

# U U O U O

## 1. BACKGROUND

### 1.1 Introduction

A large body of literature has examined the importance of financial liberalisation in ameliorating government intervention (coined as financial repression) in money and credit markets. They argued that financial repression has led to inefficient allocation of resources, increased the segmentation and fragmentation of financial markets, reduce the availability of loanable funds, constrained investments and stagnations in the economy. (Denizer et al 1998)

These issues have taken force following the seminal work of McKinnon Shaw (1973) who provide the basis for analysing financial sector development and policy implication in economic development. They propose the importance of interest rate liberalisation and the elimination of all forms of financial repression in order to enhance economic growth.

### 1.2 Aims and rationale for review

Financial liberalisation theorem postulates the important role of financial sector development as a necessary tool to support economic growth. This is due to its role in transforming deposits by making them available to lending agents with investment needs, increasing the volume of savings by discouraging firms to invest in low yielding projects hence improving the efficiency of investment and also increasing the rate of return on money which in turn increases the quality and quantity of investment. (Acemogul and Zllibotti, 1997; Serven, 2002)

Many countries have witnessed huge strides towards reforming their financial system (see Figure 1 below) as part of their growth promoting policies which were propagated by the World Bank and IMF, this ustr-4(y t)4(ca)9(n)-4(8 TmBme (g)-2(t)77 Tm[wTJdd(t)5(h)-4(er)7()-3( exacerbated excessive risk taking (Kaminsky and Schmukler, 2003; Demirguc-Kunt and Detragiache, 1999)

The deepening of the financial sector facilitated the integration with the global financial markets, leading to a more equitable and efficient allocation of resources (Galindo et al, 2007; Chari and Henry, 2008; Abiad et al 2008). It also led to output volatility, instability

#### 1.3 Contribution of the study

Majority of primary studies that have analysed the relationship between financial development and economic growth (Beck and Levine, 2004; Chang and Caudill, 2005; Ang, 2008; Yu et al 2012). These studies have shortcomings in that they cover only a small fraction of the available studies, they are based on the subjectivity of the researcher, their results are inconclusive and ambiguous, their exist a wide variation in effect sizes. Furthermore, their estimated effects are limited to estimation characteristics, proxy measures used, countries included or span of data in the estimation. This study differs from the above narrative reviews by conducting exhaustive search using explicitly stated criteria in an attempt to include all studies and enable replicability. (Carney and Geddes, 2002) Furthermore by employing Multivariate Meta Regression analysis which uses moderator variables to control for various specification and estimation characteristics, it allows the segregation of the role of other control variables and theoretical methodological issues to explain a wide variation in effect sizes found in primary studies.

On reviewing the literature, two studies have been found to systematically review the impact of financial development on economic growth. Bumann et al (2012) and Valickova et al (2013). Bumann, et al (2012) conducted meta-analysis on the effect of financial development on economic growth on a group of developed, developing and a mixture of developed and developing countries. By using the t statistics of 60 studies they found that on average there is a positive effect of financial development on growth however the significance of the effect is weak. The grouped studies showed that results do not differ across different countries, moreover the combination of measures used to measure financial development and types of countries do not find significant results. They also find that financial liberalisation measures have been more effective before

Valickova et al (2013) on the other hand, looked at most of the countries in the world by grouping them as South Asia, Asia, Europe, Latin America, MENA, Sub Saharan Africa and the rest of the world including most of OECD countries. They retrieved 1334 estimates from 67 studies finding a wide estimate variation on individual studies but overall a positive and statistically significant effect. They found that differences in result are the outcome of both research design and heterogeneity in underlying effect. Furthermore studies that do not take account of endogeneity on average exaggerate the effects of financial development on growth. Also in less developed countries effects are weaker than developing countries while studies utilising stock market variables are associated with a larger positive effect on economic growth. They further concur with Bumann et al (2012) in that the effect of financial development on growth dedines after 1980.

The study described in this protocol is believed to depart and contribute to existing literature in various ways:

Firstly, the thesis will focus on developing countries encompassing only Sub Saharan Africa in order to explicitly analyse countries in similar stage of development, unlike Bumann et al (2012) who have grouped the countries from developed and developing but have lumped the developing countries all together. This is in respect to Deidda and Fattouh (2002); De Gregorio and Guidoth, 1995; Rousseau and Watchel (2011) and Yu et al, (2012) who report different growth effect on the level of financial development across different countries. Sub Saharan Africa is more bank based unlike other developing countries which are more market based. ( ) Thus by confining the study to Sub Saharan Africa we will be in a position to see more clearly the effect of financial development on economic growth as they are a relatively homogeneous set of countries with adequate controls for country wide differences in economic, social and institutional characteristics.

Secondly, unlike Valickova et al (2013) who only analysed published studies which have been peer-reviewed, we will analyse both published and unpublished studies. Using only published studies as explained by Sterne et al (2000) and Thornton and Lee (2000) will cause a biased summary effect leading to a biased conclusion about the relationship between financial development and economic growth

Thirdly, this review will strive to be systematic and explicit in all steps undertaken in the discovery of studies, quality appraisal, analysis and justification thereof, unlike Bumann et al (2012) and Valickova et al (2013) who have not thoroughly explained and detailed the to enable independent validation, how the studies were assessed in terms of quality and methodological issues, this can lead to methodological flaw which can eventually bias the conclusion. (Mulrow, 1987)

financial development through indicators of commercial banking and stock market growth as they are readily available in contrast to other indicators of financial development which are less common in the literature and consequently are likely to be supported by a limited number of studies.

#### 2.2.1 Commercial Banks

Proxy indicators of financial development include changes in the commercial banking sector; these can be operationalized as the financial depth, bank ratio and financial activity. Financial depth as measured by the money supply M1, M2 and M3. These measure the size of the financial sector. M3 the broader aggregate money supply which is less liquid in comparison to other aggregates (Favara, 2003; Deidda and Fattouh, 2002) M3 is preferred to M2 in economies where money is mostly used as a store of value. (Yu et al, 2012) Khan and Senhadji (2003) argue that countries with underdeveloped financial systems should not use M2 as a proxy to financial development as high level of monetisation might be associated with underdevelopment. Some authors prefer to use the difference between M3 and M1 to GDP to counteract the pure transactional aspects of narrow monetary aggregates. (Yilmazkuday 2011 and Rousseau and Wachtel, 2002) The measures of financial depth have shortcomings in a sense that they are purely quantitative and fail to reflect the quality of financial services. Furthermore, they may include deposits of other financial intermediaries which raise issues of double counting (Levine 1997)

Another proxy used to measure financial development is bank ratio, defined as the ratio of bank credit to the total of bank credit and domestic assets of the central bank. This ratio shows how credit enhances the allocation of resources to the economy. Levine (1997) notes the weaknesses with this measure; first it does not take into account other institutions which perform this financial function. Secondly, it does not stipulate the beneficiaries of credit allocated, thirdly, it does not gauge how efficient bank performs. Another measure is the ratio of commercial bank assets to the sum of commercial bank and central bank assets

# LOGIC MODEL TO ANALYSE THE IMPACT OF FINANCIAL DEVELOPMENT

## **ON ECONOMIC GROWTH**

| PU |
|----|
|----|

M2, M3

activity

ratio

- Stock

market

activity

ratio

OU PU inan ial ystems tivities ntervention inan ial inan ial inan ial nstitutions nterme iation i eralisation -Allocating -Interest rate -Financial capital liberalisation & depth ie M1, -Risk removal of credit amelioration constraints. - Bank Ratio -Mobilising -Privatisation - Financial funds -Reducing -Acquiring & government disseminating intervention. information - Capital a/c -Ease the liberalisation inan ial exchange of arkets goods & a roe onomi services un amentals - Stock market -Monitor Inflation control capitalisation investm.86 2084. -Structural reforms -Financial stability -Fiscal, monetary -Turnover & exchange rate policy nstitutional re orms -Regulation & reform

> -Contract enforcement -Corporate governance -Business environment

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The second step will be to refine the first step as we will encounter many papers that might not meet the selection criteria, to accomplish this more detailed look at the text of full papers will take place.

Thirdly, once more relevant papers have been sifted through; detailed categorisation will be used to identify specific characteristics of studies at hand. Data and information will be extracted on study characteristics, estimation methods, published versus unpublished, country regions, journal quality etc. All data extracted will be stored electronically on EPPI Reviewer 4 (Thomas et al 2010) and meta-analysis will be conducted using Stata 14 (StataCorp, 2015). The overall search and screening process will be illustrated in a flow diagram.

3.2.2 Assessment of Methodological robustness/Quality of included Studies To assess the methodological quality, studies will be analysed during the Meta regression stage. Stanley et al, (2008) insists the use of all studies available as they are useful in identifying specific research dimensions among a wide variation in independent variables in research methods, models and data. Thus this study will be as comprehensive and inclusive as possible by including all studies. To ascertain the effects of quality on meta-analysis results, study quality will be coded and included as moderator variable. Various measures of quality assessment will be used. Firstly, each estimates precision will be used as a proxy for quality. This is calculated as the inverse of the estimates standard error. According to Stanley and Doucouliagos (2012) studies estimate precision is statistically more robust than other forms of quality as they are not subjective.

Also impact factor of journal of where the study was published will be used, these will be retrieved from Social Science Otation Index (SSO). A higher weight will be assigned to journals with a larger impact factor. Furthermore, the number of citations each study has received as reported in SSO or SCOPUS will be used to determine quality.

By coding and quantifying these dimensions of quality in Multiple MRA, the study will be able to ascertain the effect of quality on reported estimates.

3.2.3 Database selection

Both published and unpublished studies will be used in our analysis. To retrieve the published studies, various databases will be used including:

Econlit

Journal of Finance Journal of Financial Economics Review of Economics and Statistics Journal of International Money and Finance Journal of Development Studies Journal of Development Economics African Journals Online JSC Journal Archives

World Bank Economic Review.

Furthermore manual searches will be used to complement studies that will not be picked through electronic searches and also to generate grey literature and unpublished studies such as:

Business and Dissertation Abstracts Inter-American Development British library for Development Studies DEReC (Development Assistance Committee Evaluation Resource Centre) FRANCIS (Humanities and Social Sciences Studies)

The Chitest has short comings in that it is widely known to have poor/low power

estimates from individual studies on horizontal axis against their precision on

hand is that it is not an economic measure and also it does not follow a normal distribution which causes an asymmetry on its own values. To counter this problem

## $Z = \frac{1}{2} \ln (1 + r/1 - r)$

This transformation rectifies the standard errors of r

The t-statistic is similar to PCC in a sense that it can be comparable across estimates and also it can be calculated to estimates that have a significant level. The drawback for a t-statistic is that it is not an economic measure, it is difficult to interpret and as it is a predictable statistical power it requires to be controlled.

## 3.7 Information on the Study Team

The study team consists of Anande Semwenda, who will lead the project while Dr Denise Hawkes and Dr Dylan Kneale will oversee the project. Mrs Semwenda has a background in finance and economic development. She has experience with econometric analyses having done other projects on similar context and hence has developed expertise and knowledge on the literature. She will be responsible with the overall project from content and writing of the study, systematic review, information retrieval and meta-analysis.

Dr Denise Hawkes, a programme leader Doctor in education at UCL Institute of Education have held research grants with ESRC and National UK Government Departments, and have published in a range of journals in applied economics and social policy including: the American Economic Review, Journal of Royal Statistical Society Series A and the Journal of Social Policy

Dr Dylan Kneale is a research officer at the Evidence for Policy and Practice Information Co-ordinating Centre (EPPI-Centre) in the Institute of Education. He has previously worked as Head of Policy and Research at the charity Relate, and Head of Research at the ageing think-tank ILC-UK, and Head of Research at the ageing think-tank ILC-UK.

The review team will be led by Anande Semwenda who will ensure that the review is completed in accordance with the procedures laid down in the protocol, working with MAER-Net to respond to comments on the protocol and draft review.

# MILESTONE OF THE REVIEW PROCESS

| PROJECT ACTIVITY          | START DATE | END DATE |
|---------------------------|------------|----------|
| Submission of the draft   | 09/07/15   | 20/07/15 |
| Protocol                  |            |          |
| Review of Protocol        | 22/07/15   | 31/07/15 |
| Final Protocol            | 03/08/15   | 10/08/15 |
| Literature Search         | 12/08/15   | 30/10/15 |
| Uploading of studies on   | 03/11/15   | 15/12/15 |
| EPPI Reviewer             |            |          |
| Screening of studies      | 15/01/16   | 30/03/16 |
| Data Extraction           | 05/04/16   | 20/05/16 |
| Meta-Analysis and Finding | 23/05/16   | 08/09/16 |
| Writing and Submission of | 20/09/16   | 20/03/17 |
| final Report              |            |          |

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