



**UNIVERSITI PUTRA MALAYSIA**

***FINANCIAL INCLUSION, FINANCIAL STABILITY AND ECONOMIC  
GROWTH IN DEVELOPING COUNTRIES***

**HAMISU SADI ALI**

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**FINANCIAL INCLUSION, FINANCIAL STABILITY AND ECONOMIC  
GROWTH IN DEVELOPING COUNTRIES**

By

**HAMISU SADI ALI**

**Thesis Submitted to the School of Graduate Studies, Universiti Putra Malaysia, in  
Fulfillment of the Requirements for the Degree of Doctor of Philosophy.**

**May 2016**

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## DEDICATION

This PhD thesis is warmly dedicated to my beloved late father ALHAJI SADI ALI may his gentle soul rest in perfect and absolute peace, Ameen, and to my lovely mother HAJIYA AISHA SALISU, may ALLAH continue to bless her life, Ameen. This thesis is also dedicated to my lovely wife ZAINAB HAMISU ALI, and my charming Son SADI HAMISU SADI (Hilal) as well as the entire family of the late ALHAJI SADI ALI. It is my great pleasure and honour also, to dedicate this PhD thesis to His Excellency, the former Executive Governor of Kano State and the current Senator representing Kano Central Senatorial District, ENGINEER DR. RABI'U MUSA KWANKWASO (FNSE). Your supports and cares for educational and human development in my dear Kano State will forever be in my heart. May almighty Allah bless you and your entire family forever, and may Allah fulfill all what you desires in this life and hereafter.

Abstract of thesis presented to the Senate of Universiti Putra Malaysia in fulfillment of the requirement for the Degree of Doctor of Philosophy

**FINANCIAL INCLUSION, FINANCIAL STABILITY AND ECONOMIC GROWTH IN DEVELOPING COUNTRIES**

By

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**May 2016**

**Chairman : Associate Professor Law Siong Hook, PhD**  
**Faculty : Economics and Management**

The number of individuals and firms that have access and uses formal financial services provided by the mainstream financial sectors determines the performance of the financial sector of the economy; higher level of financial inclusion could automatically increase banking liquidity and hence provides more loanable funds for viable investments, the multiplier effect of this may positively influence the level of employment and reduce income inequality as well poverty. The present study has the overall objective of investigating the impacts of financial inclusion in sustaining financial stability and economic growth in developing countries.

The first specific objective intends to examine the effect of migrant workers' remittance on financial inclusion in developing countries based on dynamic panel GMM estimation technique. In this objective 46 developing countries were selected and the time period of the study is 2004-2010. The empirical finding reveals that migrant workers remittances have positive and significant impact on financial inclusion in the sample countries. The result reveals that 1% increase in migrant workers remittance could increase financial inclusion by 0.067% in the sample countries. Migrant workers remittance therefore becomes an important financial inflow that stimulates financial sector development in the countries investigated.

The second specific objective based on 52 developing countries for the time period of 2004-2010 also applied dynamic panel GMM estimation technique, the objective is to examine the effect of financial inclusion on financial stability in developing countries. The main empirical finding shows that financial inclusion positively influences financial stability, the result suggest that 1% increase in financial inclusion positively stimulates financial stability by 0.375%. This therefore emphasizes the relevance of higher access and usage of formal financial services in controlling the shocks of financial instability, hence financial inclusion stimulates the stability of the financial system.

The third specific objective also applied dynamic panel GMM estimation technique across 48 developing countries for the period of 2004-2010; the objective is to investigate the impact of financial inclusion on economic growth in developing countries. The key empirical finding reveals that financial inclusion have positive and significant impact on economic growth in developing countries. The result highlight that 1% increase in financial inclusion could stimulates economic growth to increase by 0.132%, this finding confirmed the essential functions that access and usage of formal financial services plays in promoting the overall economic performance in developing countries. Therefore it is imperative from the policy perspectives to encourage uses as well as provide enabling policies and suitable environments for smooth accessibility of formal financial services considering its diverse positive effects on financial sector development as well as overall economic growth.

Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia sebagai memenuhi keperluan untuk Ijazah Doktor Falsafah

**MEMASUKKAN KEWANGAN, KESTABILAN KEWANGAN DAN  
PERTUMBUHAN EKONOMI DI NEGARA MEMBANGUN**

Oleh

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Bilangan firma dan individu yang mempunyai akses dan menggunakan perkhidmatan kewangan formal yang disediakan oleh sektor kewangan boleh menentukan prestasi sektor kewangan sesebuah negara; semakin tinggi rangkuman kewangan secara automatik, boleh meningkatkan mudatunai perbankan, dan selanjutnya menyediakan lebih banyak dana pinjaman untuk pelaburan yang berdaya maju. Kesan berganda secara positif dari ini, boleh mempengaruhi tahap pekerjaan dan mengurangkan ketidaksamaan pendapatan serta kemiskinan. Kajian ini bertujuan untuk menyiasat kesan rangkuman kewangan dalam mengekalkan kestabilan kewangan dan pertumbuhan ekonomi di negara-negara membangun.

Objektif khusus yang pertama bercadang untuk mengkaji kesan pengirim wang oleh pekerja asing terhadap rangkuman kewangan di negara-negara membangun berdasarkan teknik anggaran panel dinamik GMM. Dalam objektif ini, 46 buah negara membangun telah dipilih untuk kajian dalam tempoh masa dari 2004 hingga 2010. Penemuan empirikal menunjukkan bahawa pengirim wang oleh pekerja asing mempunyai kesan positif dan signifikan terhadap rangkuman kewangan di negara-negara yang dipilih untuk kajian. Keputusan menunjukkan bahawa peningkatan 1% dalam penghantaran wang oleh pekerja asing boleh meningkatkan rangkuman kewangan sebanyak 0.067% di negara-negara yang dikaji. Oleh itu, pengirim wang oleh pekerja asing boleh menjadi aliran masuk kewangan yang penting bagi merangsang pembangunan sektor kewangan di negara-negara tersebut.

Objektif khusus yang kedua mengkaji kesan rangkuman kewangan terhadap kestabilan kewangan di negara-negara membangun dengan menggunakan teknik anggaran panel dinamik GMM berdasarkan 52 buah negara membangun untuk tempoh masa 2004-2010. Hasil penemuan empirik utama menunjukkan bahawa rangkuman kewangan secara positif mempengaruhi kestabilan kewangan. Keputusan kajian menunjukkan bahawa peningkatan 1% dalam rangkuman kewangan merangsang kestabilan kewangan sebanyak 0.375%. Maka ini menegaskan hubungan di antara akses yang

lebih tinggi dan penggunaan perkhidmatan kewangan bagi mengawal kejutan ketidakstabilan kewangan. Oleh itu rangkuman kewangan dapat merangsangkan kestabilan sistem kewangan.

Objektif khusus yang ketiga juga menggunakan teknik anggaran panel dinamik GMM terhadap 48 negara membangun bagi tempoh 2004-2010; tujuannya adalah untuk menyiasat kesan rangkuman kewangan kepada pertumbuhan ekonomi di negara-negara membangun. Penemuan empirik utama menunjukkan bahawa rangkuman kewangan mempunyai kesan positif dan signifikan terhadap pertumbuhan ekonomi di negara-negara membangun. Hasil kajian mendapati bahawa peningkatan 1% dalam rangkuman kewangan boleh merangsang peningkatan pertumbuhan ekonomi sebanyak 0.132%, penemuan ini mengesahkan fungsi penting yang akses dan penggunaan perkhidmatan kewangan formal dalam mempromosikan prestasi keseluruhan ekonomi di negara-negara membangun. Oleh itu adalah penting daripada perspektif dasar untuk menggalakkan penggunaan dan juga menyediakan dasar yang membolehkan persekitaran yang sesuai untuk kelancaran akses perkhidmatan kewangan yang formal. Ia adalah penting untuk meningkatkan kesan-kesan positif yang pelbagai terhadap pembangunan sektor kewangan serta pertumbuhan ekonomi secara keseluruhan.



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I certify that a Thesis Examination Committee has met on 13 May 2016 to conduct the final examination of Hamisu Sadi Ali on his thesis entitled "Financial Inclusion, Financial Stability and Economic Growth in Developing Countries" in accordance with the Universities and University Colleges Act 1971 and the Constitution of the Universiti Putra Malaysia [P.U.(A) 106] 15 March 1998. The Committee recommends that the student be awarded the Doctor of Philosophy.

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## LIST OF ABBREVIATIONS

ADB	Asian Development Bank
AfDB	African Development Bank
CGAP	Consultative Group to Assist the Poor
FI	Financial Inclusion
GDP	Gross Domestic Product
GMM	Generalized Method of Moments
ICRG	International Country Risk Guide
IFC	International Finance Corporations
IMF	International Monetary Fund
IV	Instrumental Variables
LSDV	Least Square Dummy Variable
OECD	Organization for Economic Cooperation and Development
OLS	Ordinary Least Square
SMEs	Small and Medium sized Enterprises
TO	Trade openness
WDI	World Development Indicators

## CHAPTER 1

### INTRODUCTION

#### 1.1 Introduction and Background of the Study

Financial sector is the set of institutions, market, and instruments. It also refers to the combination of banking institutions, financial markets, and other related financial intermediaries which includes; pension firms and insurance companies. It encompasses the legal and regulatory framework that supervise the overall transactions and dealings in the financial market (Ang, 2008). That is the Central Bank or Federal Reserve Bank as it is called in some countries like U.S and India. Financial institutions (such as banks and insurance companies) and financial markets including stock markets, bond markets, and derivative markets) have positive and significant impact on economic development, poverty alleviation, and economic stability (Levine 2005). The goal of financial sector development in emerging and developing economies is to achieve higher growth and reduce the level of poverty.

Financial sector development is basically concern to resolve the costs incurred in the financial system. The process of cutting costs of obtaining information, contract enforcement, and performing transactions lead to the emergence of financial contracts, intermediaries and markets. Various evidence shows that financial sector development promotes economic development. It enhance economic growth via capital accumulation and technological progress through boosting savings rate, providing information about investment, capital allocation optimization, mobilizing and pooling savings, and promoting and facilitating foreign capital inflows (Department for International Development, 2004). Financial development is a broad concept that contains other sub-components, like financial depth, financial efficiency, financial stability, and financial access.

Financial depth measures the strength of the financial sector in relation to the economy, it refers to the size of the banks, other financial institutions, as well as financial markets in relation to the overall economic productivity. The main indicator that is mainly used in the literature to capture financial depth is domestic and private credits to private sector relative to GDP. Private credit to GDP mainly differ among the countries, and it is highly correlate with the income level. For example, in high income countries the level of private credit to GDP is 103%, higher than 4 times the average ratio of low income countries. According to this indicator, countries with deep financial systems mostly from Europe; Canada, Australia, and South Africa ranked among those in the highest quartile in relation to private credit to GDP ratio. China's quartile is also considered highest more than other emerging markets like; Russia, Brazil, and India. Financial depth measures by private credit to GDP, believed to have strong link with the long-run economic growth and poverty reduction. For example, the yearly average of private credit across countries was 39%, and its corresponding standard deviation is 36%. The average during 1980-2010 of private credit of financial institutions was less than 10% in Angola, Cambodia, and Yemen, whereas it

is more than 85% of GDP in Austria, China, and the United Kingdom (Global financial report, 2016). This highlights the wide margin variation of financial system depth among high financially developed economies and those in the low level segments.

Financial efficiency refers to the amount of revenue incurred by the firms due to investing a specific amount of financial resources in a given venture. It also means how sound a dollar invested in every alternate generates revenues to the firm. Financial efficiency measures the ability of the organization's to transform its financial resources into its mission related undertakings. It is highly desirable in all organizations irrespective of the mission and nature of the organization. It also measures the intensity by which a business applied its assets to obtain gross revenues and the efficiency of purchasing, producing, marketing, and financing decisions (Zala, 2010). Some of the measures of financial efficiency includes; net interest margin (NIM) that measures the difference between the interest income obtained by banks and other financial institutions and the amount of interest they paid out to their lenders compared to the amount of interest assets earned. Efficiency of the financial system could be one of the determining factor to evaluate the overall performance of the financial system. Financial efficiency also measure how well an organization is able to manage different tradeoffs which includes; risk and return, and liquidity and profitability in its financial resources. The level at which an organization is capable of managing its financial resources, and its ability to generate high returns determine its strength which shows the degree of its financial efficiency.

Financial stability refers to the situation in which the financial system which comprised of the main financial markets and financial institutions are able to resist internal or external economic shocks and it's fit to achieve its primary functions. These includes among others; financial funds intermediation, risk management, and sustainable payment arrangements. Financial stability is considered as the terms of the financial system's capacity: a) to facilitate an efficient allocation of resources both intertemporal and spatial and other economic processes which includes; wealth accumulation, economic growth, and eventually social affluence; b) to access price, allot, and manage risks; and c) to maintain its stability to perform these main functions and manage even the external shocks or build up of disparities basically through self-corrective tools (Schinasi, 2004). He also stressed that, financial system is considered stable if it is able to promote economic performance in various magnitudes, while unstable financial system is the one that weakens economic performance. Therefore, no matter how the financial system is stable if it fails to enhance economic performance, it will not be regarded as stable. Instability could be overcome by the authorities by redefining the market rules for effective performance of the financial system.

Financial access refers to the ability of individuals and firms to obtain formal services timely without any obstructions. Financial inclusion could be a process of guaranteeing access to formal financial services at reasonable time and sufficient credit to both vulnerable portion which include low income groups and weaker segments at reasonable costs, it basically signifies access to bank accounts, insurance, reasonable

credits, and sound payment system (Khan, 2011). Some segments of the population were excluded from formal financial services involuntarily as a result of market imperfections/failures, while others were deliberately excluded themselves due to their personal reasons (beliefs, norms and traditions). The policy frameworks for financial inclusion focus more on the former because it's a market distortions that excluded them from accessing formal financial services, such as non-proximity or totally lack of banking branches more especially in the rural areas, excessive costs of opening, operating and maintaining accounts, lack of suitable financial products for their needs, etc. Financial inclusion is one of the main challenges of financial policy makers in the world because the global financial losses incurred from the excluded segments are of great concern nowadays. The main aim of financial inclusion is to incorporate the unbanked segment of the population into formal financial system so as to get access to financial services; the outcome will really enhance economic activities by pooling resources from the surplus economic sector to the deficit sector (financial intermediation) and hence improve the level of investment in the economy.

Based on 2014 financial inclusion report of the World Bank, the Group President Jim Yong Kim said *"Whether you are a public sector financial regulator or a private sector bank, it is in your interest to get everyone access to financial services. This is good for the world and will help us end poverty"*. Financial inclusion perceive to be a mechanism through which the obstructions to formal financial services could be eliminated, and resolve the inaccessibility of some segments of the population such as poor and disadvantaged for getting into formal financial services, i.e. loans, insurance, payments, and deposits anytime they needed (Carbo, et al. 2007; Conroy, 2005; Mohan, 2006; Rangarajan Committee, 2008). Poverty is not only about low income it also encompassed lack of numerous abilities which include security and aptitude to partake in economic and political systems (Corbridge, 2002). This means even if household have sufficient income but excluded from formal financial sector they will be considered poor in the society.

The idea of providing inclusive financial system is not only the aim of integrating numerous excluded poor into the formal financial system, rather it also challenge the mainstream financial institutions to reach the unbanked portion of the economy (Beck et al. 2004). Every one out of two people in the world do not have access to formal savings accounts, insurance, loans, and other financial services. Global financial inclusion data base, 2012 (Global index, 2012) shows that less than a quarter of global adults possess an account in the formal financial institutions, and most of them uses informal methods to save, and their burrowing is mainly from family, friends and other traditional techniques. In the UK for example, three dimension of financial inclusion exist such as; access to banking services, access to loans and access to face to face financial advices. Financial inclusion could also be seeing as the mechanisms through which all members of the society as a whole and vulnerable in particular have access to formal financial services at reasonable costs in an impartial and clear approach by conventional institutional players. This entails the wipeout of all impediments to the poor and disadvantaged segments of the population in accessing formal financial services globally which if carefully and systematically operated could lead to create an avenue of reducing income inequalities, create more jobs, reduce poverty and stimulate sustainable economic growth. Access to formal financial loans can encourage self-



employment thereby reduce the level of unemployment and underemployment (Menon and Rodgers, 2011).

Increasing theoretical and empirical proof advocates that financial systems that deal with low-income segments enhance pro-poor growth (Bankable frontier associates, 2009), which means achieving inclusive growth is among the best strategies to fight poverty. When firms and individuals are excluded from using formal financial services, they will only depend on personal wealth to provide their financial desires, which is saving for the future, financing their education, taking the benefit of business prospects and thereby faced with systemic or idiosyncratic shocks (Ayyagari et al. 2008). According to financial sector deepening trust (2009), the figure of adults excluded from formal financial services in many economies is greater than the adult's population living below poverty line of \$2 per day. It is estimated that a quarter of Europeans do not possess credit card (27%), about a third don't have access to formal financial credits (34%) and virtually half found it hard to get mortgage finance (47%), though with wide cross-country differences (Eurobarometer, 2010). A study conducted in Mexico City based on survey shows that, the main reason for being financially excluded among the respondents is high minimum balance to maintain bank account as well as dearth of income not location as mainly believed (Caskey et al. 2006).

For example, it is documented that 25% of poor households in Asia have access to formal financial services, while individual economies in Africa hardly exhibit same (Torre et al. 2007). In Africa only 23% of adults possess an account at formal financial sector, though even within the African sub-region there is a variation in terms of account penetration, while in Southern Africa 42% have access, in Central Africa is 7%, and 95% of adults in Central Africa and Congo don't have access to formal financial services. In North Africa, 23% of adults have account in the formal financial institutions, example 39% in Morocco and 10% in Egypt (Demirguc-Kunt and Klapper, 2013). Africa is among the regions with the highest level of financial exclusion in developing countries as majority of the populace are not into mainstream financial dealings. For example, the latest proof of the surveys of 47,745 firms in 99 economies globally indicated that SMEs are the main provider of jobs across the economies; it provides 66% of the employment market of developing countries. Equally, firms in Africa do not have access to formal financial loans when compared to other developing countries irrespective of their magnitude, the restrictions is more prevalent among small and medium sized enterprises (SMEs), while other sources of finances remain stagnant (Demirguc-Kunt and Klapper, 2013). There are more than 50 million micro, small and medium businesses in Africa (ADB, 2011), but 69% were informally operated.

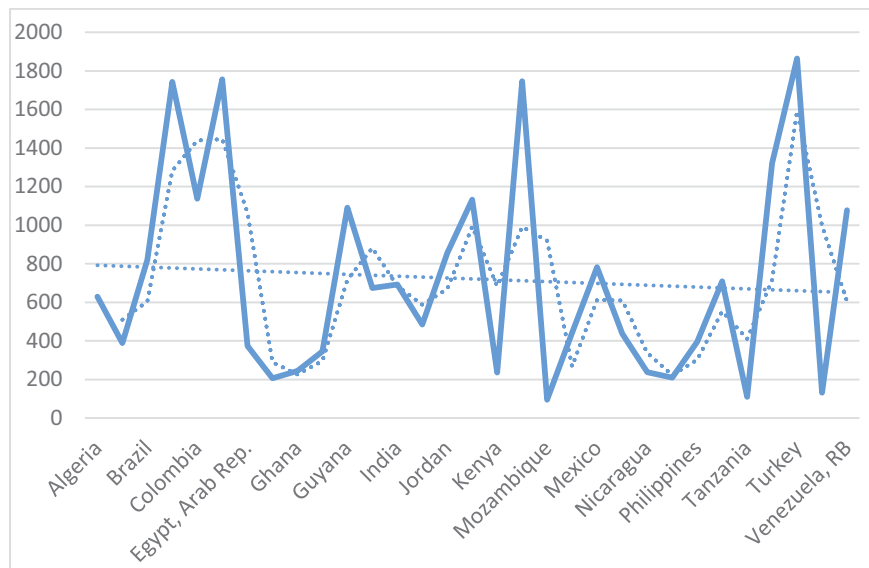
The SMEs sector contributes 58% of Africa's employment and 33% of the continent's GDP thereby become paramount for socio-economic growth of the continent (Ayyagari et al. 2011). One of the determinants of firm growth is the access to loans more especially for small firms, (Beck et al. 2005), and in the early stage of the new business formation (Klapper et al. 2006). The International Finance Corporations (IFC) enterprise survey (2011) found that on average, one of every two enterprises in Africa do not have access to formal loan or lacks suitable financial product for the



firms' innovation and growth (CGAP, 2011). Only 29% of formal firms have access to loan, line of credit or overdraft in sub-Saharan Africa where the problem is more severe which deter the economic sub-sector to contribute for employment generation and economic growth (Stein et al. 2013). In Sub-Saharan Africa, financial development is constrained by inadequate financial products and financial innovation, manifest fragmentation of market, high interest rates and mainly informal financial dealings (Atindehou et al. 2005; Ncube, 2007). Based on assessment of micro credit in India, Banerjee et al. (2010) claimed that access to microcredit results to higher investment and business robustness, improve the quantity of early stage businesses, and enhance the existing ventures. Access to formal credits by SMEs improves the performance of the economy considering its influence on generating employment, poverty reduction and hence reduce income inequality.

Even though some empirical studies argued that there is negative correlation between poverty, inequality and formal financial services, see among others; Burgess and Pande (2005), Clarke, et al. (2006), Beck et al. (2007), Jeanneney and Kpodar (2011), however there is a positive correlation between financial development and economic growth as empirically tested by the following studies Abu-Bader and Abu-Qarn (2008); Yang and Yi (2008); Pal (2011); Bittencourt (2012). It also stressed that more access to formal financial services has the potential to enhance economic efficiency and equity (Conroy, 2005). Total number of global savings account is more than the world population (Aguirre, 2008), but still half of the world's adults population i.e. 2.5 billion people are excluded from formal financial services (Banco do Nordeste do Brasil, 2010).

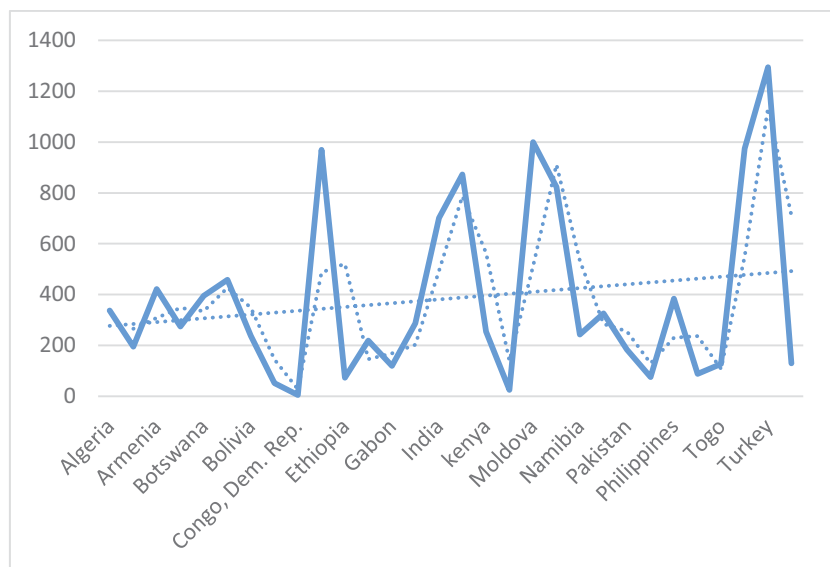
Figure 1.1 shows the trend of number of deposit accounts with the commercial banks per 1,000 adults among developing countries. When this indicator is used as a measure of financial inclusion, the level of financial inclusion is very low in most of the countries. For example, looking at the Algeria, Bangladesh, and Ghana the level of financial inclusion is extremely low. Though, some countries like Costa Rica, Malaysia, and Turkey shows a high level of financial inclusion, but averagely it shows the level of deposit account per 1,000 adults in these countries is very low. This highlight the degree through which developing countries are left behind in terms of the access and uses of formal financial services.



**Figure 1.1 Number of deposit accounts with the commercial banks per 1,000 adults (2004-2010)**

Source: Author's calculation based G-20 financial inclusion indicators, World Bank (2015)

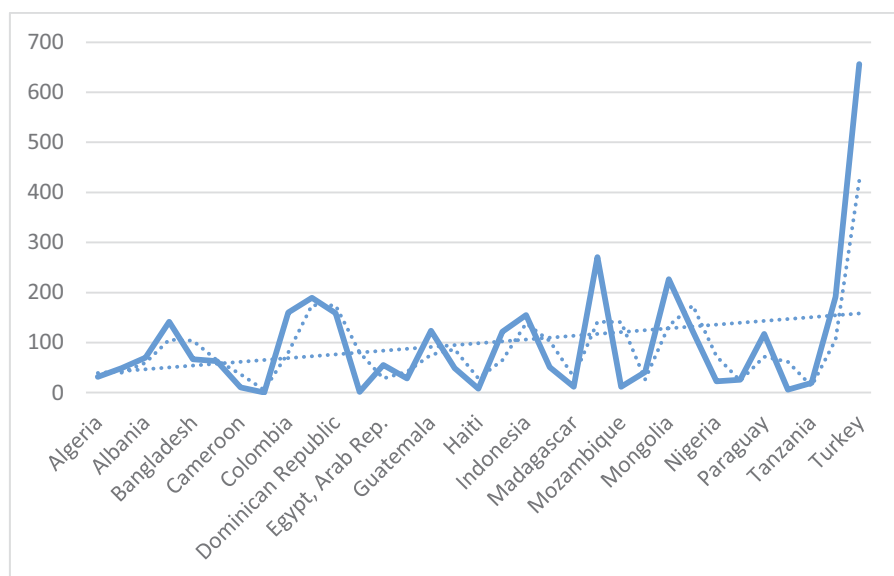
Based on figure 1.2 also, number of depositors with the commercial banks per 1,000 adults is used as an indicator of financial inclusion in developing countries. The trend also shows that, for most of the countries the level of financial inclusion is low. For example, countries like Congo, Ethiopia, Gabon, and Paraguay shows lower level of number of depositors with the commercial banks out of every 1,000 adults. Despite, the level of financial inclusion in some countries is a bit higher, but majority of the adults' population are left out in terms of using formal financial services as shown by the original data across the countries from 2004-2010.



**Figure 1.2 Number of depositors with the commercial banks per 1,000 adults (2004-2010)**

Source: Author's calculation based on G-20 financial inclusion indicators, World Bank (2015).

Inaccessibility of the required credits leads in failure to finance profitable businesses, resulted to misallocation of resources and negatively affects growth and poverty alleviation strategies. Stringent regulations, weak telecommunications system and dilapidated infrastructures hinder geographical expansion of bank branches (CGAP, 2009). Figure 1.3 shows the trend of borrowing from commercial banks out of every 1,000 adults in selected developing countries. The graph based on this indicator also shows that, borrowing behaviour from formal financial institutions is very low in developing countries. Though, some countries like Turkey, Malaysia, and Thailand exhibit high level of borrowing by the adult segment from the formal banks, but majority of the countries exhibit very poor level of borrowing among their adults' population. Hence, it shows that majority of the adult population are not borrowing from formal financial institutions due to numerous problems encountered that made some individuals and firms to rely on informal form of borrowings.



**Figure 1.3 Number of borrowers from commercial banks per 1,000 adults (2004-2010)**

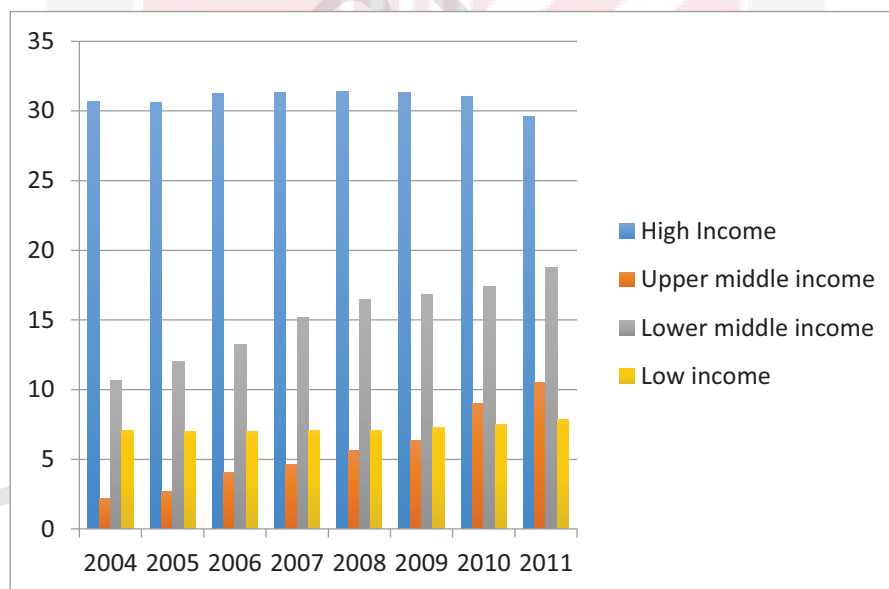
Source: Author's calculation based on G-20 financial inclusion indicators, World Bank (2015)

Available statistics from World Development Report (2014) shows that, 48% of the population in the high income countries saved in the formal financial institutions, and only 18% and 11% saved in the middle and low income countries respectively. The data also indicated that, 14% of the individuals saved using other methods in high income countries, 13% in middle income countries and 18% in low income countries, the percentage of people that do not save are 42%, 69% and 70% for high, middle, and low income countries respectively.

The level of financial exclusion is very high in Africa when compared to other developing countries from Asia, and Latin America. This is because the continent of Africa is far left behind in terms of infrastructure, good institutions, and other regulatory frameworks that encourage both economic agents and financial institutions to effectively deal with each party. Demircuc-Kunt and Klapper (2013) for example argues that, the rate of obtaining loans in Africa is high compared to global indices, 44% of adults in Africa borrowed money in the past 12 months compared to global indices of 34%, however there is a variation of borrowing in Africa as 58% of adults borrowed in East Africa compared to 34% in North Africa. Access to capital was found to have critical impacts for firm's growth as confirmed by various countries studies and randomized field experiments (Banerjee and Duflo, 2008; Mel et al. 2008). Not only access to credits matters, access to savings is also essential because it stimulates investment more specifically among women entrepreneurs (Dupas and Robinson, 2009).

Access to formal financial services is essential to both individuals, firms and economy at large because lack of credits leads to inefficiency of capital allocation and deepen income inequality by hindering the distribution of capital to poor segments that may have investment potentials that may generate maximum expected returns (Galor and Zeira, 1993; Aghion and Bolton, 1997; Galor and Moav, 2004; Beck et al. 2007; Lopez and Serven, 2009). For example, 39% of borrowing in Africa is from informal sector, in Central Africa for example, only 3% of the adults obtained a loan from formal financial institutions in the past year. South Africa is the country with high initiation of new loans from formal financial sector of 8% adults borrowed, adults in East Africa use store credit (13%) or to borrow from private informal lender (7%).

For example, Africa as the region with very low level of financial inclusion among the developing regions, the available statistics reveals that only 3% of adults have credit card in which adults in Southern Africa have the highest percentage of 7% (African Development Bank, 2013). ADB, (2013) also claimed that, globally 14% of account holders and 7% of adults receive remittances through their accounts. In Africa however, 41% of account holders receive remittances via their accounts. Receiving remittances from family members living abroad is more spread in Southern Africa and fragile states within Africa. In Somalia for example, 66% of account holders use their account to receive remittances, 55% in Zimbabwe, and 45% in Sierra Leone. Increase in the accessibility of loans and banking services to the populace such as savings accounts, small scale loans, and remittances can incorporate the higher percentage of financially excluded segment to have access to formal financial services (IMF, 2005).



**Figure 1.4 Number of commercial bank branches per 100,000 adults (2004-2011)**

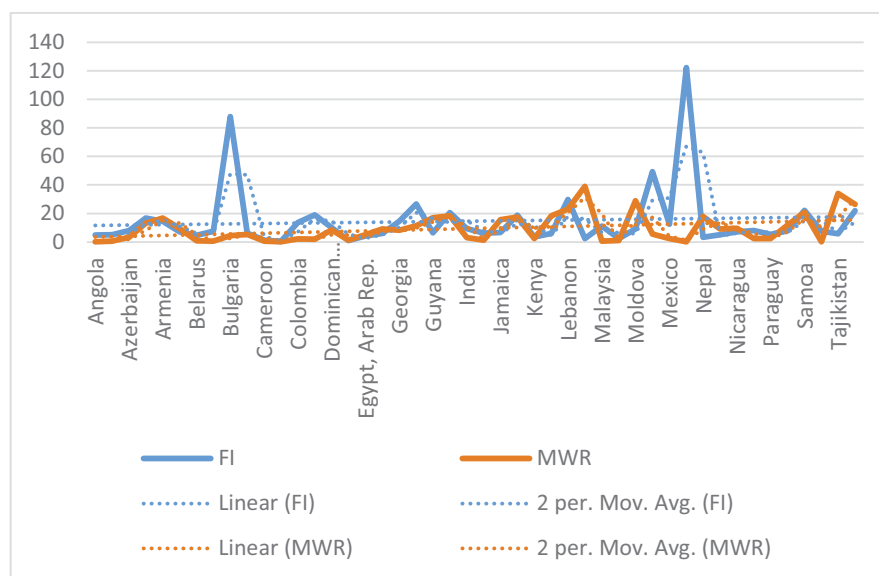
Source: Author's calculation based on G-20 financial inclusion, World Bank (2015)

Figure 1.4 below above highlights the dimension of financial inclusion as proxied by number of commercial bank branches per 100,000 adults among different income levels in the world. As expected high income countries are dominantly financially inclusive when compared with the other low income levels. But surprisingly, lower middle income has more bank branch networks than upper middle income, low income countries are the least financially included as a priori expected.

### **1.1.1 Financial inclusion and remittances**

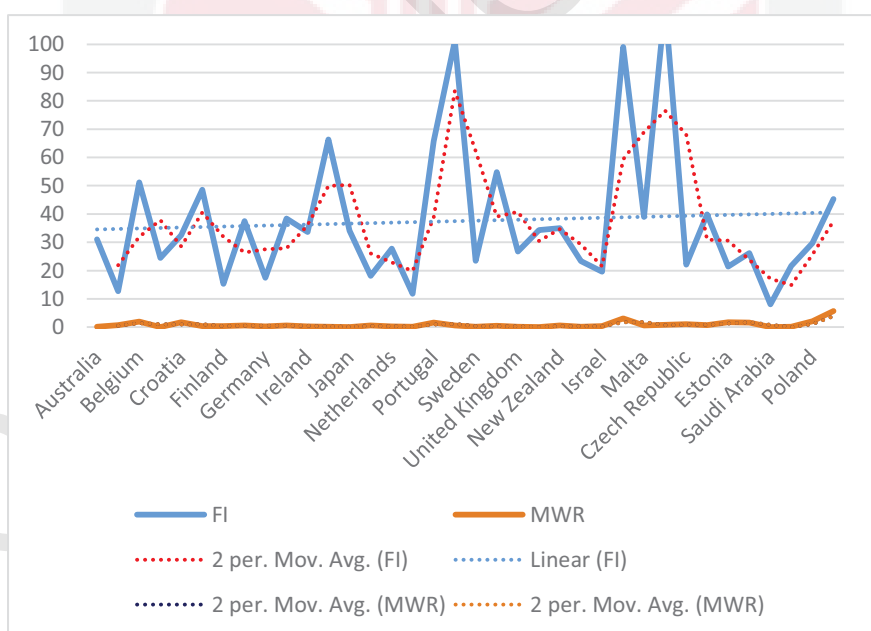
There are various factors that determines financial inclusion, migrant workers remittances that are sent to developing countries is among the factors that promote financial inclusion in developing countries, because the inflow may influence unbanked segment to be included into mainstream financial system as some transfers are through formal mediums. Remittances can enhance economic growth in developing countries by improving financial sector deepening more especially in the financially less developed economies (Giuliano and Ruiz-Arranz, 2009).

Aggarwal et al. (2006) reveals that migrants' financial remittances can lead to financial sector development in the less developed economies as it promote total volume of deposits and loans granted by the banking institutions. Figure 1.5 shows the trend of the relationship between migrant workers remittances and financial inclusion in developing countries. The trend shows that; in almost all the countries, increase in migrant workers remittances shows corresponding increase in the level of financial inclusion. This graph therefore shows the existence of positive relationship between the two key variables in most of the sample countries. However, in case of high income countries the relationship is found to be vague, because the significance of migrant workers remittances on financial inclusion in these countries is unimportant as indicated that their level of financial inclusion is high and migrant workers remittances shows a flat trend. This might be due to the fact that most of their labour force do not migrate for greener pastures in other countries, due to the stability of their economies.



**Figure 1.5 Migrant workers' remittances and financial inclusion in developing countries (2004-2010)**

Source: Author's calculation based on G-20 financial inclusion indicators and world development indicators (WDI), World Bank (2015)



**Figure 1.6 Migrant workers' remittances and financial inclusion in high income countries (2004-2010)**

Source: Author's calculation based on G-20 financial inclusion indicators and world development indicators (WDI), World Bank (2015)



### 1.1.2 Financial inclusion and financial stability

Financial system is stable when it is able to facilitate not hindering the economic performance, and also resolving the imbalances of the financial system that emanate within or due to antagonistic and unexpected actions (Schinasi, 2005). Stable financial system must be flexible to shocks and sustained capability of performing primary functions of financial intermediation in a real economy. Financial stability could also refers to a situation whereby financial system which comprises of financial intermediaries, markets and market structures are able to absorb shocks and separating financial disequilibrium, this will reduce the possibilities of interruptions in the financial intermediation procedure that may negatively affect the allocation of savings to viable investment ventures (European Central Bank, 2012). They went further to highlight three conditions for stable financial system which are;

- a) Financial system should be able to allocate resources from savers to investors appropriately
- b) The risks in the system should be reasonably and accurately priced and should be moderately managed
- c) Financial system should comfortably be able to absorb financial and real unexpected economic shocks.

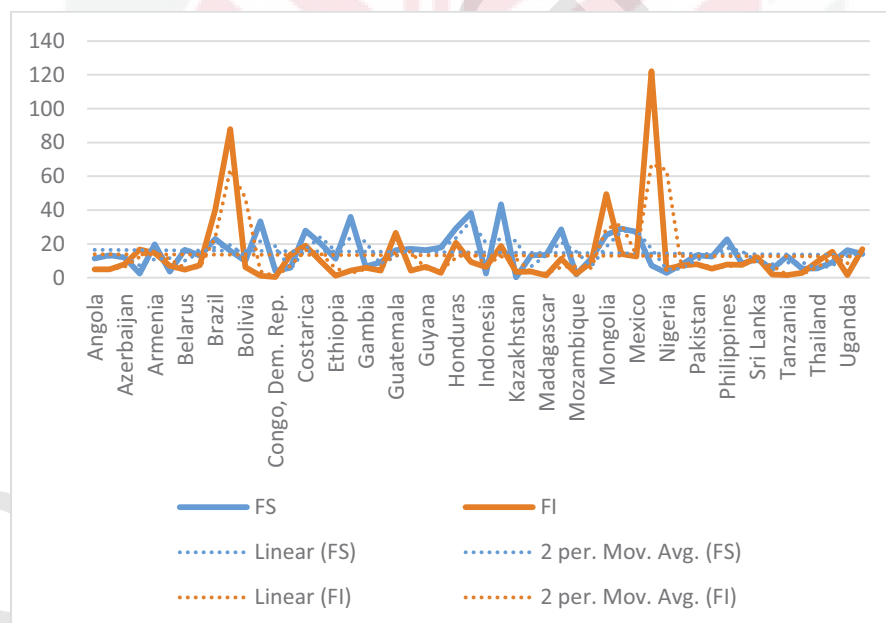
Financial system stability is therefore the ability of the financial system to resist any internal or external shocks, and also to perform its primary function of financial intermediation like arrangement of payments and proper risk management. Greater financial inclusion is a path of achieving high financial stability, this is because financial inclusion is a sub-set of financial development and without stability in the financial system it will be difficult to achieve financial development in an economy. Hannig and Jansen (2010), claimed that financial instability occurs when shocks to the system dramatically worsen information problems, so that financial intermediation between savings and productive investment opportunities breaks down. This definition is associated with one side of the coin, it is lopsided towards information asymmetry that transmits to financial instability through the vulnerability of the financial institutions' balance sheet. Shocks to the system can also directly worsen the balance sheet and currency stability to engender financial instability.

Financial instability maybe caused by information asymmetry, i.e. unequal sharing of information between the financial institutions and customers that may result to adverse selection and moral hazard problems as propose by Mishkin (1991). Despite the policy objectives of most central banks and global financial regulators in improving access to formal financial services to the less privileged and poor in the society, prudential guidelines and proper monitoring to ensure the balance between financial inclusion and financial stability is paramount, and to ensure that the objectives to provide higher access to financial services are not risks or fraud related (Khan, 2011). Including more segments and neglecting the consequences of the problems that may arise might affect the entire financial system and throw it into instability. Greater financial inclusion can enhance the effectiveness and stability of transferring savings to investment and as such there will be more savings deposits in the banking sector, as a result the



economy's banking system will not rely more on foreign capital and its stability will remain firm and strong.

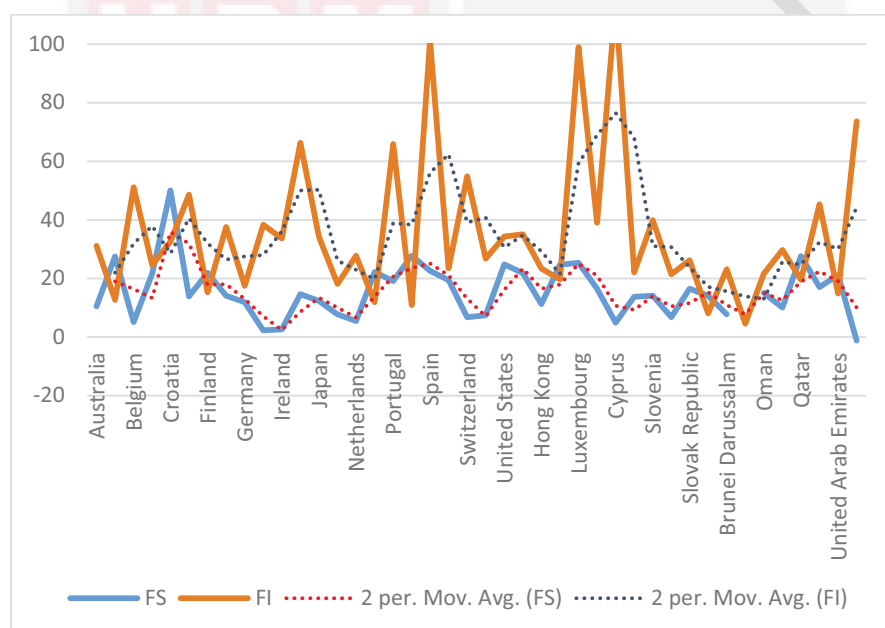
Sound and stable financial system is the one that provide easy flow of loanable funds to both firms and individuals at reasonable time and affordable costs. Exclusion of various firms (more especially SMEs) and individuals from accessing formal financial credits jeopardizes the economy as it result in destroying various business ideas and increase the level of hunger, poverty and unemployment. This point is buttressed by the study of Karlan and Zinman (2010), in which they used consumer finance in South Africa and found significant and positive relationship between access to finance and consumption, economic freedom as well as mental health and attitude. This highlights the positive influence of getting formal credits on the improvement of the economy as formal credits if efficiently utilized will definitely boost the economic activities and hence lead to greater financial development and economic growth. Financial inclusion influenced the liquidity of the banking sector and therefore improves investment opportunities because there are adequate available loanable funds to borrow from financial institutions since large portion of the population were able to formally save. The relationship between financial inclusion and financial stability in developing countries is positive as shown in figures 1.7;



**Figure 1.7 Financial inclusion and financial stability in developing countries (2004-2010)**

Source: Author's calculation based on G-20 financial inclusion indicators and world development indicators (WDI), World Bank (2015)

Although, the changes might not be of equal magnitude for all the countries, but on the average it shows that an increase in the level of access and uses of formal financial services stimulates the level of financial stability in the sample countries. Therefore, the nexus between financial inclusion and financial stability is positive among the sample countries. However, comparing this relationship with what is obtained in the high income countries it shows a different result. The trend shows that, increase in having access and uses of formal financial services in high income countries, reduces the level of financial stability among high income countries. The level of financial stability increases but at a decreasing rate for the average of the countries in the sample. Hence, the nexus between the two key variables is negative among high income countries as indicated by figure 1.8.



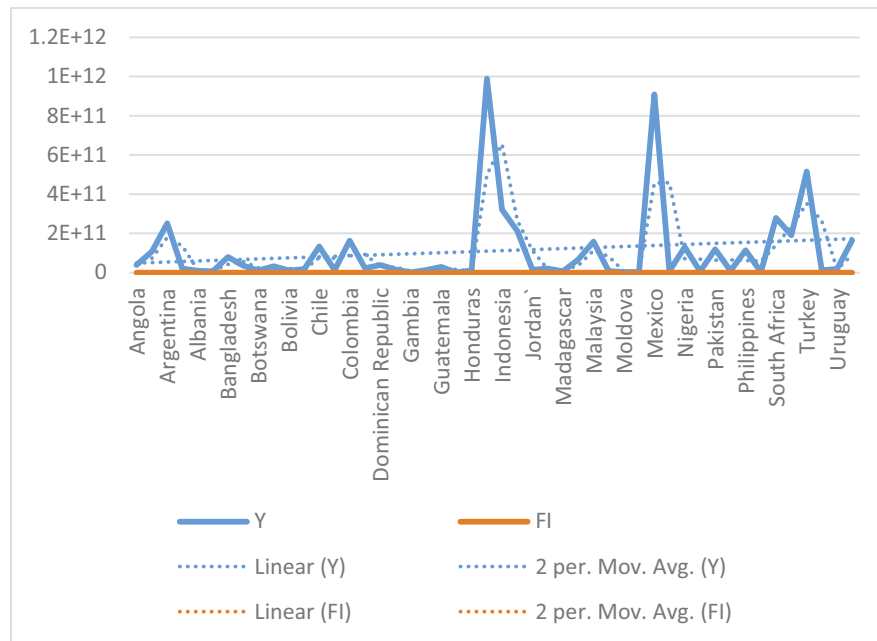
**Figure 1.8 Financial inclusion and financial stability in high income countries (2004-2010)**

Source: Author's calculation based on G-20 financial inclusion indicators and world development indicators (WDI), World Bank (2015)

### 1.1.3 Financial inclusion and economic growth

Access to formal financial services is believed to improve banking liquidity which increases investable funds and ultimately make more loanable funds available for both individuals and firms. Efficient financial sector is a prerequisite condition for achieving sustainable economic growth. Accessing financial services regularly with ease will stimulate savings, accelerate investments, increase in the reduction of poverty and achieve high and sustainable growth by promoting social cohesion in the society. Lack of access to finance negatively affects growth and poverty reduction, thereby

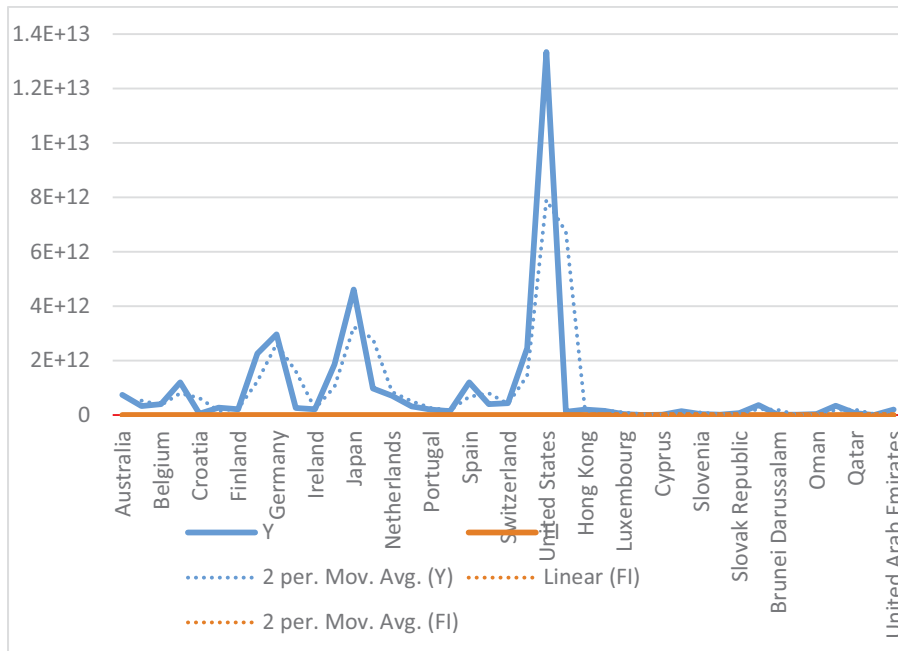
make it difficult for the poor people to mobilise savings in a formal way and hard to get access to formal loans, and the informal means of savings and loans charged them exorbitantly (Lammermann, 2010). Conroy (2005) argues that more access to formal financial services is expected to promote the efficiency and equity of the economy.



**Figure 1.9 Financial inclusion and economic growth in developing countries (2004-2010)**

Source: Author's calculation based on G-20 financial inclusion indicators and world development indicators (WDI), World Bank (2015).

Figure 1.9 depicted the relationship between economic growth and financial inclusion across developing countries, the trend shows that there is no any significant relationship between increase in having access and uses of formal financial services and economic performance in the sample developing countries. Furthermore, same relationship also exist in the case of high income countries as exhibited in figure 1.10.



**Figure 1.10 Financial inclusion and economic growth in high income countries (2004-2010)**

Source: Author's calculation based on G-20 financial inclusion indicators and world development indicators (WDI), World Bank (2015)

## 1.2 Statement of the Research Problem

Existing empirical studies documented that the links between financial inclusion and economic growth is strongly positive which gave policy makers and global financial institutions the zeal to consider the concept and treat it as a global financial agenda. The level of financial exclusion is much higher in developing countries than developed countries; it creates serious problems of macroeconomic shocks of poverty, widening income inequality, unemployment, hunger, and other socio-economic vices. Without having access to formal financial services both individuals and firms are denied the privilege of using formal savings, loans, deposits, insurance and payments. The vulnerable segment or poor are mostly financially excluded because they cannot afford to open and maintain accounts in the formal banks in some instances even if there is availability of bank branches in their locality.

Some of the factors that influence financial inclusion among others include; high transaction costs, lack of bank branches in some geographical locations, low income, poor infrastructures, and lack of collateral are among the factors that lead to exclusion of individuals. However, for SMEs information asymmetry, lacks of collateral and credit history impede them from accessing formal financial loans or operating formal account with the mainstream financial sector. Number of savings accounts in the world is more than the world population (CGAP Report, 2009), but still half of the global adult's population (2.5 billion people) do not have access to formal financial services.

For example, the rate of savings account uses in high income countries is 48%, it is 18% in middle income countries, while it is only 12% in low income countries (World Development Report, 2014). It is evident that 62% of the 2.5 billion unbanked adults are living in developing countries, and even among the banked population in developing countries more than 800 million are living on less than \$2 per day (Chaia et al. 2009).

Financial inflows sent by the migrant workers to their home countries may likely influence the recipients to open an account and deposit the funds in the formal financial institutions. The relatives and family of the migrant worker may not be financially included, due to probably limited income, poverty, and poor infrastructures that may hinder accessibility to formal financial products. Inflow of remittances into developing countries is presumed to increase financial inclusion because the beneficiaries are expected to deposit or save the funds in the mainstream financial sector, hence increase the level of financial inclusion due to the inflow of remittances into the recipient economies.

The inflow of remittances into developing countries could play a key role in reducing financial exclusion in the developing economies, but some remittances are not invested into the real economic sector because of poverty and insufficient income in most developing countries. The funds are instead used for consumption and acquiring other assets, therefore the financial resources received may not contribute to economic growth and hence do not play its deserving roles to include the excluded segments into formal financial system. Despite the desire to include more people into formal financial system, the costs and risks associated with it cannot be ignored, any shock into the system which will increase information asymmetry that affect financial intermediation between savings and viable investment to collapse is detriment to the financial sector as it will endanger the overall economy (Hannig and Jansen, 2010). Achieving inclusive financial system will be difficult without stability in the financial system, whereas it is challenging to attain financial stability, while large segment of the population are financially underserved (Khan, 2011), without achieving high level of financial inclusion, financial stability could still be an illusion.

Achieving higher level of financial inclusion without proper monitoring and supervision from financial institutions and regulators could weaken financial system stability and may lead to financial crisis. Greater financial inclusion may poses serious risks to the financial system because when low-income group were integrated into the mainstream financial system the likelihood of default maybe higher, as the market is highly composed of large number of vulnerable customers with insufficient balances and little volume of transactions which have a serious consequences on the banking liquidity. Countries with high level of financial exclusion are exposes to threat on financial instability, as both individual and firms will rely on informal sector for their financial dealings and informal sector can impose more risks considering its high level of uncertainty.

Financial inclusion is expected to improve the level of economic performance in both developed and developing countries, this is related to its functions of improving banking liquidity which in the long-run influences the overall economic growth because more funds are available for initiating new and expanding existing investments. Contrary to the general believe, sometimes financial inclusion do not enhance economic growth for both developed and developing countries, and the contribution may sometimes become very mild or ambiguous. Lack of access to finance negatively affects growth and poverty reduction thereby make it difficult for the poor people to mobilise savings in a formal way and hard to get access to formal loans, and the informal means of savings and loans charged them exorbitantly (Lammermann, 2010).

### **1.3 Research Questions**

The research questions that objectives of this study will answer give an insight of what will be the aims and objectives of the research and highlight the ideas that the study is trying to find out. The research questions were as follows;

- a) Do migrant workers' remittances have any effects on financial inclusion in developing countries?
- b) Does stable financial system creates more inclusive financial system in developing countries?
- c) What will be the impacts of financial inclusion on economic growth in developing countries?

### **1.4 General and specific objectives of the study**

The main objective of the study is to assess the impacts of financial inclusion in sustaining financial stability and economic growth in developing countries. While, the specific objectives were as follows;

- a) To examine the effect of migrant workers' remittances on financial inclusion in developing countries
- b) To examine the effect of financial inclusion on financial stability in developing countries
- c) To investigate the impact of financial inclusion on economic growth in developing countries

### **1.5 Scope and limitations of the study**

This research will cover only selected developing countries based on reliable data availability and suitability of the countries in relation to the issue needed to be addressed. One of the justifications for selecting developing countries is because, most of the countries have low level of financial inclusion, and hence the level of financial exclusion remain very high. As mentioned in various literatures majority of adults in



Asia, Africa and some parts of Europe and Latin America are unbanked, this make them vulnerable to unequal distribution of income and unemployment which leads to increase in the level of poverty in developing countries. The main limitation of the study is that it will only focus on the countries with available and reliable data in developing countries thereby make it impossible to cover other countries with no available data, as well as the variables whose data is insufficient or is lacking entirely.

## **1.6 Significance of the study**

This study will numerously add to the existing literatures through different ways; the first contribution of this research is that, most of the studies on financial inclusion used household survey data (micro), this study will used aggregate countries data (macro) to show the impact of financial inclusion in developing countries. Also, on the relationship between financial inclusion and remittances, very few researchers focus on cross-country study presently on the effects of remittances on financial inclusion. For instance, recently Anzoategui et al. (2014), study the impacts of remittances on financial inclusion in El-Salvador using household survey data. This study will fill the literature gap by using secondary data across numerous developing countries. Secondary data have some advantages over primary data sources which includes; time saving, low cost, easy access, answer targeted problem/issue, and provide bases for comparison among others. Secondly, there is little empirical evidence that document the relationship between financial inclusion and financial system stability in wide range of developing countries, as most of the evidences are based on single country study. For example Khan (2011), discussed about the relationship but restricted it on India alone. While, Han and Melecky (2013) used access to deposit as an indicator of financial inclusion, and linked their study with the recent global financial crisis, this study extend its scope and examined the issue in pre, during and post financial crisis. It also adopts number of branches per 100,000 adults to reflect financial inclusion based on the new data set (G-20 financial inclusion indicators Database, World Bank). Also, Morgan and Pontines (2014) based their study on small and medium enterprises lending only, the present study encompass overall financial inclusion in relation to financial stability.

Thirdly, still little studies were conducted on the links between financial inclusion and economic growth in the literature, as most of the studies in this angle are mainly about financial development and economic growth. Therefore this study will add to the existing literatures the roles that access and uses of formal financial services plays on economic growth of the countries under investigation. The present study also used a new dataset for the financial inclusion variable i.e. G-20 financial inclusion indicators, World Bank which is not highly utilised in the literature because of its newness.

From the policy perspectives, the study will be of great importance to policy makers, firms and financial institutions in developing countries and the wider world. Previous attention on financial inclusion from both policy and academic circle targeted at extending institutional credits at the detriment of providing savings, despite the indication of more savings demand by the poor segment (Basu, 2005; Dev, 2006; Mohan, 2006). Therefore this research finding will be a yardstick to various

governments in developing economies to realize the consequences of excluding large segments of the supposed bankable population, which if financially included would improve the deposits, savings, payments and credits in the respective countries' financial sectors.

This research outcome will be used by developing countries to combat the excessive poverty that emancipated their countries as enshrined by the global development institutions as an excellent strategy to reduce poverty by using efficient market based solution of incorporating the excluded segment into formal financial services. Simeon et al. (2008) conducted a study on households in Mexico and found that, reduction in financial exclusion is essential for economic advancement, they claimed that households that possess bank account derive higher degree of consumption, owned higher assets and have more potential to reach high school educational level. In most transition economies, the possibility of holding a bank account or bank card is positively correlated with income, education, and affluent (Beck et al. 2010).



Furthermore, applying different panel data techniques may probably provide different information on these relationships, thus also recommended for future studies.



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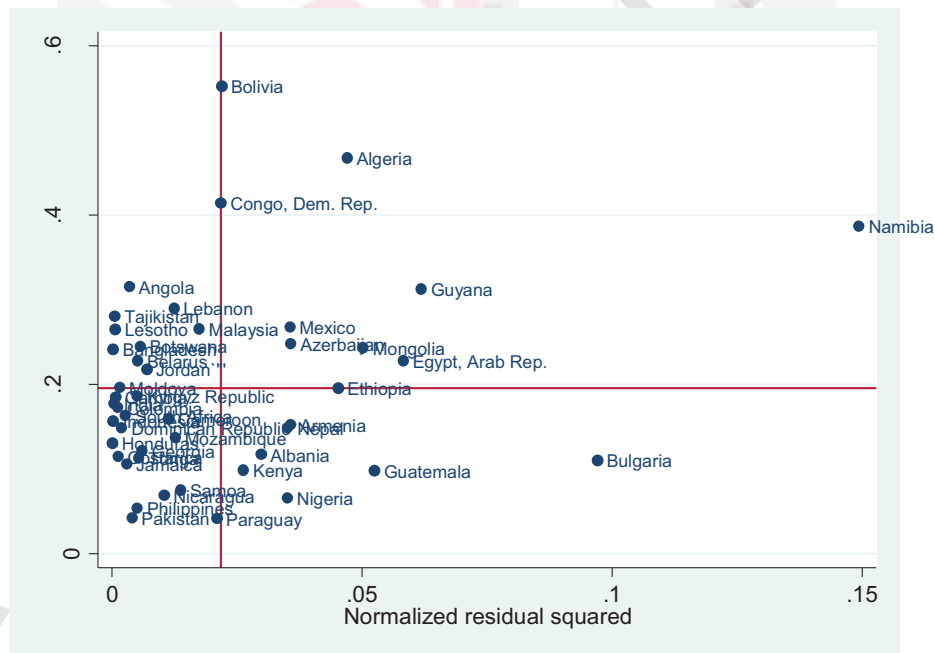
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## APPENDICES

### Appendix I: Outlier test result for objective one



S/N	Country	d1
2	Algeria	0.3196487
10	Bolivia	0.2483298
12	Congo Dem. Rep.	0.1082137
17	Egypt, Arab Rep.	0.0918038
21	Guyana	0.1683887
34	Mongolia	0.0879721
36	Namibia	0.6320801