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Improving financial access in Africa: insights from information sharing and financial sector development

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Executive Summary

The study investigates interactions between information sharing offices, the coexistence of financial sub-systems and financial access. The empirical evidence is based on Quantile regressions in order to articulate countries with low, intermediate and high levels of financial access. The scope of the study is on 53 African countries for the period 2004-2011. The following main results are established. First, the positive association between “information sharing offices (ISOs)” and “formal financial sector development” consistently increases with improvements in initial levels of credit access. Second, the negative linkage between ISOs and “informal financial sector development” consistently decreases with increasing levels of credit access. In summary, we establish that the positive complementarity of ISOs and financial formalization is an increasing function of financial activity (or access to credit) whereas the negative complementarity of ISOs and financial informalization is a decreasing function of financial activity.

JEL Classification: G20; G29; L96; O40; O55

Keywords: Information Asymmetry; Financialization; Financial Access

1. Introduction

The study is motivated by four main tendencies in academic and policy circles. These are: (i) the need to enhance financial access in Africa in the light of growing business constraints and gaps in the financial development literature; (ii) substantial liquidity concerns in African financial institutions; (iii) hitherto unexplored notions of financialization¹ within the framework of financial sector development and (iv) the imperative of modelling linkages between information sharing offices (ISO)² and financial sector development for financial access throughout the conditional distribution of financial access (Asongu & Nwachukwu, 2016).

First, recent literature has established that domestic investment responds more positively to domestic sources of capital when compared with external sources of finance such as foreign direct investment and foreign aid (Ndikumana & Blackson, 2015). The narrative is broadly in accordance with recent African business literature on the position that after failed privatisation projects, alternative investment sources are needed to address African development challenges (Rolfe & Woodward, 2004; Bartels et al., 2009; Tuomi, 2011; Darley, 2012; Agbloyor et al., 2013). The underlying policy syndrome is addressed in this study by defining financial development in terms of financial intermediation efficiency or the ability of financial institutions to transform mobilised deposits into credit for domestic investment purposes.

Second, there is an evolving stream of literature emphasising the startling contrast between the need for domestic financial resources and the dire concerns of surplus liquidity in African financial institutions (see Saxegaard, 2006; Fouda, 2009; Asongu, 2014). ISOs have been introduced across Africa over the past decades in order to reduce information asymmetry between lenders and borrowers in the banking industry (see Triki & Gajigo, 2014). Such information asymmetry has been documented to limit surplus liquidity in banking institutions (see Asongu et al., 2016). Unfortunately, as recently shown by Asongu et al. (2017), the literature on the role of information sharing in financial access has fundamentally focused on developed countries and the emerging economies of Asia and Latin America (see Galindo & Miller, 2001; Love & Mylenko, 2003; Barth et al., 2009).

Third, the concept of financial sector development within the framework of financialization has not been substantially explored in the literature. As argued in recent

¹ Financialization should be understood in this study as the coexistence of financial sub-systems (formal, semi-formal and informal) that can be complementary with or substitutes for one another.

² "Information sharing offices" is used interchangeably with "public credit registries and private credit bureaus".

literature (see O'Toole, 2014; Asongu, 2015a), the mainstream narrative has fundamentally focused on bank concentration and bank participation. The study steers clear of the mainstream literature by engaging the dimension of coexistence between financial sectors: the development of one financial sector to the detriment of others and vice versa.

Fourth, initial levels of financial access are considered in the modelling exercise in order to articulate countries with low, intermediate and high levels of financial access. The adoption of this modelling approach deviates from previous literature in which, estimation is based on the mean value of the outcome variable, notably: Asongu et al. (2016) and Triki and Gajigo (2014) who have respectively employed Generalized Method of Moments and Probit models.

The theoretical foundation underpinning interactions between ISOs and the coexistence of financial sub-systems (in order to enhance financial access) builds on two counts. On the one hand, the sharing of information is connected with financial access constraints from two main perspectives, notably: the transformation of risk features in banks and mechanisms by which liquidity provision in financial institutions can be consolidated (Claus & Grimes, 2003). The two perspectives are in line with the position that the main mission of financial institutions is to improve allocation efficiency by converting mobilised deposits into credit that is ultimately used for investment purposes. On the other hand, ISOs are theoretically expected to interact with various financial sectors in order to improve financial allocation efficiency. This is essentially because ISOs are designed to: (i) discipline borrowers on the inconveniences of defaulting on their debts in the hope of taking permanent refuge in the informal financial sector and (ii) increase competition between financial sectors within the financial system (Coccorese & Pellicchia, 2010; Coccorese, 2012).

2. Propositions, data and methodology

Propositions on coexistence between financial sectors are presented in Table 1. The propositions build on shortcomings in the financial system definition from the International Financial Statistics (IFS) (IMF, 2008). As shown by Asongu (2015a, 2015b), the definition has failed to articulate the informal financial sector of the financial system. Therefore, propositions in Table 1 have three fundamental characteristics. (i) They integrate the informal financial sector into the conception, definition and measurement of the financial system. (ii) The existing financial system definition according to the International Monetary Fund (IMF) is decomposed into its formal and semi-formal components. (iii) The propositions introduce

the notion of financialization in terms of competing shares in money supply between financial sectors.

Table 1: Summary of propositions

Panel A: GDP-based financial development indicators			
Propositions	Name(s)	Formula	Elucidation
Proposition 1	Formal financial development	Bank deposits/GDP	Bank deposits ³ here refer to demand, time and savings deposits in deposit money banks.
Proposition 2	Semi-formal financial development	(Financial deposits – Bank deposits)/ GDP	Financial deposits ⁴ are demand, time and saving deposits in deposit money banks and other financial institutions.
Proposition 3	Informal financial development	(Money Supply – Financial deposits)/GDP	
Proposition 4	Informal and semi-formal financial development	(Money Supply – Bank deposits)/GDP	
Panel B: Measures of financial sector importance			
Proposition 5	Financial intermediary formalization	Bank deposits/ Money Supply (M2)	From ‘informal and semi-formal’ to <i>formal</i> financial development (formalization) ⁵ .
Proposition 6	Financial intermediary ‘semi-formalization’	(Financial deposits - Bank deposits)/ Money Supply	From ‘informal and formal’ to <i>semi-formal</i> financial development (Semi-formalization) ⁶ .
Proposition 7	Financial intermediary ‘informalization’	(Money Supply – Financial deposits)/ Money Supply	From ‘formal and semi-formal’ to <i>informal</i> financial development (Informalisation) ⁷ .
Proposition 8	Financial intermediary ‘semi-formalization and informalization’	(Money Supply – Bank Deposits)/Money Supply	Formal to ‘ <i>informal and semi-formal</i> ’ financial development: (Semi-formalization and informalization) ⁸

N.B: Propositions 5, 6, 7 add up to unity (one) arithmetically spelling-out the underlying assumption of sector importance. Hence, when their time series properties are considered in empirical analysis, the evolution of one sector is to the detriment of other sectors and vice-versa.

Source: Asongu (2015a).

³ Lines 24 and 25 of the International Financial Statistics (October 2008).

⁴ Lines 24, 25 and 45 of the International Financial Statistics (2008).

⁵ “Accordingly, in undeveloped countries money supply is not equal to liquid liabilities or bank deposits. While in undeveloped countries bank deposits as a ratio of money supply is less than one, in developed countries this ratio is almost equal to 1. This indicator appreciates the degree by which money in circulation is absorbed by the banking system. Here we define ‘financial formalization’ as the propensity of the formal banking system to absorb money in circulation” (Asongu, 2015a, p. 432).

⁶ “This indicator measures the rate at which the semi-formal financial sector is evolving at the expense of formal and informal sectors” (Asongu, 2015a, p. 432).

⁷ “This proposition appreciates the degree by which the informal financial sector is developing to the detriment of formal and semi-formal sectors” (Asongu, 2015a, p. 432).

⁸ “The proposition measures the deterioration of the formal banking sector in the interest of other financial sectors (informal and semi-formal). From common sense, propositions 5 and 8 should be almost perfectly antagonistic, meaning the former (formal financial development at the cost of other financial sectors) and the latter (formal sector deterioration) should almost display a perfectly negative degree of substitution or correlation” (Asongu, 2015a, p. 432).

This paper examines a panel of 53 African nations with data for the period 2004 to 2011. The data is obtained from the Financial Development and Structure Database (FDSD) and African Development Indicators (ADI) of the World Bank. Information sharing offices are measured with private credit bureaus (PCB) and public credit registries (PCR) (see Triki & Gajigo, 2014). Two types financial sector measurements are used, notably: Proposition 5 (or financial sector formalization) and Proposition 7 (or financial sector informalization). Whereas because of constraints in degrees of freedom, Proposition 6 (or financial sector semi-formalization) is not used, there is a high degree of substitution between Proposition 7 and Proposition 8 (or financial sector non-formalization).

The measures of financial sector development adopted in the study are consistent with the policy syndrome surrounding surplus liquidity articulated in the introduction. First, financial allocation efficiency is measured as the ability to transform mobilised deposits into credit with (i) banking-system-efficiency (“banking system credit” on “banking system deposits”) and (ii) financial-system-efficiency (“financial system credit” on “financial system deposits”). Second, two indicators of financial allocation activity are also employed, namely (i) banking system activity (“private domestic credit by deposit banks”) and (ii) financial system activity (“private domestic credit by deposit banks and other financial institutions”).

The adopted empirical strategy is the Quantile regressions approach. For lack of space, we invite the interested reader to find more insights into narratives surrounding the estimation technique in Asongu and Nwachukwu (2016).

3. Conclusion

Two main findings are established. First, the positive association between “information sharing offices (ISOs)” and “formal financial sector development” consistently increases with improvements in initial levels of credit access. Second, the negative linkage between ISOs and “informal financial sector development” consistently decreases with increasing levels of credit access. The employment of hitherto unexplored dimensions of financial sector development merges two main strands of the literature by contributing at the same time to the growing stream of literature on measuring financial development and the economic development literature on channels by which ISOs interact with the coexistence of financial sectors to affect financial access. Hence, in summary we have provided insights into a practical way by which to disentangle financial access benefits from the interactions between various financial sectors and ISOs. An extended version of this paper can be found in Asongu and Nwachukwu (2016).

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