti-money Laundering committee to draft anti-money laundering policies (Annual Supervisory Report, 2002). Furthermore, there were also consultations to confirm that all the stakeholders agreed to report money laundering activities. To equip employees with the skills of mitigating money laundering, the Bank of Uganda continued to train its staff on how to detect and report suspicious account activities (Annual Supervisory Report, 2012). In 2014, the Bank of Uganda established the Financial Intelligence Authority in line with section 18, Anti-Money Laundering Act. The authority also set up procedures to be followed when curbing money laundering activities (Annual Supervisory Report, 2016).

The need to curb money laundering was done with the aim of "protecting the Ugandan financial sector from worldwide criminal acts of money laundering" (Annual Supervisory Report, 2002). It was also done to "*prevent the misuse of the country's financial sector for money laundering"*- Annual Supervisory Report, (2002). The efforts like capacity building, signing of a memorandum of understandings and enacting of the Anti-Money Laundering Act was to ensure that the financial system of Uganda is not used for the financing of terrorism and illegal activities like money laundering. This finding was in line with Stanley and Buckley (2016). Financial Action Task Force (2013), who highlighted the importance of protecting the financial system from illegal activities like money laundering.

The Bank of Uganda also introduced the Know-Your-Customer initiatives, which encourages banks to perform customer due diligence to examine the customers' transaction history to curb money laundering (Annual Supervisory Report, 2015). This provides essential information about the customers to the banking institutions like the home address, full names, and references, including their sources of income. Furthermore, during the KYC evaluation, the customer’s names are entered in the United Nations terrorism database, which runs a background check to evaluate if they are involved in any terrorist activities. When banks have information on the customer, it helps to reduce information asymmetry. This will make it easier for financial institutions to deal with such clients because of the information that can be used in case the need arises. This finding was corroborated by Asongu, Roux, Nwachukwu and Pyke, (2019).

As previously mentioned, the need to protect the financial system from misuse cannot be overstated. But according to Stanley and Buckley (2016), regulation about money laundering may be stringent for the less risky customers who may not have citizen identity cards and other requirements that the banks may need. Such clients may not be able to access financial services. This assertion was made about the impoverished who may not access money remittance services because of the lack of formal identification. Findings from the Bank of Uganda mentions the introduction of a risk-based approach which is meant to tailor the anti-money regulation according to the risk profile of the bank’s profile (Annual Supervisory Report, 2015). This means that requirements about certain users of financial services that are deemed less risky will be lenient.

Figure 6.1 Anti-Money Laundering Regulatory Initiatives



Source; Coding from Annual Supervisory Report

The graph above indicates the percentage of the supervisory report discussing anti-money laundering regulatory initiatives. The Annual Supervisory Report of 2011 and 2012 presented fewer regulatory initiatives for reducing money laundering than in 2014 and 2015. More anti-money laundering initiatives were explored in 2002 with 0.014%.

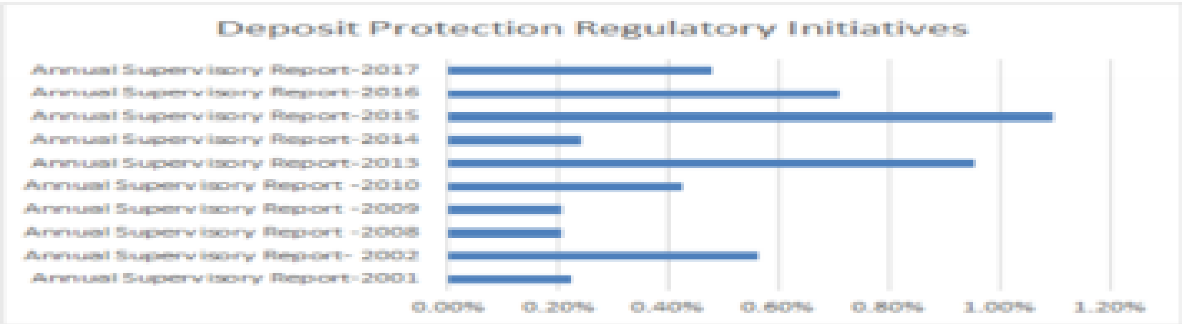
6.2 Deposit protection regulatory initiatives

Deposit protection is meant to ensure that deposits are safe with financial institutions Ognjenov, (2017). In this light, the Ugandan financial institutions are mandated to deposit 2% of a specific financial institution's average weighted deposit liabilities to the deposit protection fund. Deposit protection regulation in the form of the Financial Institutions Act (2004) and the Microfinance Deposit Taking Institutions Act (2003) emphasised that banks are entitled to information from the credit reference bureaus. Information sharing agencies and credit reference bureaus reduce information asymmetry challenges for the financial institutions, which prevents them from offering loans to the clients because of the problem of information asymmetry and adverse selection, which may lead to a high rate of loan defaults (Aga and Rilley, 2011). Information that is provided by the credit reference bureaus reduces credit rationing (Moro, Fink and Maresch, 2015), and the allocation of high-interest rate to borrowers because of lack of credit history used in assessing credit worthiness and computing interest rates (Aga and Rilley, 2011).

The deposit protection regulation known as The Financial Institutions Act (2004) was amended in 2016 to include the Micro Deposit Institutions Act (2003). This was meant to extend deposit protection to other financial services like Islamic banking, Agent Banking and Bancassurance services. *"The amendments are intended to allow supervised financial institutions (SFIs) to offer Islamic banking and insurance products within their product range, to foster financial sector development and inclusion"-Annual Supervisory Report (2010).* The protection of subscribers of the microfinance institutions also assures the subscribers about the safety of their savings and reduces the anxiety that may lead to withdrawal of savings. Mass withdrawal may affect the ability of microfinance deposit-taking institutions to lend because of poor liquidity (Fech and Weber, 2019). The importance of deposit protection to customers about ensuring that they keep their savings with the financial institution was highlighted by Bénassy-Quéré, Brunnermeier, Enderlein, Farhi, Fratzscher, Fuest, Gourinchas, Pisani-Ferry, Rey, Schnabel, Véron, Weder di Mauro, Zettelmeyer Fecht, Thum and Weber (2019).

The deposit protection regulation ensures that the Soundness in financial institutions is maintained by stipulating that those not performing satisfactorily contribute more to the deposit protection fund. Further amendment was made to deposit protection regulation under the Financial Institutions Act (2004) to extend protection to Islamic banking, Micro deposit institutions and Agent Banking. Such amendments ensure confidence in the microfinance institutions and promote Agent banking which is essential in allowing the people in the rural areas to access banking services.

Figure 6.2 Deposit protection regulatory initiatives



Source: Coding from annual supervisory reports.

As witnessed in the graph above, the Annual Supervisory report of 2001 recorded 0.20% of the initiatives to protect customer deposits. The year 2001 presented a consultative stage of setting up the deposit protection fund. The annual supervisory report of 2015 documented initiatives aimed at the amendment of both the Financial Institutions and Microfinance Deposit Institutions Act recorded 1.00% of the supervisory report in the said year.

6.3 Minimum capital regulatory initiatives

Minimum capital requirement enables banks to withstand shocks from excessive risk-taking. According to the Annual Supervisory Report (2001), Banks in Uganda subscribe to the Basel Committee's capital adequacy framework of 1988. After an Adjustment was made to Basel II, which got implemented on 3 November 2010. It increased capital contribution from 4billon to 25 billion Ugandan shillings to support the growth of commercial banks. This was to happen gradually from 10 billion in March 2011 to 25 billion by 2013 (Annual Supervisory Report, 2010). It allowed for harmonisation of the capital contribution regulation in all the East African Countries (Annual Supervisory Report 2010). According to the Annual Supervisory Report

(2015), the amendment to the Financial Institutions Act (2004) stressed the need to increase the minimum capital requirement according to the Basel III directive with a higher capital contribution, which would increase the resilience in the Ugandan banking sector. The amendment to the Financial Institutions act (2014) specifically encouraged an increase in the capital conservation buffer to the tune of 2.5 % of the risk-weighted assets for all commercial banks. Furthermore, Domestic Systemically Important Banks were mandated to contribute an additional capital buffer of 1-3.5 % of the Risk-Weighted Asset. A risk-weighted asset is a tool used to determine the minimum asset that is to be held by the banks to reduce risks Bank of Uganda also imposed a macro-prudential countercyclical Buffer of 2.5 % of the Risk-Weighted Asset during a period of excessive growth. (Annual Supervisory Report,2015).

Ozili (2017) posits that minimum capital contribution encourages resilience in the banking sector. The Bank of Uganda observed this through subscribing to the Basel II and Basel III frameworks which call for more capital contribution for tier I Commercial and Domestic Systemically Important Banks. Such improvements in capital regulation led to the harmonisation of capital regulation within East Africa, including the international banking system. However, stringency in the minimum capital requirement in developing countries may signal government interference leading to inefficient credit allocation. Banks that cannot afford capital requirements may not join the market leading to increased barriers to entry, a case that will breed consolidation of the highly capitalised banks that may not lend to the poor (Triki et al., 2017). However, Ugwuanyi (2015) posits that stringency in Capital Requirement regulation leads to financial inclusion by increasing the risk appetite of commercial banks, encouraging them to lend out more. The Ugandan Central Bank pays attention to the soundness and resilience in the banking sector, which calls for aligning minimum capital regulation to suit the local population (Anarfo et al., 2019). Setting up different regulatory authorities for Tier IV to financial institutions known as Tier IV Microfinance institutions and Moneylenders Act (2016) led to the promotion of financial inclusion. These financial institutions known as tier IV contribute a licence fee instead of stringent capital contribution.

Figure 6.3 Minimum Capital Regulative Initiatives

Source: Coding from Annual Supervisory Reports

As presented above, the Annual Supervisory Report (2016) recorded more words under the initiatives of capital regulation. This year recorded 2.00%. Such regulatory initiatives revolved around the amendment of the financial institutions' act, 2004, which stressed the importance of subscribing to the Basel III regulation.

6.4 Consumer protection initiatives

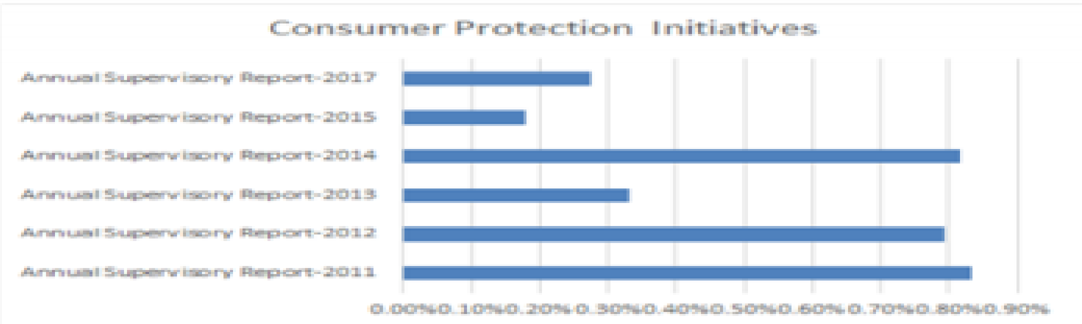
According to the Annual Supervisory Report (2011), The Bank of Uganda issued directives enabling fair and equitable services in the banking sector. Fairness and equitability were achieved by setting up clear channels for handling customer complaints during mobile money transactions. Furthermore, consumer data exchanged through mobile money transactions must be handled with integrity, authenticity, and confidentiality; the Bank of Uganda also ensured this (Annual Supervisory Report, 2013). Still revolving around mobile money services, the providers of such critical financial services had to partner with a financial institution to conduct due diligence on their customers Annual Supervisory Report (2013). According to Ellinger, Lomnicka and Hare, (2011), users of such innovative services need to be protected to guarantee that services like mobile money services are safe. Protection of the customers of mobile money customers concerns privacy and authenticity of exchanging financial information (Annual Supervisory Report, 2013).

The financial service customers were sensitised through the "know-your-rights campaign, which stipulated customers' rights when dealing with financial institutions. This ensured that customers knew the proper channels of directing their complaints. Furthermore, information was also provided about obtaining loans and saving products to promote transparency in the supervised financial institutions (Annual Supervisory Report, 2013). The need for ensuring transparency was asserted by the World Bank (2018) and Gaganisa, Galariotisb, Pasiourasc, and Staikouras (2020)

Such information was translated into several languages for easy understanding by several tribes in Uganda (Annual Supervisory Report, 2014). The need to make sure that consumers understand information provided by the financial institutions was reiterated by Uzokwe, and van Heerden, (2018). They stated banks in the less developed countries may take extra steps to simplify the regulations for their clients to promote fair and equitable services to such consumers.

As mentioned earlier, financial inclusion may be caused by inaccessibility to the banking centres in rural areas. This problem can be solved using mobile money services, enabling customers to use their mobile phones to send and receive money in rural and urban areas. Mobile money transactions should be secure to limit fraudulent activities, which builds consumer confidence to use such services. Lauer and Tarazi (2012), Gutierrez and Singh (2013)

Figure 6.4 Consumer protection regulatory initiatives



Source: *Coding from Annual Supervisory Reports*

As illustrated in the graph above, the Supervisory report with the highest percentage of words coded about initiatives to protect consumers was 2011, 2012 and 2014. In a report of the year 2014, the initiatives on consumer protection were centred around the sensitisation of financial institutions on know your customer initiatives and promoting financial literacy on borrowing and loan rate to promote the protection of consumers. The report of the year 2012 further highlighted measures for ensuring that consumers were safe to conduct mobile money services by promoting mobile money business registration into limited liability companies.

6.5 Microfinance regulatory initiatives

The regulations about microfinance institutions in Uganda include The Microfinance Institutions Bill (2014), The Microfinance Deposit-Taking Institutions Act (2003) for deposit-taking microfinance institutions and the Tier-four Microfinance Legislation (2016), which regulates non-deposit-taking institutions.

6.5.1 The Microfinance Institution Bill 2014

The Microfinance institution Bill (2014) was drafted to consolidate well-performing financial institutions into microfinance deposit-taking institutions to increase the rate of saving mobilisation to broaden their lending capacity (Annual Supervisory Report,2014*). "The policy before 2005 was focused on integrating MFIs into the financial sector, allowing them to graduate into deposit-taking institutions to increase their stock of loanable funds and role in promoting savings mobilisation". -Uganda Microfinance Sector Effectiveness Review (2014).* Therefore, the consolidation of microfinance institutions into deposit institutions improves their capacity to mobilise savings from the public, which increases the possibility of lending to more people. Such regulatory enactments also promoted confidence in the services that Microfinance institutions provide financial services this finding was corroborated by Pouchous, (2012).

6.5.2 The Microfinance Deposit-Taking Institutions Act (2003)

Microfinance regulation in the of The Microfinance Deposit-Taking Institutions Act (2003). This aimed at clearly streamlining Microfinance organisations that can legally obtain savings from the public; these as discussed earlier, would be grouped as deposit-taking microfinance institutions. For example, the Annual Supervisory Report (2010) states that: *"There have been persistent and increasing complaints from the public on fraudulent and illegal deposit-taking and hence, the need to clarify who can take deposits. The challenge in having many MFIs under inadequate supervision is the lack of oversight for savings used as collateral, which some MFIs may be attracted to intermediate"- Annual Supervisory Report (2010).* The need to increase confidence in the microfinance institutions by clearly stating the ones that have the mandate to receive deposit was confirmed by Pouchous (2012).

The Microfinance Deposit-Taking Institutions Act (2003) gave a mandate to Microfinance institutions to offer Agency Banking services in rural areas that are hard to reach by the mainstream financial institutions. Moreover, operating such a banking model is cheaper because there is no need to open branches or employ more people. Instead, an agent uses point-of-sale machines that give customers the possibility of paying bills, purchasing, and checking their account balances. Barasa and Mwirigi (2013) highlight the importance of agency banking in providing banking options in rural areas. In this light, the Uganda Microfinance Regulatory Authority (2019) states that:

"Microfinance Institutions are responsible for training, marketing, ensuring the network is available and providing gadgets for use, making the variance in the cost significant, saving the bank a significant amount of money. The working assumption is that with lower costs of operation for microfinance institutions, more people will be able to access financial services"- Uganda Microfinance Regulatory Authority (2019).

6.5.3 Tier Iv Microfinance Regulation (2016)

Stringent financial regulations may hamper the operation of Microfinance institutions. This concern was highlighted in the Uganda Microfinance Regulatory (2019). Stating that:
"Another concern is that the minimum capital requirements might be too high for some emerging microfinance institutions, which could endanger their survival. Savings-oriented initiatives, like MicroSave Africa, argue that it should be left primarily to the savers where and how to save, as no system of supervision will secure savings deposits." This was done by enacting the Tier Iv Microfinance Regulation (2016) as stated in the Annual Supervisory Report (2016); this allows microfinance institutions to contribute licences instead of paying high capital contribution.

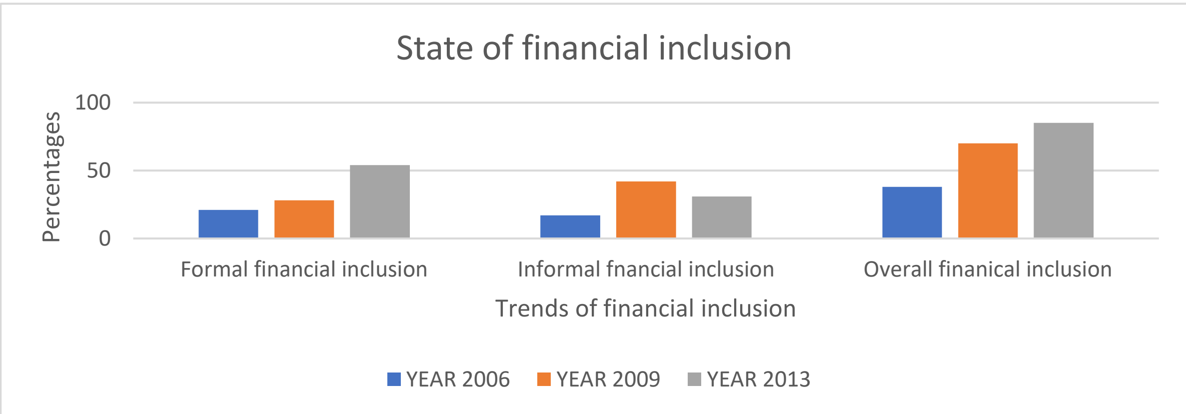
6.5 Microfinance Regulatory Initiatives.

Source: Coding from Annual Supervisory Reports and The Uganda Microfinance publications.

The graph above represents the percentage of the supervisory documents discussing the regulation of Microfinance institutions in Uganda. The Bank of Uganda Annual Supervisory report (2010) represents 1.60 %, with the year 2005 being the lowest mention of Microfinance regulation. In the following paragraphs, necessary regulation involving microfinance deposit-taking and non-deposit-taking institutions are discussed.

The above financial regulations contributed to reducing financial exclusion in Uganda through mobile money being one of the prominent services that reduce access barriers has ensured that most people can bank remotely. The Bank of Uganda (2014) states that was an increase in the number of people who are financially included to 85% from 70% in 2009 and 38% in the year 2006. This was majorly due to mobile money services (Bank of Uganda, 2014). There was also an increase in the number of the banked. For example, the FinScope survey documented an increase from 18 to 21%. This finding confirms the assertion of Lauer and Tarazi, (2012). Furthermore, mobile money services also increased the number of access points per 10000 adults this has been as demonstrated in the graph below.

Figure 6.5.1 The trend of financial inclusion in Uganda

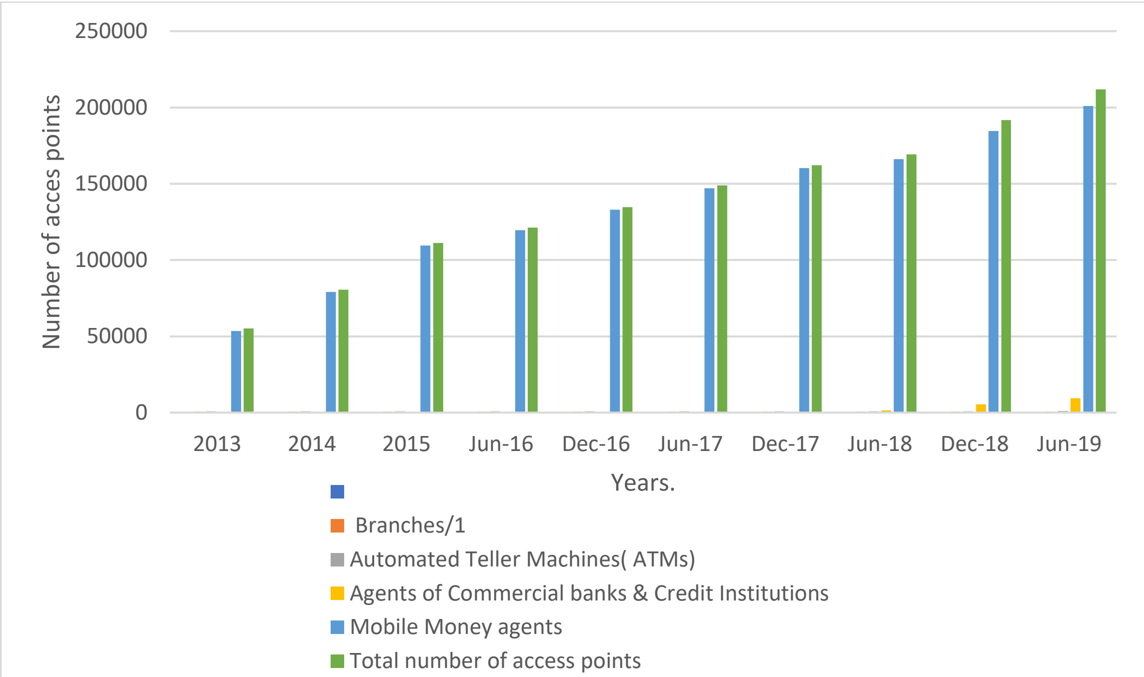


Source: FinScope Reports 2006, 2009 & 2013 population aged 18 years and above.

According to the above, the Ugandan populace was financially included while using formal financial institutions by 20%, 28%, and 54% in 2006, 2009 and 2013. The population used more informal financial institutions and recorded 42% in financial inclusion. The years 2009 and 2013 recorded an increasing trend in financial inclusion with 70% and 85%.

According to the Bank of Uganda (2014), financial inclusion from the supply side is evaluated using the Alliance for Financial Inclusion guidelines. These measures access points to financial services per 10,000 adults. Coverage of such access point is also considered when evaluating financial inclusion. Furthermore, proximity to financial service is also assessed when considering financial inclusion.

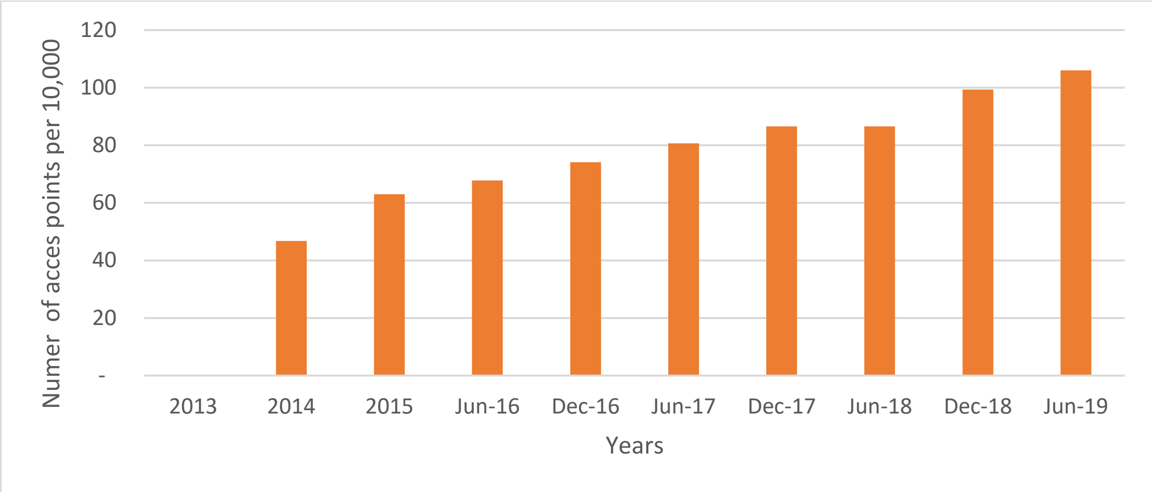
Figure 6.5.2 The total number of access points.



Source: Bank of Uganda financial inclusion indicator.

The total number of access points in Uganda increased from 2013, as noted above. It can be deduced that this increment matches the increase in the number of agents that are providing mobile money services. This observation was made about Commercial Banks, Credit Institutions and Microfinance Deposit-Taking Institutions

Figure 6.5.3 Access point per 10000 adults.



Source: Bank of Uganda financial inclusion indicator.

The number of access points available per 10,000 has increased steadily from 47 in 2014 to 106 in June 2019. This increase in access points can be attributed to mobile money services.

6.6 Financial regulation as a tool for reducing information asymmetry and promoting financial inclusion.

The less developed countries have several challenges that prevent them from attaining an inclusive financial system. Yoshino and Morgan (2018) pointed out the limited supply of access points like bank branches and the limited Automatic teller machine points as one of them. The other challenge is information asymmetry, in which the theoretical framework of this study is grounded. Information asymmetry has limited most people in less developed countries from obtaining credit from financial service providers (Aga and Rilley,2011). On one side, borrowers lack information about interest rates loans and different saving services, and they should be informed about the different methods of interest rates calculation.

Findings indicate that the Bank of Uganda has endeavoured to solve this problem by enacting consumer protection initiatives that promote disseminating information to customers about various financial services (Annual Supervisory Report, 2013). However, according to Uzokwe, and van Heerden (2018), providing the necessary information to customers should be coupled with efforts that ensure that the users of such information clearly understand the information disseminated to them. In this light, the Bank of Uganda, through the know-your-rights initiatives under the consumer protection regulation, mandated that the providers of financial service information to not only display information about their products but also translate them into local languages like Langi, Acholi, Luganda, Kiswahili, and English (Annual Supervisory Report, 2014). Since most people living in rural areas speak local languages, it is easy for them to understand the services they are using. Furthermore, the simplification and dissemination of information also promote transparency, preventing borrowers from signing contracts that may be harmful to them, like obtaining loans with predatory interest rates as asserted by Lauer and Tarazi (2012), Gutierrez and Singh (2013).

On the other hand, the providers of financial services also need information about their clients. Knowledge about customers ensures the people using their services are not involved in money laundering and financing terrorist activities. The Bank of Uganda solved this problem by enacting the antimony laundering regulation, which has two crucial regulatory instruments in reducing information asymmetry: the Financial Institution Act (2004), Microfinance Deposit-Taking Institutions Act (2003), and the know-your-customer regulatory initiatives. According to the Annual Supervisory Report (2015), knowing your customer information provides essential information about customers like home address, full names, and references, including their source of income. Such information makes it easier for banking institutions to deal with their clients. Anti-money laundering information further prevents the misuse of the country financial system from illegal activities like money laundering activities, as asserted by Buckley (2016). The Financial Institutions Act and the Microdeposit Taking Institutions Act ensure that the financial institutions in Uganda obtain information from the credit reference bureaus, reducing credit risk resulting from adverse selection and moral hazard as asserted by Berger et al. (2011). As witnessed above, curbing the challenge of information asymmetry is crucial in easing financial intermediation between the borrowers and lenders in the financial market.

7. Discussion

As earlier discussed, regulation plays an important role in ensuring that financial inclusion is a chieved. This section discusses the different regulatory initiatives and how it leads to financial inclusion.

Financial exclusion is a challenge for attaining economic development in developing countries, as asserted by Allen, Demirgüç-Kunt, Klapper and Peria (2016). To curb this, the G20 countries have directed efforts to enact regulation that promotes financial inclusion (G20 Financial inclusion Action Plan 2014). However, for regulation to have positive effects, it should suit the country's economic system. On this backdrop, the Bank of Uganda set up two regulatory authorities for the formal and informal financial institutions to promote financial inclusion. This has had positive effects on the survival of some financial institutions. An example is The Tier Iv Financial Regulation (2016); this ensures that the microfinance institutions under such regulatory authorities pay a licence fee instead of contributing capital requirements which may act as an entry barrier for some microfinance companies (Triki et al., 2017). This increases the chances of such financial institutions to survive and continue providing financial services to those consumers.

The Bank of Uganda further extended important regulation that promotes the safety in the formal financial institution to the informal ones. A case in point was the deposit protection regulation through the Financial institution act (2004) and the Microfinance Deposit Taking Institutions Act, (2003) and provision of information through the credit reference bureaus the exchange of information is important in ensuring that borrowers are assigned interest rate that is commensurate to their risk profiles (Aga and Rilley, 2011).

The deposit protection offered by mainstream banks regulated by the Bank of Uganda ensures that deposits are safe. The deposit insurance ensures that savers do not withdraw their savings from the banks, which would cripple the bank's ability to provide credit to its customers (Bénassy-Quéré et al., 2018). The ability of commercial banks to provide loans to their customers is essential. Still, it is not easy to attribute deposit protection regulation to banks' ability to lend out to more customers of the non-deposit taking financial institutions as these who are in the rural areas. Another observation is that bank regulation in the form of deposit protections regulation ensures that banks are employing market discipline while transacting with customers (Demirgüç-Kunt& Huizinga, 2004). Such banks may financially exclude most customers who are not deemed profitable. Nonetheless, aspects of deposit regulation like the Financial Institution act, (2004) were further amended to include the protection of insurance and agency banking services. As previously explained, agency banking is important in reaching the rural areas increasing access to financial services (Barasa and Mwirigi, 2013).

The minimum capital requirement regulation, which applies to mainstream commercial banks and deposit-taking microfinance institutions, negatively influences financial inclusion because subscribing to Basel II, the minimum capital contribution was increased from 4 billion to 25 billion Ugandan shillings. Furthermore, there was a need to increase the Ugandan banking system's resilience, which called for the subscription to Basel III with a higher capital contribution requirement. The financial institution act 2014 also encouraged increasing a capital conservation buffer rate from 1-3.5% of the risk-weighted asset. It can be witnessed that the minimum capital contribution has been increasing among the Ugandan commercial banks to ensure a sound financial system. Given that stringency in the capital requirement limits the banks from lending to many customers to ensure a sound financial standing Anarfo et al. (2019). Furthermore, many banks that want to join the Ugandan banking sector as commercial banks may not have the financial power to make such minimum capital contribution. This encourages the high concentration of few commercial banks that may be hesitant to lend to financially impoverished individuals (Anarfo, Abor, Osei and Dako, 2019). This challenge was solved by setting up different regulatory regimes from microfinance institution known as the Tier Iv Microfinance Regulation (2016) which ensures that the microfinance institutions paid an annual operating licence instead of contributing minimum capital requirement.

Financial regulation to prevent money laundering played essential roles in the Ugandan financial system. Firstly, it strengthened the capacity to prevent the Ugandan financial sector from being used for money laundering and financing terrorism by building capacity and enacting new regulations, culminating in directives like KYC. This directive aimed to provide more information about the clients of banking institutions, hence reducing information asymmetry, Asongu, Roux, Nwachukwu and Pyke (2019). Highlighted that more information reduces credit rationing as banks understand who their customers are. To ensure that anti money laundering regulation was not stringent for financial companies, the Bank of Uganda introduced the risk-based approach to suit regulation to different institution’s risk this finding was in agreement with Stanley and Buckley (2016) who posited concerns about anti-money disproportionately affecting the financially impoverished from accessing financial services due to lack of proper identification.

Microfinance institutions have been known to aid the financially excluded in the rural areas to access financial services, improving microfinance regulation that promotes confidence in such institutions crucial for ensuring continued usage for example, Cons and Paprock (2008) stressed the importance of protecting consumers from unlawful repossession of property after borrowers have defaulted on loans. Chen, Rasmussen, and Reille (2010) also highlighted the importance of protecting small depositor and the financial system. On this backdrop, the bank of Uganda enacted financial regulation to promote soundness in the microfinance institutions; these include The Microfinance Institutions Bill (2014), The Microfinance Deposit-Taking Institutions Act (2003) for deposit-taking microfinance institutions and the Tier-four Microfinance Legislation (2016). This promoted financial inclusion in the following ways.

The Microfinance Institutions Bill (2014), which was drafted to consolidate well-performing microfinance institutions into deposit-taking ones, saw the development of banks like Finca Uganda into deposit-taking microfinance institutions, as stated in the Uganda Microfinance Sector Effectiveness Review (2014). According to Pouchous (2012), it is important to protect the users of such financial services who stand a risk of losing their savings, the protection of saving is therefore important in restoring confidence in the microfinance companies to continue providing financial services. The Microfinance Deposit-Taking Act (2003) encouraged the advent of agent banking services in the rural areas, which are hard to reach. Moreover, this mode of banking ensures that are operating costs for microfinance companies are lowered so that they continue offering affordable services to their clients reduced lending cost are passed on to the borrowers which is an incentive for them to continue borrowing from microfinance companies. Agency banking is known as an important tool for reaching the rural areas hence increasing access to financial services (Barasa and Mwirigi, 2013).

7.1 How Information asymmetry leads to financial inclusion

For financial exclusion to be reduced, financial information should be available for ease of financial intermediation. Unfortunately, most people in the less developed countries still face this challenge, as posited by (Aga and Rilley,2011). If consumers know the services being offered by the banks, it aids in making an informed decision that protects such customers from being taken advantage of through predatory lending practices. Banking institutions also need information about the creditworthiness of their consumers before lending, which protects them from credit risks resulting from information asymmetry; Berger et al. (2011). The Anti-money regulation of the Bank of Uganda, which promotes the know-your-customer initiatives, provides information about the customers that promoted information sharing. Other regulations like the Financial Institutions Act (2004) And Microfinance Deposit Taking Act (2003) ensures that banking institutions obtain credit information about their customers from the credit reference bureaus. This information makes it easier to compute interest rates that are in line with the consumer's credit history, as opposed to charging a general interest rate that may be too high for a given borrower.

8. Conclusion

This thesis set out to determine how financial regulation leads to financial inclusion in less developed countries like Uganda by examining regulatory documents from the Bank of Uganda. Findings indicate that regulatory instruments like the minimum capital requirement may encumber the rate of financial inclusion. This is because stringency in the minimum capital requirement may act as an entry barrier to new financial service providers who can provide the much-needed financial services. This finding was commensurate with Anarfo, Abor, Osei and Dako (2019). The bank of Uganda mitigated this by setting a separate regulatory authority for microfinance institutions and commercial banks. This has ensured the survival of the microfinance institutions that would not contribute to the minimum capital requirement as they paid annual operating license. Streamlining regulation to specifically suit the objective of financial inclusion is not a panacea to solving the problems of financial exclusion but it plays a monumental role reducing financial exclusion. This agrees with assertions made by Chen, Rong, Divanbeigi and Raian (2019).

The anti-money laundering regulations play an essential role in encouraging financial inclusion because it prevents the misuse of financial systems for illegal activities like money laundering. This is done by sharing information about the customers through the KYC initiatives, which may promote lending. The Bank of Uganda introduced the risk-based approach to ensure that regulation does not stifle microfinance institutions from providing financial services. Under this, stringent anti-money laundering regulation was directed to institutions that presented more risk to the banking sector (Stanley and Buckley, 2016).

Consumer protection regulation encourages the provision of fair and equitable services to financial service consumers; this has encouraged users of financial services to continue using mobile money, which has been a significant factor in the increasing of the number of access points that people use to obtain financial services. This finding agreed with Duke (2009), who highlighted the importance of building trust to make financial services attractive to users. Furthermore, the importance of protecting users of financial services was asserted by Lomnicka and Hare (2011). The know-your-rights initiatives of consumer protection also built confidence in the financial service sector by establishing clear channels of handling complaints. This legitimized the banks and encouraged people to subscribe to their services. The know your rights initiatives also ensured that customers clearly understood the terms and conditions of service, promoting transparency and trust as asserted by Uzokwe and Heerden (2018).

Deposit protection plays a vital role in ensuring that the savers do not withdraw all their money which would prevent the banks from lending to the poor. This also plays a role in maintaining the soundness of deposit-taking microfinance companies because it maintains the liquidity of such institutions and keeps them lending to the consumers who are mostly located in the rural areas, as asserted by Bénassy-Quéré et al. (2018). Deposit protection, however, plays no significant role in promoting financial inclusion about the commercial banks in the rural areas, which majorly subscribe to the microfinance institution. This has been addressed by employing a section of the Microfinance Deposit-taking Institutions Act (2003) and the Financial Institutions Act (2004), which encouraged the provision of banking services through agency banking which serves to clients located in the hard-to-reach areas. Deposit protection regulation through the Financial Institutions Act (2004) also promotes the sharing of information from the credit reference bureaus, which may promote the efficient allocation of credit. This may encourage borrowers to apply for loans. The findings about information sharing as a tool for promoting financial inclusion agree with Kusi and Mensah (2018).

The Microfinance Institutions Bill (2014) gave a mandate to some microfinance companies to obtain deposits from the savers. Operating as a microfinance deposit-taking institution ensures liquidity which fosters the offering of loans to new customers. Pouchous (2012) highlighted the importance of protecting the savers of microfinance institutions. Microfinance regulation also ensured that microfinance institutions continue to survive by mandating them to pay licences instead of capital contribution as done by the mainstream banks. Furthermore, the regulation of mobile money services done by the Central Bank played an essential role in increasing financial inclusion in the rural areas since the users of microfinance companies subscribe to it. This finding agreed with Pouchous (2012).

This study demonstrated how financial regulation plays a role in increasing financial inclusion in commercial and microfinance banks in less developed countries. It is congruent with the Chen, Rong, Divanbeigi and Raian (2019) school of thought, which states that regulation should be streamlined on essential financial inclusion areas like financial cooperatives and agent banking. However, this research adds to the study of financial inclusion by demonstrating how regulation in the mainstream banks like deposit protection and anti-money laundering regulation helps improve financial inclusion by reducing information asymmetry.

8.1 Limitations and areas for further studies

The most significant limitation of this study is the use of secondary information instead of interview methods; this might have limited clarifications from financial regulation experts from the Bank of Uganda and the Ugandan banking sector. As earlier explained, this was addressed by examining the annual supervisory documents to investigate how financial regulation helps to improve financial inclusion in Uganda. Furthermore, this is a single country study; it inhibits opportunities for comparing regulatory initiatives in other countries to foster regulatory benchmarking about improving financial inclusion. Therefore, further studies should be conducted using interview methods across many countries at different stages of development to promote regulatory benchmarking to aid in financial inclusion.

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