Financial development in Africa - a critical examination

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Note if anything has been removed from thesis: This doctorate was awarded on the basis of published work. The papers constituting the major part of the thesis have been removed but are listed in section 1.2.

FINANCIAL DEVELOPMENT IN AFRICA - A CRITICAL EXAMINATION

By

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This work is submitted in partial fulfilment of the requirements of Oxford Brookes University for the Degree of Doctor of Philosophy on the basis of published work. Unless otherwise stated, this work is that of the author and has not been submitted in whole or in part for an award at any other University.

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Abstract

The thesis summarises eight published articles for my doctoral degree research project. Individually the published articles coherently present a critical examination of financial development in Africa.

Three main shortcomings in the literature have motivated the project: limited studies on stock market development in spite of the need for more sources of long-term finance; the absence of literature that engages the exposure of financial systems in Africa to recent global crises and a mainstream definition of the financial system that is not relevant to the continent because it fails to incorporate the informal financial sector.

The highlighted gaps are addressed in three main themes. The main results of the first theme are twofold. Political, economic and institutional governance can play a positive role in the performance of African stock markets. There is urgent need for the improvement of cross-country characteristics that enhance convergence for the performance of stock markets.

Findings of the second theme are as follows. There is absence of convergence among member states of the CFA franc zones. Limited financial dynamics can be used in monetary policy to exert deflationary pressures in periods of soaring consumer prices. There is very moderate evidence supporting the hypothesis of thresholds in financial development for financial globalisation benefits.

A new definition of the financial system in the third theme has also led to some interesting results. Liberalisation policies have broadly promoted the informal financial sector to the detriment of the formal sector. An example of such liberalisation is the information and communication technology sector, which has led to mobile phone penetration being positively (negatively) correlated with the informal (formal) financial sector. In another example, not all financial intermediary channels are pro-poor for the effectiveness of liberalisation policies in enhancing investment for inequality mitigation. Policy implications, research limitations and future research directions are discussed.

List of Abbreviations

2SLS: Two Stage Least Squares
ADI: African Development Indicators
CEMAC: Central African Economic and Monetary Community
CFA: French African Colonies
EAMZ: East African Monetary Zone
ECOWAS: Economic Community of West African States
EMU: European Monetary Union
FAO: Food and Agricultural Organisation
FDI: Foreign Direct Investment
FDSD: Financial Development and Structure Database
GMM: Generalised Method of Moments
HAC: Heteroscedasticity and Autocorrelation Consistent
ICT: Information and Communication Technology
IFS: International Financial Statistics
IMF: International Monetary Fund
KE: Knowledge Economy
MENA: Middle East and North Africa
OBU: Oxford Brookes University
OLS: Ordinary Least Squares
SME: Small and Medium Sized Enterprise
SSA: Sub-Saharan Africa
PCA: Principal Component Analysis
RESET: Regression Equation Specification Error Test
UEMOA: West African Economic and Monetary Community
WAMZ: West African Monetary Zone

Contents

Chapter 1: Introduction

1.1 Overview

This thesis is a portfolio of eight papers written between 2009 and 2013 and published between 2012 and 2014. It is the outcome of a 5 year full time research activity. This introductory chapter provides a list of the published articles, discusses the context of the published works, engages existing literature, identifies gaps in the engaged literature, discusses how the thesis proposes to address identified gaps, presents the contribution of the thesis to knowledge and provides a statement on the coherence of the published works.

1.2 List of Published Works

The following constitute the portfolio of submitted published works.

Paper 1. Asongu, S. A., (2012). "Government quality determinants of stock market performance in African countries", *Journal of African Business*, 13(3), pp. 183-199.

Paper 2. Asongu, S. A., (2013a). "African Stock Market Performance Dynamics: A Multidimensional Convergence Assessment", *Journal of African Business*, 14(3), pp. 186-201.

Paper 3. Asongu, S. A., (2013b). "Real and Monetary Policy Convergence: EMU Crisis to the CFA Zone". *Journal of Financial Economic Policy*, 5(1), pp. 20-38.

Paper 4. Asongu, S. A., (2013c). "Fighting consumer price inflation in Africa. What do dynamics in money, credit, efficiency and size tell us?" *Journal of Financial Economic Policy*, 5(1), pp. 39-60.

Paper 5. Asongu, S. A., (2014a). "Financial development dynamic thresholds of financial globalization: evidence from Africa*", Journal of Economic Studies*, 41(2), pp. 166-195.

Paper 6. Asongu, S. A., (2014b). "Liberalization and financial sector competition: a critical contribution to the empirics with an African assessment", *South African Journal of Economics*. http://onlinelibrary.wiley.com/doi/10.1111/saje.12048/abstract

Paper 7. Asongu, S. A., (2013d). "How has mobile phone penetration stimulated financial development in Africa?" *Journal of African Business*, 14(1), pp. 7-18.

Paper 8. Asongu, S. A., (2013e). "Investment and Inequality in Africa: which financial channels are good for the poor?" *African Finance Journal*, 15(2), pp. 44-66.

1.3 Context of Published Works

The world is increasingly looking to Africa as an important contributor to global growth (Ife-Oluwa & Samantha, 2013, p.10; Young, 2012). But in order to ensure greater economic prosperity, long-term financial solutions are needed for the continent's growing investment needs (Allen et al., 2011, pp. 79-80). Accordingly, concerns of finance for small and medium-sized enterprises (SMEs) have dominated discussions in policy circles (Biekpe, 2004, p.29; Quartey, 2003, p.37). With positive signs that regional integration and enhanced convergence in financial markets are steps in the right direction (Allen et al., 2011, pp. 81), governments of the continent have been adopting more market-oriented policies and developing infrastructure in financial markets to attract finance for private and public sectors (Gray & Bythewood, 2001, p.65). Yet, African financial markets have not received adequate scholarly focus because of poor institutions and a riskier business environment (Alagidede, 2008, p.26). In light of the above, two concerns boldly standout: the role of government in facilitating stock market development and the need for greater market convergence. The highlighted issues are tackled in the first-two articles of this critical appraisal (Asongu, 2012, 2013a).

Another important concern is exposure to globalisation (Allen & Giovannetti, 2011, p.1; Senbet, 2009). Hence, assessing how liberalisation and recent global economic shocks have affected African financial systems are interesting policy concerns. Challenges of the recent EMU crisis to African monetary unions and policy issues of addressing the 2008 food crisis are tackled in the third (Asongu, 2013b) and fourth (Asongu, 2013c) articles respectively. The recent global financial crisis has resurfaced the debate over financial development initial conditions for the benefits of financial globalisation (Kose et al., 2011, p.147). The fifth article addresses this apprehension by investigating financial development dynamic thresholds of financial globalisation in Africa (Asongu, 2014a). It would be misleading to assess the effect of globalisation on financial development with the International Financial Statistics' (2008) IMF definition of the financial system because the definition does not incorporate the informal financial sector that characterises financial systems in less developed countries[1]. Hence, the sixth article assesses the effects of liberalisation policies on financial development using new indicators of financial development that reflect the African context by integrating a previously missing informal financial sector component into the definition of the financial system (Asongu, 2014b).

The seventh article extends the previous two by assessing the correlations between the burgeoning phenomenon of mobile phone penetration (from liberalisation policies) and new financial sector indicators obtained from the adjusted financial system definition (Asongu, 2013d). With knowledge that liberalisation policies were partly meant to stimulate investment for poverty alleviation, the last article investigates which financial intermediary development channels are good for the poor, contingent on aggregate investment dynamics (Asongu, 2013e).

1.4 Existing Knowledge

There are three main challenges to African business, notably, the need: for alternative sources of capital inflows (Rolfe & Woodward, 2004); to improve governance standards in order to attract more investment (Bartels et al., 2009) and to mitigate regulatory and political distortions that negatively affect capital flows (Tuomi, 2011; Darley, 2012).

While stock markets represent alternative sources of long term finance in Africa after privatisation projects have failed to attract the much needed foreign direct investment (FDI), their role in allocation efficiency is questionable on the continent because with the exception of South Africa and Egypt, these markets are undeveloped for the most part. More convergence is required for financial market efficiency because, integrated stock markets are associated with many benefits, notably: reduced

[1] Lines 24, 25 and 45 of the International Financial Statistics (October, 2008) does not incorporate the informal financial sector into the definition of the financial system.

transaction cost, increased trade volume, more liquidity, lowered cost of capital for corporations, more cross border flow of capital and similar yields for financial assets with the same risks and liquidity (Von Furstenberg & Jeon, 1989; Kim et al., 2005).

Advantages of convergence in financial markets also apply to currency unions. The recent EMU crisis has shown that the absence of real and monetary convergence can result in a monetary union being designed not to be robust to adjusting disequilibria from shocks (Willet, 2010; Willett & Srisorn, 2011). A resulting policy syndrome is that existing African monetary unions need to reconsider whether they are designed to dampen disequilibria associated with negative development externalities.

The design of monetary and exchange rate policies was also not robust in addressing the 2008 food crisis in most African countries (Von Braun, 2008). Between 2005 and 2008, the prices of wheat, rice, milk powder and maize rose respectively by 70%, 25%, 90% and 80%. This rise in food prices led to increased poverty and socioeconomic instability in many African countries (World Bank, 2008; Wodon & Zaman, 2010). Notable examples of countries that experienced significant riots include: Burkina Faso, Cameroon, Côte d'Ivoire, Egypt, Ethiopia, Guinea, Senegal, Mauritania, Morocco and Mozambique. A major factor to the collective experiences in staple food price hike is increasing financial globalisation.

The '2007-2008' financial crisis has resurfaced the debate over development outcomes of increasing financial globalisation. Whereas the debate on the beneficial effects of trade openness has reached some consensus in the literature, some scholars are of the position that the rewards of recent advances in financial engineering are not so apparent because of the frequency and magnitude of global financial crises (Rodrik & Subramanian, 2009). Moreover, given that the volatility effects are more apparent in developing countries, some authors have been consistent on the view that certain domestic conditions are needed to materialise the benefits of financial globalisation (Henry, 2007; Kose et al., 2011).

Another debate about globalisation that has received only moderate consensus in the literature is the effect of liberalisation on formal and informal economic sectors (Fugazza & Fiess, 2010). Unfortunately, the debate cannot be engaged in the financial sector because the informal financial sector is not a component of the mainstream financial system definition.

The information and communication technology (ICT) sector is an eloquent example of a liberalisation policy that has had substantial poverty-reduction and financial development externalities, inter alia (Jonathan & Camilo, 2008). Yet, despite the associated burgeoning phenomenon of mobile banking, the nexus between mobile phone penetration and various financial sectors is difficult to establish because the informal financial sector is not a component of the mainstream financial system definition.

Liberalisation policies have also been aimed at stimulating investment for pro-poor growth. Financial development is a mechanism by which the underlying inclusive development benefits can be achieved because of the broad consensus in theoretical literature that financial development affects the distribution of income: directly (Banerjee & Newman, 1993; Galor & Zeira, 1993) and indirectly (Greenwood & Jovanovic, 1990). Unfortunately, due to data availability constraints, only two studies have assessed the finance-inequality relationship within the scope of Africa (Kai & Hamori, 2009; Batuo et al., 2010).

1.5 Research Gaps

I chronological present research gaps in light of the existing literature covered in the previous section. First, the literature on dynamic relationships in the financial markets of developing countries has been limited to the emerging nations of Latin America and Asia for the most part. According to Alagidede (2008), the neglect of the African continent is traceable to undeveloped financial markets that are comparatively more risky and highly illiquid. Second, before the EMU crisis, African studies had been fundamentally focusing on embryonic monetary unions in West and East Africa (see Mkenda, 2001; Buigut & Valev, 2005; Celasun & Justiniano, 2005; Debrun et al., 2005; Tsangarides & Qureshi, 2008). Third, there is no literature that has investigated how monetary policy can be tailored towards keeping consumer prices in-check because a substantial bulk of the literature has been devoted to investigating the causes and consequences of soaring global food prices (Wodon & Zaman, 2010). Fourth, the African development literature is short of an inquiry that has investigated initial financial development conditions for the rewards of financial globalisation.

Fifth, the International Financial Statistics (2008) definition of the financial system by the IMF has failed to incorporate the informal sector. Moreover, existing literature has either not articulated the informal financial sector (Arestis et al., 2002) or focused on more specific areas of the banking structure like bank concentration and bank participation (O'Toole, 2012). Sixth, the bulk of studies on mobile phones have been qualitative and exploratory for the most part. Furthermore, the few quantitative studies have been restricted to country-specific and micro-level data. Seventh, two major gaps are apparent in the two existing studies on the nexus between financial development and inequality in Africa, notably: (i) restriction of financial development to concepts of activity (Batuo et al., 2010) and depth (Kai & Hamori, 2009; Batuo et al., 2010) and (ii) employment of financial variables that fail to appreciate the substantially documented issue of surplus liquidity in African financial institutions (Saxegaard, 2006; Owoundi, 2009).

1.6 Proposals on Addressing Research Gaps

In this section I engage how this thesis proposes to address identified gaps in the same chronological order. First, Asongu (2012) aims to assess government quality (political, economic and institutional) determinants of stock market performance in Africa while Asongu (2013a) projects to examine dynamics of stock market convergence on the continent. Asongu (2013b) attempts to address the policy challenge of investigating real and monetary policy convergence in the CFA zone in light of the EMU crisis whereas Asongu (2013c) examines how money, credit, efficiency and size can be instrumented by monetary policy to curb consumer price inflation, with regard to recent global food price hikes. Asongu (2014a) proposes to examine financial development initial or threshold conditions for the materialisation of financial development benefits from financial globalisation.

The objectives of Asongu (2014b) and Asongu (2013d) are to assess the effects of liberalisation on financial development using a definition of the financial system that incorporates the previously missing informal financial sector. They also project to introduce hitherto unexplored concepts of formalisation, informalisation and non-informalisation in order to capture elements of financial sector competition. Whereas Asongu (2014d) broadly focuses on the effects of liberalisation policies on financial development, Asongu (2013d) narrows down the perspective to the ICT sector in order to examine how mobile phone penetration has stimulated development of the financial sector. Asongu (2013e) intends to fill identified gaps in the literature on the finance-inequality nexus by: (i) using financial intermediary dynamics of depth, activity, size and efficiency and (ii) introducing a previously missing investment component such that, the inequality-finance nexus is conditional on the instrumentality of aggregate investment dynamics.

1.7 Contributions to Knowledge

Contributions to knowledge are also summarised in the same chronological order. Results from Asongu (2012) confirm the importance of government quality in the promotion of stock market development on the continent. The findings of Asongu (2013a) do not show overwhelming evidence of convergence. This implies that African countries need to work towards improving institutional and structural differences in determinants of stock market performance that are inhibiting the convergence process. Asongu (2013b) contributes to the literature of financial integration among member states of currency unions by providing the speed and time needed to achieve full convergence. The findings broadly show the absence of convergence, with the exception of financial size within the CFA zone. The inference is that real and monetary policies in the currency zones are thwarted by heterogeneous institutional and structural characteristics.

Hence, asymmetries in these characteristics should be mitigated to promote real and monetary policy effectiveness.

The following four main findings are established by Asongu (2013c). The analysis highlights the following four primary findings. *First,* a significant long-term equilibrium exists between financial dynamics and inflation. *Second,* only those reforms that are allied to financial depth (money supply or liquid liabilities) and size (deposit bank assets) can be used to exert pressures of deflation in situations of disequilibrium. *Third*, the instrumentality of financial size is higher than that of financial depth. *Fourth*, the deflationary effect of money supply is about double that of liquid liabilities (bank deposits). The results have far reaching implications for inflation targeting. In particular, I recognise the need to integrate the informal financial sector into the definition of the financial system for monetary policy effectiveness and prevention of social unrest resulting from increasing food prices.

The findings of Asongu (2014a) reveal that only initial financial conditions of size are crucial in materialising the benefits of financial globalisation. Dynamics of activity and efficiency do not validate the hypothesis while the contribution of financial depth is only marginal. In terms of policy implications, tackling the concern of surplus liquidity in African financial institutions could ameliorate the rewards of financial size and reverse the tendencies of financial activity and efficiency. Hence, policy makers who have been viewing the challenges of financial globalisation exclusively from the tide of financial flows for financial benefits could be getting the dynamics badly wrong.

Asongu (2014b) confirms the moderate consensus on the role of liberalisation in reducing formal financial development. The new financial sector measurements broadly confirm the importance of the informal sector as a component of the financial system. The study is useful to the macroeconomic literature on measuring financial development and contributes at the same time to the evolving field of economic development by means of informal sector promotion through mobile banking, knowledge economy and microfinance. It also suggests a practicable method for disentangling the impact of various policies of liberalisation on financial sectors.

The findings of Asongu (2013d) which are based on two conflicting definitions of the financial system establish that when the International Financial Statistics (IFS) definition is employed, mobile phone penetration is negatively correlated with traditional financial intermediary development dynamics of depth, size and activity. But when the previously missing informal sector is incorporated into the IFS definition, mobile phone penetration is positively correlated with informal financial development.

Asongu (2013e) concludes that with the exception of financial efficiency, financial dynamics of depth and activity are pro-poor, while the effect of financial size is not statistically significant. The detrimental effect of financial allocation efficiency underlines the substantially documented issues of surplus liquidity in African financial institutions.

1.8 Statement of Coherence of the Published Works

Individual items of the submitted published articles coherently present some critical aspects of financial development. These entail an aspect of stock market performance in financial market development and two aspects of financial intermediary market development notably: exposure of African financial systems to global shocks and a rethinking of financial systems in the light of liberalisation and the poverty alleviation initiatives. While the first two studies employ the same stock market dynamics as dependent variables, the last six papers consistently employ depth, efficiency, activity and size as measurements of financial intermediary development.

We articulate the coherence of the papers listed in 1.2 in the context and structure of this critical appraisal. The investigation of African financial markets is less abundant and has been neglected because these markets are viewed as very risky, institutionally poor and highly illiquid. This fact motivates a number of concerns, *inter alia*: the role of governance dynamics (political, economic and institutional) in facilitating stock market development (Asongu, 2012) and the need for greater stock market convergence (Asongu, 2013a). Financial market convergence reduces the cost of capital and improves international risk sharing. It also increases exposure to global shocks. Hence, African financial systems have recently been exposed to the EMU and 2008 global food crises. How the EMU crisis is reflected by the CFA franc zone (Asongu, 2013b) and issues on monetary policy measures needed to fight consumer price inflation (Asongu, 2013c) are challenging policy concerns.

Other globalisation-related challenges of significant policy relevance include preventive measures against exposure to such crises which require, among others: the examination of financial development thresholds for which financial globalisation is beneficial (Asongu, 2014a) and assessment of how financial globalisation affects various sectors of the financial system (Asongu, 2014b). These financial sectors are derived from a rethinking of the conception and definition of the financial system in the context of developing countries. Hence, when the previously missing informal financial sector is incorporated into the definition, the pro-poor phenomenon of mobile phone penetration is positively (resp. negatively) correlated with the informal (resp. formal) banking sector (Asongu, 2013d). The new financial indicators are complemented with an investigation of traditional financial intermediary development indicators that are good for the poor (Asongu, 2013e).

This introductory chapter has tackled the second item on the outline for this thesis[2]. The rest of the study is presented as follows. Chapter 2 summarises the published articles along three respective themes: (i) theoretical underpinnings, (ii) gaps in or challenges to the literature on which the inquiries are based, (iii) how the studies respectively intend to address the challenges or fill the gaps and (iv) describes the data, methodology and empirical findings with policy implications. The three themes engaged in this chapter tackle the first, third and fourth items of this critical appraisal[3]. More specifically, the first subject explores the two

[2] "*(ii) describe the overall programme of research and its aims and discuss how the individual items of published work submitted fit into this*" (Oxford Brookes University (OBU), 2010, p. 4).

[3] "*(i) review the general literature in the field and place the candidate's submitted work in the context of this literature*" (OBU, 2010, p. 4). "*(iii) analyse the research methodology used where this is not covered in the published work; (iv) analyse and assess the original contribution to knowledge represented by the published work submitted*"(OBU, 2010, p. 4).

studies on African stock market development while the second focuses on the three articles dealing with the exposure of African financial systems to global shocks, notably: the EMU crisis, the 2008 food crisis and 2007-2008 financial crises. In the third theme, three articles dealing with nexuses among finance, liberalisation and the poor are presented.

Chapter 2: Critical Appraisal

2.1 Overview

This chapter is discussed in three themes. The first addresses two main issues in the area of stock market development in Africa: the role of governance (institutional, political and economic) in stock market performance on the one hand and evidence of convergence across stock markets on the other hand. The dependent variables employed in the two assessments are the same, notably: stock market capitalisation, stock market value traded, stock market turnover and number of listed companies. The second covers the exposure of African financial systems to global shocks like the EMU crisis, 2008 soaring food prices and 2007-2008 global financial crises. The third theme provides an extension by examining the nexuses among liberalisation, financial development and the poor. In essence, this appraisal aims to: (i) make a critical contribution to the literature of financial sector competition by assessing the effect of liberalisation policies on financial development using new indicators based on an improved definition of the financial system; (ii) investigate how mobile phone penetration as a product of liberalisation is related to the informal financial sector and hence, indirectly to poverty mitigation and (iii) examine financial development channels to inequality contingent on liberalization policies, which include the stimulation of aggregate investment.

Each theme is discussed in four strands: (i) theoretical underpinnings and scope of problem statement; (ii) gaps in the literature and how the exposition intends to fill them; (iii) describe data and empirical strategy and (iv) presents results with policy implications.

2.2 African Stock Market Development

2.2.1 Theoretical underpinnings

The theoretical underpinnings consist of justifying the choice of instrumental variables employed in the empirical section. These include:

legal origins, income-levels, press-freedom qualities and religious dominations. The law and finance theory (La Porta et al., 1998) and an elucidation of why legal origin matters in finance (Beck et al., 2003). The basis for wealth effects and press-freedom are justified by Beck et al. (1999) and Guo-Ping (2008) respectively; while religious influence is substantiated by Hearn et al. (2011).

A substantial body of the literature supports the benefits of financial market convergence. Integrated financial markets are considered to be relatively more efficient than their divergent counterparts, with respect to capital allocation efficiency (Chen et al., 2002). In accordance with Kim et al. (2005), financial market convergence stimulates the flow of funds across borders, lowers the cost of capital for corporations, mitigates investors' transaction cost and increases the volume of trade which has an appealing effect on market liquidity. Financial stability reduces the probability of asymmetric shocks and mitigates the cross-border risk of financial contagion because of increases in the capacities of economies to absorb shocks. In summary, with convergence, the potential for making supernormal profits is mitigated since financial assets with similar risks and liquidity provide the same yields (Von Furstenberg & Jeon, 1989).

2.2.2 Gaps in the literature

The challenges in African business literature are classified in three main strands. *First*, the need for novel sources of capital inflows, institutional quality and regulatory reforms. For instance, like other Sub-Saharan Africa (SSA) countries, beside Foreign Direct Investment (FDI), Zambia needs alternative sources of finance, after failed privatisation projects (Rolfe & Woodward, 2004). *Second*, a decision to invest in the continent is substantially influenced by issues of governance (Bartels et al., 2009). *Third,* distortions in regulatory and political environments (Tuomi, 2011) and corruption (Darley, 2012) are strong determinants of capital inflows.

While a bulk of the literature has assessed dynamic linkages of equity markets at the global level, the focus has substantially been limited to advanced countries and the emerging nations of Asia and Latin America.

Alagidede (2008) has provided a twofold explanation for this neglect. *First,* with the exception of South Africa, African countries do not yet have financial markets of Western standards. *Second,* the neglect of markets on the continent does not come as a great surprise because they are perceived as highly illiquid and relatively more risky.

2.2.3 Contribution to knowledge

The first article (Asongu, 2012) on determinants of stock market performance addresses the challenges by assessing three main concerns. *First,* it examines if the manner in which governments are selected and replaced (*political governance*) affects the health of financial markets. *Second,* it investigates how stock market development is influenced by *economic governance*: the ability of governments to formulate and implement policies that deliver public goods. *Third,* it assesses how *institutional governance* affects capital markets. This form of government quality is the respect of institutions by the State and citizens.

The second article (Asongu, 2013a) on stock market convergence contributes to existing literature in a threefold manner. *First,* it is one of the few studies to consider convergence among African stock markets using aggregate measures of stock market performance. *Second,* the assessment is based on eleven homogenous panels depicting fundamental characteristics of African development. *Third,* the speed and time needed to achieve full convergence are also provided.

2.2.4 Data, methodology, results and implications

The first article assesses a panel of fourteen African nations[4] with data from African Development Indicators (ADI) of the World Bank for the period 1990 to 2010. The dependent variables include: stock market value traded, number of listed companies, stock market turnover and stock market capitalisation (Narayan et al., 2011). The main independent variables are political (voice & accountability and political stability/no violence),

[4] Botswana, Egypt, Ghana, Ivory Coast, Kenya, Mauritius, Morocco, Namibia, Nigeria, South Africa, Swaziland, Tunisia, Zambia and Zimbabwe.

economic (government effectiveness and regulation quality) and institutional (corruption-control and rule of law) dynamics of government quality (Andrés & Asongu, 2013). The adopted methodology is a Two-Stage-Least Squares (2SLS) procedure of instrumental variables, which is consistent with Beck et al. (2003).

The results confirm the importance of government quality in the promotion of stock market development in Africa. Therefore, in order to attract investment through capital markets, governments of the chosen African countries need to, *inter alia*, promote: political governance through voice and accountability and political stability; economic governance through regulation quality and government effectiveness and; institutional governance via controlling corruption and enhancing the rule of law. The policy recommendations are consistent with the underlying literature which strongly argues that corporations would enhance their access to finance if the rules of governance are improved and standards of accounting enforced, among others (La Porta et al., 1998).

The second article on stock market convergence, examines a panel of fourteen African countries[5] with data from the Financial Development and Structure Database (FDSD) and ADI of the World Bank for the period 1991-2009. The procedure of estimation is consistent with the theoretical underpinnings of income convergence that have been applied in growth models and recently extended to other fields of development (Narayan et al., 2011).

The results do not show overwhelming evidence of convergence. The speed of convergence varies between 12% and 28% per annum. The main policy implication is that countries need to improve the adoption of common structural and institutional features that are conducive for stock market development. The findings which also have positive and negative implications for regional integration and portfolio diversification are substantially discussed. Specific panel oriented implications are followed by other consequences on measures that are needed to accelerate stock market convergence.

[5] Botswana, Egypt, Ghana, Ivory Coast, Kenya, Mauritius, Morocco, Namibia, Nigeria, South Africa, Swaziland, Tunisia, Zambia and Zimbabwe.

While financial market integration decreases the cost of capital and enhances international risk sharing, it also increases exposure to global shocks. In this light, African financial systems have recently experienced and learned from a number of global shocks, *inter alia*: lessons of the recent EMU crisis to CFA franc zone member states, appropriate monetary policies for addressing the 2008 global food crisis and financial development thresholds needed to avoid the pitfalls of the 2007-2008 financial crisis in order to reap the benefits of financial globalisation.

2.3 Exposure of African Financial Systems to Global Shocks

2.3.1 Theoretical and contextual underpinnings

The recent EMU crisis has revived real and monetary policy convergence concerns in common currency unions. According to the narrative, failure to safeguard some common criteria has substantially led to the crisis, because disequilibria results from monetary arrangements that are not designed to be robust to a plethora of shocks (Willet, 2010; Willett & Srisorn, 2011). In this light, African common monetary unions in the CFA franc zone need to revisit their convergence criteria to avoid similar issues in the future. The interest of convergence for common policies within a homogenous panel has already been substantially covered (Von Furstenberg & Jeon, 1989; Bessler & Yang, 2003).

The dramatic increase in staple food prices in 2008 substantially affected the income of poor households (World Bank, 2008). According to the narrative, the prices of maize, milk powder, rice and wheat rose respectively by 80%, 90%, 25% and 70% during the period 2005-2007. Such high prices led to socio-political instability in many developing countries (Wodon & Zaman, 2010) including North Korea where to the surprise of many, female traders protested against restrictions on food trade (Hendrix et al., 2009)[6]. Since, high inflation increases poverty (Fujii, 2013,

[6] According to the narratives, in the Middle East and North Africa (MENA) riots occurred in Jordan, Morocco, Yemen and Egypt. In SSA, they were experienced in Côte d'Ivoire, Cameroon, Ethiopia, Senegal, Mozambique, Burkina Faso, Guinea and Mauritania. In Latin America, clashes of violent nature occurred in Bolivia, Guatemala, Nicaragua, Peru, Mexico, Argentina and the prime minister of Haiti was toppled because of food riots. In

p.13) and inequality (Albanesi, 2007, pp. 1105-1107) while, lower inflation could mitigate inequality (Lopez, 2004), it is important to implement timely policies that curtail the rise in consumer prices. Unfortunately, according to the Director General of the International Food Policy Research Institute, monetary and exchange rate policy responses to the crisis were ineffective (Von Braun, 2008).

From a theoretical perspective, financial globalisation is expected to ease efficiency in the international allocation of capital and risk sharing. The narrative sustains that benefits should be higher in developing countries that are rich in labour but scarce in capital (Kose et al., 2011). However, concerns about the initial financial conditions needed to profit from financial globalisation have remained open to debate (Henry, 2007).

2.3.2 Gaps in the literature

Before the EMU crisis, African studies on currency unions were focused on the feasibility of proposed monetary unions in East and West Africa[7]. Mkenda (2001) using a Generalized Purchasing Power Parity (GPPP) model concluded that the embryonic East African Monetary Zone (EAMZ) is feasible. Buigut and Valev (2005) have complemented Mkenda by distinguishing errors from responses to provide asymmetric demand and supply shocks. Hence, conclude that a common currency union in the area is unfeasible. Celasun and Justiniano (2005) have analyzed the feasibility of the Economic Community of West African States (ECOWAS) forming monetary unions using a dynamic factor analysis. They established that small member states have comparatively more synchronised variations in output. Consequently, they recommended monetary unification among subsets of countries. Using a model of fiscal and monetary policy interactions, Debrun et al. (2005) have found that a common currency area is recommendable for most nations that are not in the West African

Asia, India, Cambodia, Bangladesh, the Philippines and Thailand also witnessed street protests (Hendrix et al., 2009).

[7] Cameroon, Central African Republic, Chad, Equatorial Guinea, Gabon, Burkina Faso, Ivory Coast, Mali, Niger, Senegal and Togo.

Economic and Monetary Union (UEMOA). In the same light, Tsangarides and Qureshi (2008) have shown dissimilarities in economic features among candidate members for the proposed West African Monetary Zone (WAMZ), using clustering algorithms.

To the best of my knowledge, there was no literature that assessed how financial policies influenced consumer prices because most of the documented post-food crisis literature was centred on the causes and consequences of soaring global food prices (Wodon & Zaman, 2010). Moreover, some of the suggested remedial and pragmatic choices which were proposed to curb inflation were not motivated by monetary policy (SIFSIA, 2011).

There is an interesting bulk of the literature discussing the debates. India's strategy has consisted of opening-up its capital account in tandem with some development thresholds (Henry, 2007), a caution confirmed in a recommendation by Prasad and Rajan (2008) on the need for country-specific features in the design of financial openness strategies. China is *de jure* closed while *de facto* open, a tendency that has recently led to much discussion in academic circles (Prasad & Wei, 2007; Aizenman & Glick, 2009; Shah & Patnaik, 2009). The *de jure* and *de facto* measurements are KAOPEN from Ito and Chin (2002) and FDI respectively. These strategies substantially question an emerging consensus before the Asian financial crisis, *inter alia*: "*the correct answer to the question of capital mobility is that it ought to be unrestricted*" (Dornbusch, 1998, p. 20) which optimistically reflected Fischer's IMF lectures on orderly globalisation of capital movements (Fischer, 1998).

In the wake of 2007-2008 financial crises, Rodrik and Subramanian (2009) have presented the issue as an open debate in need for more scholarly focus. The *thesis* sustains that growing financial liberalisation has enabled transitions from low- to middle-income in many countries while at the same time substantially enhancing stability in more developed nations (Kose et al., 2006). The *anti-thesis* documents the conception of complete financial liberalisation as a great setback to global financial stability (Rodrik, 1998). Some narratives of this latter strand even go as far as advocating that financial liberalisation has a hidden agenda of extending the international benefits from trade to assets (Asongu, 2014a). To the best of my knowledge, as of 2012 we did not find any study that had assessed the debate within the context of Africa. Hence, this study has examined financial development thresholds for the benefits of financial globalisation in order to advance the debate and provide policy makers with insights into the issues.

2.3.3 Contribution to knowledge

Before Asongu (2013b) was submitted to be considered for publication, to the best of my knowledge, no study had addressed how the EMU crisis was reflected in existing and potential African monetary unions. However, before the paper was accepted for publication, Alagidede et al. (2012) used integration and cointegration estimations to investigate inflation dynamics and common tendencies in the real domestic product of potential member states of the West African Monetary Zone (WAMZ) and concluded on substantial heterogeneity across countries. Hence, the main contribution of Asongu (2013b) to the literature was essentially drawn from the urgent policy challenge of assessing how the EMU crisis was reflected in the CFA zone, notably: the Economic and Monetary Communities of Central (CEMAC) and Western (UEMOA) Africa. It has contributed to the literature of financial integration among member states of currency unions by providing the speeds and time needed to achieve full convergence.

Asongu (2013c) investigates how money, credit, efficiency and size in financial intermediation matter in fighting consumer price inflation. While *money* as a proxy for financial depth is measured by financial system liquid liabilities and overall money supply, *credit* appreciates financial activity from banking and financial system dimensions. *Efficiency,* in terms of intermediary allocation is also measured from financial and banking system perspectives while financial *size* represents deposit bank assets as a percentage of total assets. This investigation also complements the scarce literature on the impact of financial development on inflation, in spite of a substantial bulk of studies on the effects of inflation on financial and economic variables (Bruno & Easterly, 1998).

Asongu (2014a) engages the concern of potential shocks from financial globalisation due to growing debates in contemporary globalisation (Singh, 2008). It tackles the issue of whether financial development thresholds[8] are needed to reap the benefits of financial globalisation. The motivation draws on the recent financial crisis that has resurfaced the longstanding debate about the implications of globalisation on financial development. The study tackles the Kose et al. (2011, p.147) and Henry (2007, p. 897) hypotheses which maintains the need for certain initial financial conditions in order to materialise the financial development benefits of financial globalisation. According to the narratives, while there is already some consensus in the debate on the effects of trade openness, that on financial openness has been reignited by the global financial crisis.

2.3.4 Data, methodology, results and implications

Asongu (2013b) examines a panel of eleven Western and Central African countries[9] with data from the FDSD and ADI of the World Bank. The monetary policy variables include inflation and financial intermediary dynamics of depth, efficiency, activity and size, whereas the real policy variable is economic performance. The convergence empirical strategy discussed in the preceding theme is used. The findings broadly show the absence of convergence, with the exception of financial size within the CFA zone. This implies real and monetary policies in the currency zones are thwarted by heterogeneous institutional and structural characteristics. Hence, asymmetries in these characteristics should be mitigated to promote real and monetary policy effectiveness.

Asongu (2013c) investigates a sample of ten African countries with data from the FDSD and ADI of the World Bank for which inflation is chaotic for the period 1980 to 2010. The estimation strategy is consistent with the literature on fighting inflation (Goujon, 2006). Vector autoregressive (VAR) models in the perspective of error correction and

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[8] Threshold here should be understood as a level of domestic financial development needed to benefit from the positive effect of financial globalisation on domestic financial development.

[9] Cameroon, Central African Republic, Chad, Equatorial Guinea, Gabon, Burkina Faso, Ivory Coast, Mali, Niger, Senegal and Togo.

Granger causality are used. The findings show the following: (i) significant long-term equilibrium between financial dynamics and inflation; (ii) only financial depth and size can be exploited to exert pressures of deflation in situations of disequilibrium, the instrumentality of the latter financial dynamic is higher than the former and (iii) the deflationary effect of money supply is about double that of liquid liabilities. The findings have far-reaching implications for inflation targeting, the need to incorporate the informal financial sector into the definition of the financial system and prevention of social unrest resulting from increasing food prices.

Asongu (2014a) assesses a panel of fifteen African countries with data from ADI and the FDSD of the World Bank for the period 1996-2009. Financial development indicators include dynamics of depth, efficiency, activity and size while the financial globalisation variable is FDI. Consistent with underlying threshold literature (Billger & Goel, 2009), a quantile regression estimation approach is used as empirical strategy. The findings show that only initial financial conditions of size are crucial in materialising the benefits of financial globalisation. Dynamics of activity and efficiency do not validate the hypothesis while financial depth only partially does so. In terms of policy implications, tackling the concern of surplus liquidity in African financial institutions could ameliorate the rewards of financial size and reverse the tendencies of financial activity and efficiency. Hence, policy makers who have been viewing the challenges of financial globalisation exclusively from the tide of financial flows for financial benefits could be getting the dynamics badly wrong.

Getting the dynamics of financial sectors right in the definition of the financial system in Africa is also important in order to appreciate the benefits of liberalisation in financial development. In what follows, the International Monetary Fund (IMF) definition of the financial system is reconsidered and the previously missing informal sector incorporated to reflect the context of African countries.

2.4 Rethinking the Financial System, Liberalisation and the Poor

2.4.1 Theoretical underpinnings

According to theory or convention, informality increases with liberalisation. Though not a universal consensus, globalisation which increases competition among domestic producers pushes them to recourse to informal services in order to reduce production cost because such services do not often comply with legal and fiscal regulations (Fugazza & Fiess, 2010).
There is a broad consensus in theoretical literature that financial development has some effect on income distribution. Conflicting strands however exist on whether the impact is direct (Banerjee & Newman, 1993) or indirect (Greenwood & Jovanovic, 1990).

2.4.2 Gaps in the literature

The International Financial Statistics (2008) definition of the financial system by the IMF has failed to incorporate the informal sector. Many studies have been restricted to more specific dimensions of the banking structure like foreign bank participation and bank concentration (O'Toole, 2012). In addition, financial development studies have failed to adequately incorporate the informal financial sector (Batuo et al., 2010).

Article 7 (Asongu, 2013d) complements Articles 5-6 (Asongu, 2014ab). Accordingly, liberalisation (especially in the Information & Communication Technology (ICT) sector) has facilitated the growing trend of mobile banking which is substantially improving informal finance relative to the formal sector. Hence, the new financial development indicators proposed in the previous strand are used in this stream to assess the incidence of mobile phone penetration on financial development in order to provide policy makers with insights into the trends. Accordingly, the mobile revolution while providing communication facilities is also enhancing mobile banking services to a previously unbanked fragment of the population.

The existing literature on linkages between mobile phone penetration and mobile banking is discussed in four strands. The *first* covers the utility of mobile transactions in terms of: transfer of stored value, conversion of cash and store of value (Jonathan & Camilo, 2008). The *second* stream discusses mobile banking through concepts of savings: *basic* and *partially integrated* mobile savings (Demombynes & Thegeya, 2012). In the *third* strand, Ondiege (2010) has provided an interesting account on how mobile phones and mobile banking are linked. The last strand provides stylized facts on the burgeoning phenomenon of mobile telephony/banking (Demombynes & Thegeya, 2012, pp. 23-25).

The idea in Asongu (2013e) is to assess how investment can be instrumental in affecting inequality through financial intermediary development channels. This existing finance-inequality literature can be categorised into three main areas. The *first* embodies nexuses among financial development, inequality and growth with some arguing that financial development (especially allocation efficiency) helps the poor while others present the relationship as non-linear (Asongu, 2013e). The *second* is devoted to unequal access to and usage of finance which could be structural or due to political influences. The *third* covers studies documenting the impact of inequality on access to financial services, which may lead to lower firm growth, reduction in overall welfare gains corruption or decline in entrepreneurship and catch-up between poor and rich countries.

As far as I am aware, due to scarcity of data on income distribution, two studies have investigated the finance-inequality nexus on the African continent (Batuo et al., 2010; Kai & Hamori, 2009). Two gaps are identified in these studies. *First,* the very restricted use of financial development concepts that is limited to dynamics of depth (Kai & Hamori, 2009; Batuo et al., 2010) and activity (Batuo et al., 2010). *Second,* the employed financial variables do not account for issues of surplus liquidity (or excess cash) in African financial institutions (Saxegaard, 2006; Owoundi, 2009).

2.4.3 Contribution to knowledge

Asongu (2014b) is an extension of Asongu (2014a) on financial development benefits of globalisation. There is a substantial gap in the literature on measuring financial development in developing countries because the informal sector is not incorporated into the mainstream or IFS (2008) definition of the financial system[10]. Accordingly, financial development indicators have been employed without due consideration to country-specific characteristics. While some authors have chosen variables from assumptions of general validity (Gries et al., 2009, p. 1851)[11], others have identified the missing informal sector component but failed to effectively address the issue. In this latter strand, while some authors have attempted to tackle the concern by subtracting currency outside formal banking institutions when measuring liquid liabilities (Abu-Bader & Abu-Qarn, 2008), another stream of authors has tried to address the concern by deriving a composite indicator of financial variables that reflect financial depth (Gries et al., 2009). Unfortunately, whereas the latter solution juxtaposes financial variables by mixing financial concepts (financial depth, efficiency, activity and size), both (former and latter) do not incorporate the informal financial sector.

The underlying article has tackled the issue by neither marginalising informal finance nor juxtaposing concepts of finance. It provides a pragmatic way of disentangling the effects of liberalisation policies on informal, semi-formal and formal financial development. Therefore, it unites two strands of research by contributing to the macroeconomic literature on measuring financial development and at the same time responding to the evolving field of economic development through informal finance. It also introduces unexplored financial development concepts of formalisation, informalisation, semi-formalisation and non-formalisation.

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[10] Lines 24, 25 and 45 of the International Financial Statistics, October, 2008.

[11] Gries et al. (2009) state: "*In the related literature several proxies for financial deepening have been suggested, for example, monetary aggregates such as Money Supply (M2) on GDP. To date there is no consensus on the on the superiority of any indicator*" (p. 1851).

It is interesting to position the investigation on the effect of liberalisation policies essentially because, while a substantial bulk of the literature has focused on the economic outlook of liberalisation (Chaudhuri & Banerjee, 2007), the scarce literature on financial implications has failed to rethink financial development indicators in the context of developing countries (Adeusi et al., 2012). It is logical to think that policies of liberalisation adopted by authorities have some effect on informal finance, favorably or adversely.

Despite the growing knowledge economy (KE) literature, not much is known about the effect of mobile phone on economic development in Africa (Aker & Mbiti, 2010, p. 224)[12]. Moreover, there is scarce scholarly research on the socioeconomic effects of mobile phones (Thacker & Wright, 2012). Accordingly, while most studies have been qualitative and theoretical in nature, the few empirical works have been predominantly based on survey-oriented micro-level and country-specific data (Demombynes & Thegeya, 2012). Hence, Asongu (2013d) fills the above gaps by providing a macroeconomic assessment of the correlation between mobile phone penetration and various financial sectors. In so doing, it also indirectly investigates the validity of some sentiments on financial development and the poor[13]. Both traditional and new indicators are employed. The distinction between various financial sectors in the assessment enables the examination of which financial sectors have benefited most from mobile phone penetration.

Asongu (2013e) addresses identified gaps in the finance-inequality literature by investigating the relationship in Africa with financial

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[12] "*Existing empirical evidence on the effect of mobile phone coverage and services suggest that the mobile phone can potentially serve as a tool for economic development in Africa. But this evidence while certainly encouraging remains limited. First, while economic studies have focused on the effects of mobile phones for particular countries or markets, there is little evidence showing that this has translated into macroeconomic gains…*" (Aker & Mbiti, 2010, p. 224).

[13] For instance, at the Connect Africa summit in 2007, Paul Kagame, president of Rwanda asserted: "*in ten short years, what was once an object of luxury and privilege, the mobile phone has become a basic necessity in Africa*" (Aker & Mbiti, 2010, 208). A year later, *The Economist* (2008) reported: "*a device that was a yuppie toy not so long ago has now become a potent for economic development in the world's poorest countries*". Hence, the current exposition aims to examine if these slogans and sentiments are reflected in the nexus between mobile telephony and financial development in Africa.

intermediary dynamics of efficiency, size, activity and depth. The first of the four variables appreciates financial allocation efficiency which tackles the surplus liquidity concern. Moreover, the article also contributes to the literature by conditioning the nexus on the instrumentality of aggregate investment dynamics.

2.4.4 Data, methodology, results and implications

Asongu (2014b) investigates a sample of twenty eight African countries using annual data from ADI and the FDSD of the World Bank, Chinn and Ito (2002) and Gwartney et al. (2011), for the period 1996 to 2010. The affects of trade, financial, political and institutional liberalisation policies are investigated on eight financial sector measures. The empirical strategies employed are principal component analysis (PCA) and System Generalized Method of Moments (GMM).

The findings confirm the role of liberalisation in mitigating formal financial development. The new financial sector measurements broadly confirm the importance of the informal sector as a component of the financial system. The study is useful to the macroeconomic literature on measuring financial development and contributes at the same time to the evolving field of economic development by means of informal sector promotion through mobile banking, knowledge economy and microfinance, by suggesting a practicable means of disentangling the impact of various policies of liberalisation on financial sectors.

Asongu (2013b) uses a panel of fifty two African countries with data from ADI and the FDSD of the World Bank for the year 2009. The mobile data is obtained from the African Development Bank. Due to the cross-sectional nature of the data, a heteroscedasticity consistent standard errors Ordinary Least Squares (OLS) technique that is robust to RAMSEY's Regression Equation Specification Error Test (RESET) is employed.

The findings which are based on two conflicting definitions of the financial system establish the following. *First,* when the IFS (2008) definition is employed, mobile phone penetration is negatively correlated with traditional financial intermediary development dynamics of depth, size and activity. But when the previously missing informal sector is incorporated into the IFS definition, mobile phone penetration is positively correlated with informal financial development. Three main policy implications result from the findings: (i) the role of informal finance is growing; (ii) the burgeoning phenomenon of mobile phone penetration cannot be effectively assessed at the macroeconomic level with traditional indicators of financial development and (iii) there is need for more research on informal financial indicators which would play a crucial role in monetary policy effectiveness.

Asongu (2013e) assesses a panel of thirteen African countries with data from the FDSD and ADI of the World Bank for the period 1980-2002. The inequality variables are obtained from the University of Texas Inequality Project (UTIP). 2SLS with aggregate investment instrumental variables is employed as estimation technique.

The results show that with the exception of financial efficiency, financial dynamics of depth and activity are pro-poor, while the effect of financial size is not significant. The detrimental effect of financial allocation efficiency underlines the substantially documented issues of surplus liquidity in African financial institutions. Moreover, within the dimensions of financial depth, the liquid liability effect is higher than that of money supply, further implying that loans via formal financial institutions are more pro-poor. The overall implication is that the fight against surplus liquidity will substantially mitigate inequality through a positive income redistributive effect.

Chapter 3: Conclusion

Individual items of the submitted published works have coherently presented a critical examination of financial development in Africa. These entail an aspect of stock market performance in financial market development and two aspects of financial intermediary market development notably: exposure of African financial systems to global shocks and a rethinking of financial systems in light of liberalisation and the poor. The introductory chapter has outlined a list of the published works, discussed their contributions to knowledge, presented a statement of their coherence and provided a context with reference to literature on the subject. Chapter 2 has discussed each of the eight articles in the portfolio of published works in light of their original contributions to knowledge along three themes.

Asongu (2012) is concerned about how institutional, economic and political governance dynamics affect stock market development. The results broadly show the need for improving government standards in order to enhance the development of stock markets on the African continent. The substantial absence of convergence (as discussed in Asongu 2013a) also reveals the imperative for improvement of structural and institutional characteristics among countries in order to ease regional integration and stock market performance.

The two aspects of financial intermediary development assessed have been: the exposure of African financial systems to globalisation and the nexuses among liberalisation, finance and the poor. Both the former and the latter have entailed three articles respectively.

I have established the following for the exposure of African financial systems to globalisation, which has been concerned with the recent EMU crisis, the 2008 food price inflation and the 2007-2008 global financial crises. Asongu (2013b) which is prompted by the recent EMU crisis investigates the presence of disequilibria in real and monetary policies in the CFA zones. It concludes on the broad absence of convergence among member states. The 2008 global food crisis has inspired Asongu (2013c) because monetary policies were inadequate at mitigating inflation. Financial intermediary development dynamics of depth, efficiency, activity and size, have been used to find that very limited aggregate financial dynamics can be used by monetary policy to exert deflationary pressures in periods of soaring consumer price inflation. The 2007-2008 global financial crisis which has resurfaced the debate on initial development thresholds for the benefits of financial globalisation has motivated Asongu (2014a), that has concluded on very moderate evidence for the hypothesis supporting thresholds of financial development for the benefit of financial globalisation.

Nexuses among liberalisation finance and the poor have consisted of rethinking the definition of the financial system. Hence, after defining and measuring financial indicators in the context of developing countries, I have first assessed in Asongu (2014b) the impact of globalisation policies on financial sector competition and concluded that liberalisation policies have broadly promoted the informal financial sector at the expense of the formal financial sector. In Asongu (2013d) I have narrowed down the perspective by assessing how the liberalisation of the information and communication technology sector has affected financial sector competition. I have established that mobile phone penetration is positively correlated with the informal financial sector but negatively linked to the formal financial sector. Asongu (2013e) has investigated which financial intermediary development channels are good for the poor, contingent on investment. The findings have shown that not all financial intermediary channels are pro-poor for the effectiveness of liberalisation policies targeting the enhancement of investment for inequality mitigation.

In the paragraphs that follow, I chronologically discuss some caveats and future directions. Asongu (2012) is limited in the perspective that it fails to account for a diversification dimension. Given that integration reduces risk effects on investment decisions, the effect of poor governance on stock market development may become insignificant with diversification and increasing international market integration. Within this framework, stocks in markets that are characterised with lower returns and higher risk could still be retained by investors that are averse to risk because of the need for portfolio diversification. This limitation is most apparent in stock markets that are comparatively more integrated to the global economy (e.g South Africa and Egypt). Another relevant limitation of the inquiry is that the analysis depends substantially on the integrity of good governance indicators that are obtained from perception based measures. Hence, media and 'omitted variable' biases could significantly affect perceptions of good governance.

Future inquiries devoted to improving extant knowledge on the subject could assess whether the established linkages withstand further empirical scrutiny by: (i) using alternative governance indicators as well as firm-specific variables; (ii) employing more endogeneity-robust estimation strategies and (iii) accounting for the highlighted diversification dimension by disaggregating the sample based on levels of international financial market integration.

Three main shortcomings are apparent in Asongu (2013ab), notably: negative spillovers that are characteristic of convergence, moderate consensus on theoretical basis and methodological caveats. It is interesting to note that with increased convergence, negative shocks and spillovers from industries/countries could quickly spread to other industries/countries. Employing econometrics with moderate theoretical consensus is not without risks because the intuitive bases of some hypotheses imply that the results have to be treated with caution because they are contingent on variables we choose and empirically test, which may not reflect all structural and institutional differences required for cross-country diminishing dispersions in the investigated factors. The adopted beta catch-up approach has shortcomings in terms of concerns about initial endowments and multiple equilibria which diminish possibilities of cross-country convergence.

Above shortcomings leave room for future research in a number of interesting areas. The statistical fragility of the findings could be further assessed with a sigma convergence methodology because beta catch-up is a necessary but not a sufficient condition for sigma convergence. Furthermore, the use of alternative stock market development variables and convergence criteria for optimal currency areas, could address some of the apparent policy shortcomings. On the optimal currency front for instance, disaggregating samples and distinguishing responses from shocks in the assessment of synchronisation in business cycles could lead to more policy options. Moreover, given that convergence is not apparent even within the

European Monetary Union (EMU), I caution that future inquiries based on the same variables, theoretical underpinnings and methods may only contribute to establishing the same broad findings of divergence, if only the context/scope and periodicities of underlying inquiries are modified. In my view, authors should focus more on new approaches and perspectives to currency areas that are specific to African countries in light of lessons from the EMU and CFA zones.

While Asongu (2013c) has exclusively considered financial intermediary determinants of inflation, in the real world, inflation is endogenous to a plethora of variables, inter alia: wages, exchange rates and price control. Hence, the interaction of credit, money, size and efficiency with inflation and other unexplored determinants of inflation could provide more relevant insights into dynamics of consumer price variations. In light of these shortcomings, replicating the analysis within a multivariate framework is an interesting future research angle. Moreover, future inquiries could also be devoted to assessing whether the findings are relevant to other developing countries.

Asongu (2014a) is limited to a selected number of African countries. Moreover, the quantile regressions strategy employed has limited control on endogeneity. These shortcomings can evidently be addressed by broadening the sample to more African countries and using instrumental variables and/or non-contemporary regressions to increase the control for endogeneity. Debates on the effects of financial globalisation on financial development would also be improved if more scholarship engages comparative pre- and post-crisis investigations on the one hand and condition the established linkages on the distributions of financial globalisation on the other hand.

A number of drawbacks have been noted in Asongu (2013d, 2014b) which are based on a rethinking of the mainstream definition of the financial system. First of all, while the new definition of the financial system is exclusively based on the existence of a monetary informal financial sector, a non-monetary informal economic sector also exists in the real world. Second, the effects of mobile phones on financial sector competition are interpreted as relationships or correlations. Therefore, it would be interesting to engage panel data instead of cross-sectional data so that relevant policy implications based on causality can be inferred from findings. Moreover, accounting for the non-monetary informal economic sector in future studies is also worthwhile.

Given the current transition to Sustainable Development Goals, investigating the linkages between informality, the mobile phone, globalisation and poverty reduction could provide sound policy insights for the post-2015 development agenda. In the same vein, Asongu (2013e) needs to be revisited in the light of whether the conclusions withstand empirical scrutiny when other instruments of globalisation are engaged.

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The eight published papers constituting the major part of this thesis have been deleted from the electronic version. Please see section 1.2 List of Published Works.