

Finance and Democracy in Africa

Simplice A. Asongu^a

Abstract: *This paper focuses on how political regimes affect financial developments in Africa and the role of dominant religion, income levels and colonial legacies in this regard. The findings indicate that authoritarian regimes have a higher propensity to effect policies that favour the development of financial intermediary depth, activity and size. Democracy has important effects on the degree of competition for public offices but is less significant in influencing policies related to promoting financial development when compared with autocracies. Once democracy is initiated, it should be accelerated (to edge out the appeals of authoritarian regimes) to reap the benefits of level and time hypotheses in financial development.*

Keywords: Banking, Democracy, Development, Finance, Politics

JEL Classification: E40, E50, O10, P16, P50

Article Received: 26 July 2012; Article Accepted: 27 May 2013

1. Introduction

Political regimes and their contributions to economic growth, welfare, civil liberties and financial development have marked the geo-political landscape of the African continent in recent years. The Arab Spring has reignited the debate over the influence of political institutions on the destinies of those who depend on their policies for a livelihood. Tunisia, Egypt, Libya, Algeria, Morocco, Senegal, Ivory Coast, Uganda, Zambia, Mauritania, Sudan, Western Sahara, Bahrain, Syria, Yemen, Jordan, Oman, Lebanon, Saudi Arabia among others have recently witnessed major or minor revolutions through civil resistance in the form of strikes, demonstrations, marches and rallies and the use of social-media to organise, communicate and raise awareness in dealing with state-sponsored repressions and internet censorship.

These unprecedented uprisings have left political economists, researchers, governments and international policy makers pondering over the following concerns: How do national religious inclinations exert influence on financial developments? How do income levels matter in financial development? What bearing do legal origins have on financial development prospects? Do income-

^a Corresponding Author. African Governance and Development Institute, Yaoundé, Cameroon. *E-mail:* asongusimplice@yahoo.com

levels, dominant religions and colonial legacies influence the political regimes in developing policies related to financial development? How do democracy and autocracy affect financial development dynamics which are influenced by three important factors: dominant religion, legal traditions and income brackets? This work seeks to address this.

The remainder of the paper is organised in the following manner: Section 2 reviews existing literature. Data and methodology are presented and outlined respectively in Section 3. Section 4 presents and discusses the empirical analysis. We draw conclusions and summarise main findings in Section 5.

2. Literature review

2.1 Existing strands

2.1.1 Democracy and growth

The relationship between political democracy and economic growth has been a centre of debate over the past decades. A bulk of cross-country research has shown a theoretical divide on the impact of democratic (versus authoritarian) regimes on growth. Literature on this subject is highly divided on the effects of democracy on economic growth. From a theoretical perspective, Clague et al. (1996) and Haggard (1997) argue that democracy is a more effective political tool in promoting economic growth compared with autocracy, but Rao (1984) and Blanchard and Shleifer (2000) disagree.

Proponents of democracy postulate that for citizens to be motivated to work and invest, effective allocation of resources in the marketplace and profit-maximisation of private activity are crucial and must be maintained in a climate that promotes civil liberty, free-flowing information and secure control of property (North, 1990; Doucouliagos and Ulubasoglu, 2008). Democracies can in the form of state intervention, improve responsiveness to the public's demand on education, justice and health and, most importantly, encourage sustained and stable growth (Rodrik, 2000; Baum and Lake, 2001, 2003).

Conversely, opponents of democracy posit that democracies lend themselves to popular demands at the expense of profitable investments and can neither be insulated from the interest of rent-seekers nor mobilise resources swiftly and effectively. In the same vein, democracies are said to be prone to conflicts due to social, ethnic and class struggles. While some authors believe authoritarian regimes play an important role in suppressing conflicts, resist sectional interests and take coercive measures if necessary to ensure rapid growth, others emphasise the role of markets and institutions irrespective of political regime-type (Bhagwati, 1995). Democracy, it is argued, presents a risk to growth because it is open to pressures from interest groups (Olson, 1982). Rao (1984) postulates that two-thirds of the world's population are living under

nondemocratic forms of government principally because democratic institutions have failed to respond to the immediate demands of the population to raise the standard of living. In his assessment, authoritarian regimes orchestrate economic growth by sacrificing current consumption for investment which makes them rather effective at mobilising savings. Blanchard and Shleifer (2000) compare fiscal federalism in China and Russia to demonstrate that political centralisation in the former reduces the risk of capture and the scope for competition for rents by local governments. In contrast, the emergence of a partly dysfunctional democracy in transitional Russia inhibits economic growth due to rampant local capture and competition for rents.

Shen (2002) cuts adrift the cross-country mainstream approach to empirical examination of the democracy-growth nexus and proposes a “before-and-after” analytical approach. His paper compares the economic performance of 40 countries before and after they became democracies or semi-democracies over the last four decades and finds evidence that an improvement in growth performance typically follows the transformation to democracy. In the same vein, growth appears to be more stable under authoritarian regimes. Interestingly, rich countries often experience declines in growth after a democratic transformation whereas poor nations typically experience accelerations in growth. Growth change appears to be negatively associated with initial savings ratio and positively linked to the export ratio to GDP.

Doucouliaqos and Ulubasoglu (2008) have challenged the consensus that the relationship is not apparent with democracy-growth meta-analysis. They have applied meta-regressions to a population of 470 estimates derived from 81 papers (on the democracy equals growth association) and drawn the following conclusions. (1) Based on available published works, there is little evidence that democracy is detrimental to growth since the former has no direct effect on the latter. Evidence suggests only a robust and significant indirect effect on growth. (2) Results are consistent with democracies being associated with higher human capital accumulation, lower political instability, lower inflation and higher economic freedom. (3) Democracies are also associated with greater restrictions pertaining to international trade. (4) Economic growth linked to democratic regimes is higher in Latin America and lower in Asia but insignificant in Africa.

2.1.2. Democracy and finance

Literature stresses the importance of political and legal institutions in promoting financial development, which is widely viewed as necessary for economic growth (King and Levine, 1993; Levine and Zervos, 1998). Institutions that abide by the rule of law, protect property rights as well as enforce contracts (and put effective constraints on rulers) are associated with higher levels of

financial development (La Porta et al., 1998; Rajan and Zingales, 2003; Haber et al., 2007; Asongu, 2011ab, 2012a, 2014a).

Democracy is conducive to the growth of powerful state and semi-state institutions to ensure accountability and transparency of the ruling regime; in fact, democracy is characterised by popular participation, political competition for public offices and institutional constraints on rules (Siegle et al., 2004). For example, democracy ensures political checks and balances, responsiveness to citizens, self-correcting mechanisms, openness and other good institutions. La Porta et al. (2002) suggest that democratic regimes encourage financial development by discouraging government ownership of financial institutions. Borrowing from Haber et al. (2007), transparency and competitiveness in a country's political system also allow openness and competitiveness of its financial system. Thus, democracies by promoting political participation and competition limit the power of the state to control and repress the financial system while diminishing the chance for both predatory and opportunistic behaviour, consequently generating a more competitive and efficient banking system. Countries with greater checks and balances provide greater protection against expropriation ensuring a better banking system and more advanced stock markets (Acemoglu and Johnson, 2005). In the same vein, the presence of competitive elections, political oversight are crucial for growth protection of property rights and contract enforcement (North and Weingast, 1989).

2.2 Case of Africa

Several studies have investigated the effects of political variables on economic growth in Africa (Ghura, 1995; Ojo and Oshikoya, 1995; Easterly and Levine, 1997; Guillaumont *et al.*, 1999). Others have examined the ramifications of political instability on savings or investment (Gyimah-Brempong and Traynor, 1996, 1999). To the best of our knowledge, there has been no study that has examined the relationship between finance and democracy in the African continent; this is an important missing link in the literature. This paper seeks to investigate the role of political regimes in the development of financial intermediary dynamics. The study is especially important given the role of politics in financial and human developments, the recent waves of revolution that have marked the Arab-Spring, the role of institutions in the rule of law, protection of private property rights and enforcement of contracts as well as the undeveloped state of financial and democratic institutions in Africa. This paper assesses how income levels, colonial legacies and the dominant religion influence political regimes which in turn affect of financial development dynamics in terms of depth, efficiency, activity and size.

The paper contributes to the literature by analysing how and in which way national religious inclinations exert influence on financial dynamics, how

income levels matter in financial development and finally what bearing legal origins have on financial development prospects. Do income levels, dominant religion and colonial legacies affect the quality of political institutions? How do democracy and autocracy affect financial development dynamics in the context of religious domination, legal traditions and income brackets? Moreover, given the unprecedented nature of the Arab Spring on which this work is partly motivated, some form of arbitrariness in the hypotheses to be tested is required.

3. Data and Methodology

3.1 Data

We examine a panel of 34 African countries (Appendix 4) with data (Appendix 3) from African Development Indicators (ADI) and the Financial Development and Structure Database (FSDS) of the World Bank (WB). The balanced panel is from 1980 to 2010 owing to constraints in data availability. For clarity in presentation, we classify selected variables into the following categories.

3.1.1 Dependent variables

a) Financial depth

Borrowing from the FSDS and recent studies on the financial system in Africa (Asongu, 2013ab, 2014bc), we measure financial depth from economic and financial system perspectives with indicators of broad money supply (M2/GDP) and financial system deposits (Fdgdp) respectively. The former represents the monetary base plus demand, saving and time deposits while the latter denotes liquid liabilities. Since we are dealing exclusively with developing countries, we distinguish liquid liabilities from money supply because a great chunk of the monetary base does not transit through the banking sector (Asongu, 2011c). The two indicators are in ratios of GDP (see Appendix 3) and can robustly check each other as either accounts for over 97% of information in the other (see Appendix 2).

b) Financial intermediation efficiency

The term financial efficiency here refers neither to the profitability-oriented concept nor to the production efficiency of decision making units in the financial sector (through Data Envelopment Analysis - DEA). What this paper seeks to elucidate is the ability of banks to effectively fulfill their fundamental role of transforming mobilised deposits into credit for economic operators. We employ indicators of banking-system-efficiency and financial-system-efficiency (respectively 'bank credit on bank deposits: Bcbd' and 'financial system credit on financial system deposits: Fcfd'). These financial allocation

efficiency proxies can check against each other as they represent more than 89% of variability in one another (see Appendix 2).

c) Financial size

In accordance with the FDSO, financial intermediary size is the ratio of “deposit bank assets” to the “total assets” (deposit bank assets on central bank assets plus deposit bank assets: Dbacba).

d) Financial activity

Financial intermediary activity refers to the ability of banks to grant credit to economic operators. We proxy for both bank-sector-activity and financial-sector-activity with “private domestic credit by deposit banks: Pcrb” and “private credit by domestic banks and other financial institutions Perbof” respectively. The latter measure checks the former as it represents more than 92% of information in the former (see Appendix 2).

3.1.2 Independent variables

In accordance with the democracy-finance (growth) literature (Narayan et al., 2011; Yang, 2011), we measure political regimes with indicators of “Polity” and “Democracy” from the ADI of the WB. The Polity measure has been widely used in political science research and discloses the state’s level of democracy (about 89%: see Appendix 2) based on an evaluation of competitiveness, openness and level of participation at elections. We add an indicator of “Autocracy” to check its robustness.

3.1.3 First-stage control variables

In line with literature findings (Asongu, 2012a; Yang, 2011) we control for population growth, openness (trade) and public investment, in the finance (democracy)-instrument regressions. It is worth noting that these control variables are important in the first-stage regressions to confirm the strength of the instruments. In the Instrumental Variables (IV) estimation procedure, the instruments must be exogenous to the endogenous components of the independent variables conditional on other covariates (control variables).

3.1.4 Second-stage control variables

The choice of control variables in the second-stage of the IV procedure is very important for goodness of fit in model specification since they should be valid both from theoretical and empirical perspectives. Borrowing from literature (Asongu, 2012a), the paper adopts inflation as the second-stage control variable. The empirical validity of the choice of this indicator is presented in Table 2

of Section 4.2. Owing to limited degrees of freedom (from over-identifying restrictions test constraints), we stop at one control variable for the second-stage regressions in the IV variable estimation approach¹.

3.1.5 Instrumental variables

Previous studies (La Porta *et al.*, 1997; Stulz and Williamson, 2003; Beck *et al.*, 2003; Asongu, 2011a, 2012b, 2014a; Yang, 2011) have demonstrated the correlation between political (financial) institutions and “moment” conditions of legal origins, income levels and dominant religion. The instruments have also been employed in recent studies on African finance (Asongu, 2012c) and human development literature (Asongu, 2013c).

The summary statistics, correlation analysis (showing the nexuses among key variables used in the paper), variable definitions and sampled countries are presented in the appendices. The ‘summary statistics’ (Appendix 1) of the variables used in the estimations shows that there is some variation in the data used so that one is confident that reasonable estimated relationships should emerge. The objective of the correlation matrix (Appendix 2) is to mitigate concerns of over-parameterisation and multicollinearity. Based on an initial assessment of the correlation coefficients, there appear to be no serious issues in terms of the relationships to be estimated. Definitions and corresponding sources of the variables are presented in Appendix 3 while sampled countries are disclosed in Appendix 4.

3.2 Methodology

3.2.1 Endogeneity

While democracy might account for better financial development, a reverse causality cannot be ruled out especially as market pressures do influence the quality of political institutions. This potential correlation between independent variables and the error term in the equation of interest is taken into account by using an Instrumental Variable (IV) estimation technique.

3.2.2 Estimation Technique

Borrowing from Beck *et al.* (2003), the paper adopts the Two-Stage-Least Squares (TSLS) with religion, income level and legal origin dynamics as instrumental variables. As highlighted earlier, the paper requires an estimation technique that takes account of endogeneity. When independent variables are correlated with the error term in the equation of interest, the IV estimator can avoid the bias of inconsistent estimates from Ordinary Least Squares (OLS). Thus, the IV model assesses how the moment conditions are instrumental in shaping the financial development dynamics of depth, efficiency, activity and

size. Borrowing from Asongu (2011ab) the IV process of the paper shall adopt the following steps:

- (i) justify the use of an IV over an OLS estimation technique with the Hausman-test for endogeneity;
- (ii) Show that instrumental variables are exogenous to the endogenous components of explaining variables (political-regime channels), conditional on other covariates (control variables);
- (iii) Verify if the instrumental dynamics are valid and not correlated with the error-term in the equation of interest with an Over-Identifying Restrictions (OIR) test.

The above methodology will have the following stages:

First-stage regression:

$$Political\ Channel_{it} = \gamma_0 + \gamma_1 (legalorigin)_i + \gamma_2 (religion)_i + \gamma_3 (incomelevel)_i + \alpha_i X_{it} + v_{it} \quad (1)$$

Second-stage regression:

$$Finance_{it} = \lambda_0 + \lambda_1 (DemocraticChannel)_{it} + \lambda_2 (AutocraticChannel)_{it} + \beta_i X_{it} + \mu_{it} \quad (2)$$

In the two equations, X is a set of independent control variables. For the first and second equations, v and u respectively denote the disturbance terms. Instrumental variables are legal origins, dominant religion and income levels.

3.2.3 Over-parameterisation and multicollinearity issues

The over-parameterisation and multicollinearity claim is simply based on the fact that if the Democracy and Polity IV indicators are included in the same regression, the high correlation rate (of over 0.75) will make one of the estimated coefficients negative and insignificant in relation to the other. Accordingly, to include two variables which are highly correlated in the same model is by definition an issue of overparameterisation because the same information is contained in both variables at the height of the correlation coefficient (multicollinearity). This explanation is extended to the choice of instrumental variables which reflect perfect negative correlations for the most part (see English versus French or Christian versus Islam in Appendix 2).

Another dimension of over-parameterisation worth elucidating is the degrees of freedom needed for an OIR test. There are five instruments. Hence, only less than five endogenous explaining variables can be included in a model. Why? Simply because the Sargan OIR test for instrument validity is feasible

only in case of over-identification (where the instruments must be higher than the endogenous explaining variables by at least one degree of freedom). If we use five explaining variables, this will result in exact-identification. If we use more than five explaining variables, it will result in under-identification. The two latter cases represent issues of over-parameterisation. Our use of four explaining variables will provide us with a degree of freedom necessary for the Sargan OIR test which is one of the information criteria (beside R^2 and Fisher statistics).

In light of the above, two main criteria will be applied in the selection of variables to be included in the models. (1) The avoidance of over-parameterisation and multicollinearity that may substantially bias estimated coefficients in the choice of endogenous explaining and instrumental variables. (2) Constraints in the degrees of freedom necessary for the OIR test of instrument validity.

3.2.4 Checking for Robustness

In order to assess the robustness of results, the paper (1) uses alternative indicators of each financial dynamics; (2) employs different measures of democracy; (3) adopts two interchangeable sets of instruments and; (4) assesses validity of the African results with sub-Saharan African regressions (excluding South Africa and Northern African countries).

4. Empirical Analysis

This section presents results from panel regressions to assess the importance of instrumental variables in explaining cross-country variances in financial development dynamics, the ability of instrumental variables to explain cross-country differences in political-regime institutions and the ability of the exogenous components of political-regime channels to account for cross-country differences in terms of financial development dynamics.

4.1 Finance and instruments

In Table 1, we regress the financial intermediary dynamics on the instruments. We classify the instrumental variables into two sets to avoid issues related to multicollinearity and over-parameterisation². Thus we regress proxies for each indicator within each financial dynamic on a distinct set of instruments. Our use of alternative indicators with different sets of instruments at every phase of the analysis ensures the robustness of the findings. The results in the Table 1 indicate that distinguishing African countries by income levels, dominant religion and legal origins help explain cross-country differences in financial development. These findings have been documented by many studies (La Porta

Table 1: Finance and instruments

	Financial Depth		Financial Efficiency		Financial Activity		Financial Size	
	iM2	FdGdp	BcBd	FcFd	Perb	Perbof	Dbaoba	Dbaoba
	1 st Set	2 nd Set	1 st Set	2 nd Set	1 st Set	2 nd Set	1 st Set	2 nd Set
Constant	0.400*** (15.05)	0.203*** (9.818)	0.637*** (11.84)	0.907*** (14.10)	0.276*** (12.71)	0.208*** (7.906)	0.533*** (21.55)	0.527*** (34.26)
English	---	0.055*** (4.840)	---	-0.352*** (-9.956)	---	0.034** (2.412)	---	-0.103*** (-7.535)
French	-0.029** (-2.315)	---	0.383*** (12.60)	---	0.001 (0.139)	---	0.103*** (7.535)	---
Christianity	---	-0.041*** (-3.526)	---	0.161*** (4.444)	---	0.004 (0.289)	---	-0.002 (-0.177)
Instruments								
Islam	0.067*** (5.178)	---	-0.056* (-1.748)	---	0.017 (1.609)	---	0.002 (0.177)	---
L.Income	-0.141*** (-9.358)	---	-0.099*** (-2.840)	---	-0.131*** (-10.68)	---	-0.112*** (-6.992)	---
M. Income	---	0.187*** (12.27)	---	0.260*** (5.486)	---	0.276** (14.30)	---	0.201*** (10.15)
LMIncome	---	-0.047*** (-2.966)	---	-0.136*** (-2.769)	---	-0.123*** (-6.139)	---	-0.089*** (-4.290)
UMIncome	0.037** (2.118)	---	-0.011 (-0.262)	---	0.062*** (4.331)	---	0.089*** (4.290)	---
Control								
Trade	-0.0003** (-2.061)	-0.0003** (-2.013)	---	-0.001*** (-3.320)	-0.0004*** (-3.001)	-0.001*** (-5.580)	0.002*** (10.19)	0.002*** (10.19)
Public Ivt.	0.007*** (5.101)	0.007*** (5.337)	-0.007** (-2.209)	-0.005 (-1.381)	0.002* (1.688)	0.0007 (0.461)	---	---
Pop. growth	-0.027*** (-5.071)	-0.029*** (-5.951)	0.049*** (3.742)	0.044*** (2.915)	-0.012*** (-2.749)	-0.017*** (-2.761)	---	---
Adjusted R ²	0.258	0.304	0.176	0.169	0.260	0.234	0.295	0.295
Fisher-test	42.234*** 830	53.055*** 834	31.878*** 868	25.221*** 834	42.672*** 829	37.542*** 836	80.070*** 945	80.070*** 945

M2: Money Supply. FdGdp: Liquid liabilities. BcBd: Bank credit on Bank deposit (Banking Intermediary System Efficiency). FcFd: Financial credit on Financial deposits (Financial Intermediary System Efficiency). Perb: Private domestic credit (Banking Intermediary Activity). Perbof: Private credit from domestic banks and other financial institutions (Financial Intermediary Activity). Dbaoba: Deposit bank assets on deposits banks plus central bank assets (Financial size). L: Low. LM: Lower Middle. UM: Upper Middle. Ivt: Investment. Pop: population. *, **, ***, significance levels of 10%, 5% and 1% respectively.

et al., 1997; Stulz and Williamson, 2003; Beck et al., 2003) and very recently confirmed in the law (democracy) and finance literature (Asongu, 2011a, 2014a, 2012bc; Yang, 2011). Even after controlling for trade, public investment and population growth, the instrumental dynamics enter jointly and significantly in all regressions at a 1% significance level.

The dominance of countries practising English common law (French civil law) in financial depth, activity and size (efficiency) is consistent with recent literature on African law and finance (Asongu, 2011ab, 2012a, 2014a). Results also indicate that Christian-dominated countries have higher levels of financial efficiency (depth) than their Muslim counterparts. Income levels also matter in financial development as poorer countries have a lower propensity to improve their financial dynamics than the wealthier ones. This postulation is boosted by the role Upper Middle Income (UMI) countries play in Middle Income (MI) elasticities. While Lower Middle Income (LMI) effects are negative, their combined effect with UMI countries in the MI elasticity is positive.

4.2 Political regimes and instruments

Table 2 investigates how instrumental dynamics shape the quality of political institutions and the validity of the inflation indicator as a control variable in the second stage of the IV approach. The regression in the first stage is the initial condition for the IV process in which the endogenous components of the political-regime channels must be explained by the instruments conditional on other covariates (control variables). Clearly, distinguishing African countries by instrumental dynamics helps elucidate cross-country differences in political institutions. Additionally, the validity of inflation as a control variable is consistent with recent empirical literature (Asongu, 2011d); for example, the low level of inflation in Francophone African countries which practice French civil law is associated with their fixed-exchange rate regimes.

Countries with English common-law (Islam-oriented) have more functional democratic institutions than those adhering to French civil law (Christian-dominated countries). This finding is antagonistic to the ‘democracy deficiency’ conclusions in the Arab world propounded by El Badawi and Makdisi (2007). Two important circumstances surrounding the difference in results are worth pointing out: (1) While El Badawi, and Makdisi have conducted a comparative analysis between countries in the Arab World and Latin America, sub-Saharan Africa and OECD countries, this paper’s focus is exclusively African. (2) In their study, oil is negatively associated with democracy, exemplified by oil producing Arab countries which lack important democratic institutions and vibrant democratic practices. But oil is found in both Muslim and Christian Africa. There is evidence of a U-shape relationship between national wealth and the level of democracy with Low-income countries experiencing lower (higher) levels of democracy than Upper (Lower) middle income countries.

Table 2: Endogenous independent variables and instruments (First-Stage regressions)

	Endogenous Explaining Variables (EEV)						Control EEV	
	Democracy		Polity(Revised)		Autocracy		Inflation	
	1 st Set	2 nd Set	1 st Set	2 nd Set	1 st Set	2 nd Set	1 st Set	2 nd Set
Constant	1.475*** (2.765)	1.061** (2.364)	-1.158 (-1.407)	-0.106 (-0.154)	2.805*** (4.853)	1.109** (2.281)	23.827*** (7.966)	6.700** (2.502)
English	---	2.138*** (8.396)	---	2.651*** (6.747)	---	-0.418 (-1.518)	---	15.069*** (10.40)
French	-2.138*** (-8.396)	---	-2.651*** (-6.747)	---	0.418 (1.518)	---	-15.06*** (-10.40)	---
Christianity	---	-0.485* (-1.838)	---	-0.373 (-0.918)	---	-0.065 (-0.230)	---	0.212 (0.138)
Islam	0.485* (1.838)	---	0.373 (0.918)	---	0.065 (0.230)	---	-0.212 (-0.138)	---
L.Income	1.239*** (4.094)	---	3.329*** (7.127)	---	-2.180*** (-6.650)	---	-1.845 (-1.079)	---
M. Income	---	2.207*** (6.459)	---	2.382*** (4.520)	-0.111 (-0.300)	---	---	-1.723 (-0.909)
LMincome	---	-3.446*** (-9.651)	---	-5.711*** (-10.37)	2.291*** (5.926)	---	-3.569* (-1.816)	3.569* (1.816)
UMIncome	3.446*** (9.651)	---	5.711*** (10.37)	---	-2.291*** (-5.926)	---	---	---
Trade	0.008** (2.227)	0.008** (2.227)	0.011** (1.987)	0.011** (1.987)	-0.003 (-0.940)	-0.003 (-0.940)	-0.099*** (-4.811)	-0.099*** (-4.811)
Public lvt.	0.052* (1.784)	0.052* (1.784)	-0.054 (-1.213)	-0.054 (-1.213)	0.110*** (3.501)	0.110*** (3.501)	-0.067 (-0.407)	-0.067 (-0.407)
Pop. growth	-0.313*** (-2.929)	-0.313*** (-2.929)	-0.891*** (-5.402)	-0.891*** (-5.402)	0.570*** (4.922)	0.570*** (4.922)	2.111*** (3.429)	2.111*** (3.429)
Adjusted R ²	0.206	0.206	0.207	0.207	0.093	0.093	0.134	0.134
Fisher-test	34.439***	34.439***	34.555***	34.555***	14.249***	14.249***	19.998***	19.998***
Observations	899	899	899	899	899	899	855	855

L: Low. LM: Lower Middle. UM: Upper Middle. lvt: Investment. Pop: population. ***, **, *, significance levels of 10%, 5% and 1% respectively.

4.3 Finance and democracy

Table 3 investigates two main concerns: (1) whether the exogenous components of political-regime channels explain finance conditional on the instruments and; (2) if the instruments help explain financial dynamics beyond political-regime channels. We use the IV regressions to conduct the investigations entailing a simultaneous examination of equations (1) and (2). The first issue is examined by looking at the significance of the estimated coefficients while the second is assessed by the OIR test whose null hypothesis is that instruments do not explain finance beyond political-regime channels. Robustness checks are carried out in three stages: (1) the use of alternative indicators of political-regimes and financial dynamics; (2) the political channels are instrumented with two different sets of moment conditions and; (3) an independent regression for SSA countries (excluding South Africa and Northern Africa) is performed for the consistency of sub-continental results.

We first justify the choice of the IV estimation technique with the Hausman test for endogeneity. The null hypothesis of this test is the position that estimators by OLS are efficient and consistent. Thus a rejection of this null hypothesis attests to the presence of endogeneity and in which case the independent variables are correlated with the error term in the equation of interest. Results fully validate the presence of endogeneity in all eight models. With regards to the first issue which is resolved by the significance of the estimates, it could be concluded that autocratic-regimes are more favourable to financial intermediary development dynamics of depth, activity and size. These findings are broadly consistent with literature (Olson, 1982; Bhagwati, 1995; Blachard and Shleifer, 2000).

Owing to the relatively undeveloped state of African economies, democracies lend themselves to popular demands for immediate consumption at the expense of profitable investments for financial development. By the same token, democracies could be prone to conflicts resulting from social, ethnic and class struggles that retard financial intermediary activities due to instability. In summary, democracy in the African continent presents a potential risk to financial development because it may be vulnerable to pressures from competing interest groups (Olson, 1982). On the contrary, authoritarian regimes in Africa suppress conflicts, resist sectional interests and take coercive measures for rapid financial intermediary development. Our results on financial depth and activity confirm the findings of Rao (1984) who postulated that authoritarian regimes propel economic growth by sacrificing current consumption for investment which makes them rather effective at mobilising savings. Mobilised savings is a direct source of liquid liabilities and growth in money supply. Most African democracies are dysfunctional and thus, rampant local capture and competition for rents seriously undermine the development of the financial sector.

Table 3: Two-stage least squares regressions

	Financial Depth		Financial Efficiency		Financial Activity		Financial Size	
	M2	Fdgd	BcBd	FcFd	Perb	Perbof	Dbaeba	Dbaeba
Constant	-0.319* (-1.827)	-0.347** (-2.376)	1.060*** (6.776)	1.294*** (7.491)	-0.294** (-2.127)	-0.290* (-1.960)	0.211 (1.439)	0.233* (1.673)
Democracy	0.092*** (4.038)	---	-0.014 (-0.708)	---	0.074*** (4.366)	---	0.093*** (4.446)	---
Polity 2(Revised)	---	0.086*** (4.710)	---	-0.008 (-0.399)	---	0.094*** (4.937)	---	0.090*** (4.580)
Autocracy	0.144*** (3.767)	0.216*** (4.512)	0.019 (0.580)	-0.030 (-0.540)	0.115*** (3.770)	0.208*** (4.260)	0.124*** (3.810)	0.210*** (4.446)
Inflation	-0.007** (-2.420)	-0.005** (-2.177)	-0.020*** (-7.426)	-0.022*** (-7.434)	-0.007*** (-3.345)	-0.009*** (-3.534)	-0.012*** (-4.023)	-0.012*** (-4.155)
Hausman-test	194.26***	226.96***	96.046***	79.366***	241.51***	162.424***	168.681***	168.97***
OIR-Sargan test	0.326	0.000	0.233	2.647	0.048	0.946	0.245	0.121
P-value	[0.567]	[0.978]	[0.629]	[0.103]	[0.825]	[0.330]	[0.620]	[0.727]
Cragg-Donald	4.183	4.902	4.751	4.902	4.349	4.679	5.000	5.281
Adjusted R ²	0.012	0.021	0.067	0.047	0.033	0.027	0.058	0.063
Fisher Statistics	6.004***	7.587***	32.306***	24.703***	7.778***	9.074***	8.583***	9.092***
Observations	909	913	945	913	908	915	914	914

Initial Instruments Constant; English ; Christianity; Middle Income; Lower Middle Income

Robust Instruments Constant; French; Islam; Lower Income; Upper Middle Income

*, **, ***: significance levels of 10%, 5% and 1% respectively. M2: Money Supply. Fdgd: Liquid liabilities. BcBd: Bank credit on Bank deposit (Banking Intermediary System Efficiency). FcFd: Financial credit on Financial deposits (Financial Intermediary System Efficiency). Perb: Private domestic credit (Banking Intermediary Activity). Perbof: Private credit from domestic banks and other financial institutions (Financial Intermediary Activity). Dbaeba: Deposit bank assets on deposits banks plus central bank assets (Financial size). L: Low. LM: Lower Middle. OIR: Overidentifying Restrictions.

Conversely, authoritarian regimes with political centralisation reduce both the risk of capture and the scope of competition for rents by local governments. In terms of financial development policies in the continent, authoritarian regimes can produce more efficient mechanisms for effective mobilisation of savings for investment.

Pertaining to the second issue, it could be said that the instruments do not explain finance beyond political-regime channels, implying they (instruments) are valid and do not suffer from the inconvenience of endogeneity as the endogenous independent variables. The control variable (inflation) is significant as inflation seriously hampers financial intermediary development.

Table 4 shows results for SSA countries excluding South Africa and Northern Africa. We did not include Algeria, Egypt, Morocco and Tunisia from the initial data set. But for financial intermediary aspects of depth and efficiency, results are specifically consistent with those in Table 3. Findings for financial depth and efficiency are also broadly consistent with those reported in Table 3. The only difference in interpretation with respect to the depth and efficiency channels is that the instruments do not explain finance specifically through political-regime mechanisms. This partial invalidity of the instruments does not however change the general interpretation of the results. In Tables 3-4, for robustness purposes, we replicate the regressions with the second set of instrumental variables and find no alteration in the results.

Drawing on recent literature related to effects of democracy on financial development, the findings in the paper complement those of Yang (2011) who found a positive relationship between democracy and the development of the banking sector. However, it is worth pointing out that Yang's work is of global appeal and has used only one indicator of bank sector development (bank credit). The positive link is only present in cross-country regressions and disappears in regressions controlling for country-specific factors. While this paper does not investigate the stock market dimension owing to relatively scarce data, Yang (2011) has found no significant relationship between democracy and stock market development. Thus again, we have complemented Yang (2011) with a measure of authoritarian regimes for which comparative estimates indicate that while democracy is attractive for the development of financial intermediary sector, authoritarian regimes are more appealing in an African context. Our results are consistent with Mulligan et al. (2004) who found that democracies have important effects on the degree of competition for public offices but have less significant impact compared with autocracies in relation to policies promoting financial development.

Table 4: Two-stage least squares regressions without South Africa and Northern Africa

	Financial Depth		Financial Efficiency		Financial Activity		Financial Size	
	M2	FdgdP	BeBd	FcFd	Perb	Perbof	Dbacba	Dbacba
Constant	-0.055 (-0.504)	-0.192 (-1.587)	1.131*** (5.199)	1.346*** (6.035)	-0.155 (-1.332)	-0.088 (-0.936)	0.214 (1.226)	0.231 (1.368)
Democracy	0.047*** (3.428)	---	-0.014 (-0.508)	---	0.044*** (3.002)	---	0.073** (3.013)	---
Polity 2(Revised)	---	0.057*** (3.663)	---	-0.047 (-1.629)	---	0.036*** (2.951)	---	0.073*** (3.040)
Autocracy	0.061** (2.241)	0.134*** (3.027)	0.027 (0.514)	-0.052 (-0.641)	0.076*** (2.638)	0.098*** (2.834)	0.130*** (2.915)	0.200*** (3.156)
Inflation	-0.0008 (-0.517)	-0.0007 (-0.420)	-0.026*** (-7.382)	-0.025*** (-7.344)	-0.004*** (-2.742)	-0.003*** (-2.683)	-0.011*** (-3.354)	-0.011*** (-3.403)
Hausman-test	76.072***	147.181***	179.669***	220.813***	99.964***	58.158***	81.674***	81.609***
OIR-Sargan	4.578** [0.032]	4.635** [0.031]	9.625*** [0.001]	3.699* [0.054]	0.364 [0.546]	1.498 [0.220]	0.251 [0.616]	0.271 [0.602]
P-value	1.810	2.065	2.491	2.065	2.006	2.065	2.548	2.603
Cragg-Donald	0.002	0.009	0.075	0.095	0.022	0.019	0.047	0.049
Adjusted R ²	6.253***	6.800***	33.309***	41.201***	3.427**	3.286**	4.351***	4.433***
Fisher Statistics	767	773	804	773	773	773	769	769
Observations								

Initial Instruments Constant; English ; Christianity; Middle Income; Lower Middle Income
 Robust Instruments Constant; French; Islam; Lower Income; Upper Middle Income

*, **, ***: significance levels of 10%, 5% and 1% respectively. M2: Money Supply. FdgdP: Liquid liabilities. BeBd: Bank credit on Bank deposit (Banking Intermediary System Efficiency). FcFd: Financial credit on Financial deposits (Financial Intermediary System Efficiency). Perb: Private domestic credit (Banking Intermediary Activity). Perbof: Private credit from domestic banks and other financial institutions (Financial Intermediary Activity). Dbacba: Deposit bank assets on deposits banks plus central bank assets (Financial size). L: Low. LM: Lower Middle. OIR: Overidentifying Restrictions.

4.4 Further discussion, caveats and policy recommendations

The role of authoritarian regimes (implied by our findings) could also be elucidated from cross-country differences in terms of policies on good governance. Thus, political regimes provide the regulatory environment for financial development. This implies the absence of adequate mechanisms that minimise corruption, boost government effectiveness, ensure political stability or prevention of violence, promote freedom of expression and accountability, rule of law and regulatory quality, could seriously infringe on the proper development of the financial intermediary sector.

There are many qualitative studies providing exhaustive case studies depicting how corruption (good governance) increases (decreases) with the advent of democracy. This is the case with many developing countries in Africa (Lemarchand, 1972) and Southeast Asia (Scott, 1972), India (Wade, 1985) and Turkey (Sayari, 1977) as well as post-communist Russia (Varsee, 1997) and many Latin American countries which have witnessed waves of democratisation (Weyland, 1998). This contradictory relationship between democracy and corruption has been confirmed by a stream of quantitative studies (Harris-White and White, 1996; Sung, 2004).

Our findings can be further elucidated via two hypotheses highlighting the non-linear relationship between political regimes and management effectiveness of the financial system. The time and level hypotheses have been tested independently to validate the existence of a non-linear relationship between democracy and financial institutional quality. Concerning the level of democracy hypothesis and using continuous measures of political regimes, it has been found that institutional quality is highest in strongly democratic states, medium in strongly authoritarian regimes and least in states that are partially democratised. With respect to these varying empirical specifications, the level oriented non-linearity has been defined as either U-shaped (Montinola and Jackman, 2002), S-shaped (Sung, 2004), or J-shaped (Back and Hadenius, 2008). According to the time of exposure hypothesis, Keefer (2007) has shown that younger democracies produce worse institutions than older ones. In summary, partial or young democracies perform worse (worst) than authoritarian (full or older democratic) regimes. It follows that most African countries are young democracies which establish institutions that govern the financial intermediary sector less efficiently than authoritarian regimes.

As a policy implication, once democracy is initiated, it should be accelerated (to edge out the appeals of authoritarian regimes) to reap the benefits of level and time hypotheses in financial development.

5. Conclusion

This aim of this paper is to explore the impact of political-regime channels on financial intermediary dynamics of depth, efficiency, activity and size which are conditional on income level, legal origins and religious instrumental variables. The findings can be summarised as follows: (1) Authoritarian regimes have a higher propensity to effect policies that favour the development of financial intermediary sector in terms of depth, activity and size. (2) Christian-dominated countries have higher levels of financial efficiency (depth) than their Muslim counterparts. (3) Income levels also matter in financial development as poorer countries have a much lower propensity to improve their financial dynamics than wealthier ones. (4) On average, countries that practise English common law have better democratic institutions than those adhering to French civil law. (5) There is evidence of a U-shape relationship between national wealth and the level of democracy with Low-income countries experiencing lower (higher) levels of democracy than Upper (Lower) middle income countries.

In short, democracies have important effects on the degree of competition for public offices but are ineffective compared with authoritarian regimes when it comes to policies promoting financial intermediary development. As a policy implication, once democracy is initiated, it should be accelerated (to edge out the appeals of authoritarian regimes) to reap the benefits of level and time hypotheses in financial development.

Acknowledgement

The author is highly indebted to the editor and referees for their very useful comments.

Notes

- ¹ An OIR test is only applicable in the presence of over-identification, that is, the instruments must be higher than the endogenous explaining variables by at least one degree of freedom. In the cases of exact-identification (instruments equal to endogenous explaining variables) and under-identifications (instruments less than endogenous explaining variables) an OIR test is by definition impossible.
- ² For instance, countries practising English common law and French civil law have a perfectly negative correlation coefficient. In the same vein, Christian-oriented and Islam-dominated countries have a perfectly negative coefficient of correlation (see Appendix 2).

References

- Acemoglu, D. and Johnson, S. (2005) "Unbundling Institutions", *Journal of Political Economy*, 113: 949-994.

- Asongu, S. A. (2011a) "Law, Finance, Economic Growth and Welfare: Why does Legal Origin Matter?", *MPRA Paper No. 33868*.
- Asongu, S. A. (2011b) "Law and Investment in Africa", *MPRA Paper No. 34700*.
- Asongu, S. A. (2011c) "New Financial Intermediary Development Indicators for Developing Countries", *MPRA Paper No. 30921*.
- Asongu, S. A. (2011d) "Why do French Civil-Law Countries have Higher Levels of Financial Efficiency?", *Journal of Advanced Research in Law and Economics*, 2(2): 94-108.
- Asongu, S. A. (2012a) "On the effect of foreign aid on corruption", *Economics Bulletin*, 32(2): 2174-2180.
- Asongu, S. A., (2012b) "Government quality determinants of stock market performance in African countries", *Journal of African Business*, 13(2): 183-199.
- Asongu, S. A. (2012c) "Law and Finance in Africa", *Brussels Economic Review*, 55(4): 385-408.
- Asongu, S. A. (2013a) "Fighting Consumer Price Inflation in Africa: What do Dynamics in Money, Credit, Efficiency and Size Tell us?", *Journal of Financial Economic Policy*, 5(1): 39-60.
- Asongu, S. A. (2013b) "Real and Monetary Policy Convergence: EMU Crisis to the CFA zone", *Journal of Financial Economic Policy*, 5(1): 20-28..
- Asongu, S. A. (2013c) "Globalization and Human Development: Implications for Africa", *International Journal of Development Issues*, 12(3): 213-238.
- Asongu, S. A., (2014a) "Law, Finance and Investment: Does Legal Origin Matter in Africa?", *The Review of Black Political Economy*, 41(2): 145-175.
- Asongu, S. A. (2014b) "African Financial Development Dynamics: Big Time Convergence", *African Journal of Economic and Management Studies*, 5(2): 160-194.
- Asongu, S. A. (2014c) "Are Proposed African Monetary Unions Optimal Currency Areas? Real, Monetary and Fiscal Policy Convergence Analysis", *African Journal of Economic and Management Studies*, 5(1): 9-29.
- Baum, M. A., and Lake, D. A. (2001) "The Invisible Hand of Democracy: Political Control and the Provision of Public Services", *Comparative Political Studies*, 34: 587-621.
- Baum, M. A. and Lake, D. A. (2003) "The Political Economy of Growth: Democracy and Human Capital", *American Journal of Political Science*, 47: 333-347.
- Beck, T., Demirgüç-Kunt, A. and Levine, R. (2003) "Law and finance: why does legal origin matter?", *Journal of Comparative Economics*, 31: 653-675.
- Bhagwati, J. (1995) "Democracy and Development: New Thinking on an old Question", *Indian Economic Review*, 30(1): 1-18.
- Blanchard, O. and Shleifer, A. (2000) "Federalism with and without Political Centralization; China versus Russia," *NBER Working Paper No. 7616*.
- Clague, C., Keefer, P, Knack, S. and Olson. M. (1996) "Property and Contract Rights in Autocracies and Democracies," *Journal of Economic Growth*, 1: 243-76.

- Doucouliagos, H. and Ulubasoglu, M., A. (2008) "Democracy and Economic Growth: A Meta-Analysis", *American Journal of Political Science*, 52(1):61-83.
- Easterly, W. and Levine, R. (1997) "Africa's Growth Tragedy: Policies and Ethnic Divisions", *Quarterly Journal of Economics*, 112: 1203-1250.
- El Badawi, I. and Makdisi, S. (2007) "Explaining the Democracy Deficit in the Arab World", *The Quarterly Review of Economics and Finance*, 46: 813-831.
- Ghura, D. (1995) "Macro Policies, External Forces and Economic Growth in Sub-Saharan Africa", *Economic Development and Cultural Change*, 43: 759-778.
- Gyimah-Brempong, K. and Traynor, T. L. (1996) "Political Instability and Savings in Less Developed Countries: Evidence from Sub-Saharan Africa", *Journal of Development Studies*, 32: 695-714.
- Gyimah-Brempong, K. and Traynor, T. L. (1999) "Political Instability, Investment and Economic Growth in Sub-Saharan Africa", *Journal of African Economies*, 8:52-86.
- Guillaumont, P., Jeanneney, S. G. and Brun, J. F. (1999) "How Instability Lowers African Growth", *Journal of African Economies*, 8: 87-107.
- Haber, S., North, D. and Weingast, B. (eds.), (2007) *Political Institutions and Financial Development*, Stanford, CA: Stanford University Press,
- Haggard, S. (1997) *Democratic Institutions and Economic Policy*, in Christopher Clague (ed.), *Institutions and Economic Development*, Baltimore: Johns Hopkins University Press.
- Harris-White, B. and White, G. (1996) *Liberalization and New Forms of Corruption*, Brighton: Institute of Development Studies.
- King, R. G. and Levine, R. (1993) "Finance and growth: Schumpeter Must be Right", *Quarterly Journal of Economics*, 108: 717-737.
- La Porta, R., Lopez-de-Silanes, F. and Shleifer, A. (2002) "Government Ownership of Banks", *Journal of Finance*, 57: 265-301.
- La Porta, R., Lopez-de-Silanes, F., Shleifer, A. and Vishny, R. W. (1997) "Legal Determinants of External Finance", *Journal of Finance*, 52:1131-1150.
- La Porta, R., Lopez-de-Silanes, F., Shleifer, A. and Vishny, R. W. (1998) "Law and finance", *Journal of Political Economy*, 106:1113-1155.
- Lemarchand, R. (1972) "Political Clientelism and Ethnicity in Tropical Africa: Competing Solidarities in Nation-Building", *American Political Science Review*, 66(1): 68-85.
- Levine, R., and Zervos, S. (1998) "Stock Markets, Banks, and Economic Growth", *American Economic Review*, 88: 537-558.
- Mulligan, C. B., Gil, R. and Sala-i-Martin, X. (2004) "Do Democracies have Different Public Policies than on Nondemocracies", *Journal of Economic Perspectives*, 18: 51-74.
- Narayan, P. K., Narayan, S. and Smyth, R. (2011) "Does Democracy Facilitate Economic Growth or does Economic Growth Facilitate Democracy? An Empirical Study of Sub-Saharan Africa", *Economic Modelling*, 28(3): 900-910.

- North, D. (1990) *Institutions, Institutional Change and Economic Performance*, Cambridge University Press.
- North, D. C. and Weingast, B. (1989) "Constitutions and Commitment: The Evolution of Institutions Governing Choice in Seventeenth-Century England", *Journal of Economic History*, 49: 803-832.
- Olson, M. (1982) *The Rise and Decline of Nations*, New Haven: Yale University Press.
- Ojo, O. and Oshikoya, T. (1995) "Determinants of Long-term Growth: Some African Results", *Journal of African Economies*, 4: 163-191.
- Rajan, R.G. and Zingales, L. (2003) "The Great Reversals: The Politics of Financial Development in the Twentieth Century", *Journal of Financial Economics*, 69:5-50.
- Rao, V. (1984) "Democracy and Economic Development", *Studies on Competitive International Development*, 19: 67-81.
- Rodrik, D. (2000) "Institutions for High-Quality Growth: What They are and How to Acquire Them", *Studies in International Comparative Development*, 35: 3-31.
- Sayari, S. (1977) "Political Patronage in Turkey", in E. Gellner and J. Waterbury (eds.), *Patrons and Clients in Mediterranean Societies*, London: Duckworth: pp.103-113.
- Scott, J. C. (1972) *Comparative Political Corruption*, Englewood Cliffs, NJ: Prentice-Hall.
- Shen, J. (2002) "Democracy and Growth: An Alternative Empirical Approach", Bank of Finland, Institute for Economies in Transition, *BOFIT Discussion Papers 13/2002*.
- Siegle, J. T., Weinstein, M. M. and Halperin, M. H. (2004) "Why Democracies Excel", *Foreign Affairs*, 83: 57-71.
- Stulz, R., M. and Williamson, R., (2003) "Culture, Openness and Finance", *Journal of Financial Economics*, 70: 313-349.
- Sung, H. E. (2004) "Democracy and Political Corruption: A Cross-National Comparison", *Crime Law and Social Change*, 41: 179-194.
- Varese, F. (1997) "The Transition to the Market and Corruption in Post-socialist Russia", *Political Studies*, 45: 579-96.
- Wade, R. (1985) "The Market for Public Office: Why the Indian State is not better at Development", *World Development*, 13: 467-97.
- Weyland, K. (1998) "The Politics of Corruption in Latin America", *Journal of Democracy*, 9 (2): 108-121.
- Yang, B. (2011) "Does Democracy Foster Financial Development? An Empirical Analysis", *Economic Letters*, 112: 262-265.

Appendices

Appendix 1: Summary Statistics

		Variables	Mean	S.D	Min.	Max.	Obsr.
Financial Development	Financial Depth	Money Supply	0.299	0.190	0.001	1.141	938
		Liquid Liabilities	0.228	0.174	0.001	0.948	942
	Financial Efficiency	Banking System Efficiency	0.856	0.517	0.070	5.411	1003
		Financial System Efficiency	0.897	0.505	0.139	3.979	942
	Financial Activity	Banking System Activity	0.176	0.155	0.001	0.869	937
		Financial System Activity	0.200	0.211	0.001	1.739	944
	Fin. Size	Financial System Size	0.686	0.235	0.017	1.609	971
	Democracy/ Autocracy	Democracy	Democracy Index	1.904	3.799	-8.000	10.000
Polity Index(Revised)			-1.701	5.978	-10.000	10.000	1054
Autocracy		Autocracy Index	3.614	3.901	-8.000	10.000	1054
Control Variables	First-Stage Variables	Population growth	2.563	1.117	-8.271	10.043	1054
		Public Investment	7.649	4.211	0.000	31.047	899
		Trade	68.175	37.041	6.320	275.23	1012
	2 nd Stage	Inflation	12.264	21.244	-100.00	200.03	989
Instrumental Variables	Legal Origin	English Common-Law	0.441	0.496	0.000	1.000	1054
		French Civil-Law	0.558	0.496	0.000	1.000	1054
	Religion	Christianity	0.617	0.486	0.000	1.000	1054
		Islam	0.382	0.486	0.000	1.000	1054
	Income Levels	Low Income	0.529	0.499	0.000	1.000	1054
		Middle Income	0.470	0.499	0.000	1.000	1054
		Lower Middle Income	0.294	0.455	0.000	1.000	1054
	Upper Middle Income	0.176	0.381	0.000	1.000	1054	

S.D: Standard Deviation . Min: Minimum. Max: Maximum. Obser: Observations.

Appendix 2: Correlation Analysis

Financial Development				Dependent Variables				Endogenous				Control Variables				Instrumental Variables							
F. Depth	F. Efficiency	F. Activity	F. Size	Dem	Auto	Pol1	Pol2	Popg	Publ	Trade	S.S	Eng.	Frch	Law	Chris	Islam	LJ	MI	LMI	UMI			
M2	Fdgdp	BoBd	FcFd	Pcrb	Perbof	Dbaeba					S.S												
1.000	0.972	-0.11	-0.07	0.74	0.627	0.403	0.14	0.019	0.090	0.081	-0.28	0.160	0.148	-0.12	-0.02	0.028	-0.175	0.175	-0.41	0.412	0.249	0.238	M2
	1.000	-0.12	-0.05	0.78	0.705	0.459	0.21	0.001	0.149	0.135	-0.32	0.159	0.206	-0.12	0.068	-0.06	-0.101	0.101	-0.44	0.448	0.238	0.299	Fdgdp
		1.000	0.89	0.35	0.298	0.242	-0.11	0.090	-0.146	-0.13	0.078	-0.05	-0.048	-0.23	0.388	-0.099	0.099	-0.07	0.072	0.057	0.026	0.026	BoBd
			1.000	0.44	0.507	0.269	-0.02	0.089	-0.075	-0.07	0.085	-0.06	-0.098	-0.24	0.339	0.039	-0.039	-0.10	0.104	0.008	0.126	0.126	FcFd
				1.000	0.926	0.542	0.19	0.022	0.124	0.113	-0.24	0.044	0.145	-0.19	-0.07	0.075	-0.092	0.092	-0.46	0.466	0.230	0.333	Perb
					1.000	0.479	0.21	-0.03	0.164	0.167	-0.22	-0.02	0.058	-0.15	0.008	-0.00	-0.009	0.009	-0.39	0.394	0.127	0.361	Perbof
						1.000	0.17	-0.02	0.136	0.131	-0.14	0.11	0.390	-0.41	-0.15	0.150	-0.009	0.009	-0.40	0.408	0.202	0.306	Dbaeba
							1.000	-0.19	0.89	0.757	-0.12	0.076	0.190	-0.01	0.298	-0.29	0.084	-0.084	-0.05	0.057	-0.17	0.283	Demo
								1.000	-0.596	-0.78	0.144	0.107	-0.003	0.048	-0.10	0.104	-0.051	0.051	-0.09	0.096	0.193	-0.10	Auto
									1.000	0.958	-0.16	0.014	0.140	-0.03	0.269	-0.26	0.076	-0.076	0.016	-0.01	-0.23	0.261	Polity1
										1.000	-0.17	-0.01	0.125	-0.04	0.263	-0.26	0.090	-0.090	0.022	-0.02	-0.23	0.25	Polity 2
											1.000	-0.03	-0.124	0.124	-0.04	0.048	0.064	-0.064	0.211	-0.21	-0.14	-0.10	Popg
												1.000	0.269	-0.07	-0.04	0.043	-0.022	0.022	-0.04	0.046	0.016	0.039	Publ
													1.000	-0.12	0.238	-0.23	0.185	-0.185	-0.39	0.397	0.196	0.283	Trade
														1.000	0.329	-0.32	0.061	-0.061	0.090	-0.09	-0.01	-0.09	Inflation
															1.000	-1.00	0.211	-0.211	0.007	-0.00	-0.05	0.054	English
																1.000	-0.211	0.211	-0.00	0.007	0.05	-0.05	French
																	1.000	-1.000	0.107	-0.10	-0.28	0.205	Christian
																		1.000	-0.10	0.107	0.289	-0.20	Islam
																			1.000	-1.00	-0.68	-0.49	Lower I
																				1.000	0.684	0.491	Middle I
																					1.000	-0.29	L Middle I
																						1.000	U Middle I

M2: Money Supply, Fdgdp: Liquid liabilities, BoBd: Bank credit on Bank deposit (Banking Intermediary System Efficiency), FcFd: Financial credit on Financial deposits (Financial Intermediary System Efficiency), Perb: Private domestic credit (Banking Intermediary Activity), Perbof: Private credit from domestic banks and other financial institutions (Financial Intermediary Activity), Dbaeba: Deposit bank assets on deposits banks plus central bank assets (Financial size), Demo: Democracy, Poli: Policy, Auto: Autocracy, Popg: population growth, Publ: Public Investment, Infl: Inflation, S.S: Second-Stage control variable, Eng: English Common-Law, Frch: French Civil-Law, Chris: Christianity, LJ: Low Income Countries, MI: Middle Income Countries, LMI: Lower Middle Income Countries, UMI: Upper Middle Income Countries, Free: Freedom of the Press, PFree: Partial Freedom of the Press, NFree: No Freedom of the Press

Appendix 3: Variable Definitions

Variables	Sign	Variable Definitions	Sources
Democracy	Demo	Institutionalised Democracy(-10 to +10)	World Bank (WDI)
Polity	Pol	Revised Combined Polity Score (-10 to +10)	World Bank (WDI)
Autocracy	Auto	Institutionalised Autocracy (-10 to +10)	World Bank (WDI)
Inflation	Infl.	Consumer Prices (Annual %)	World Bank (WDI)
Openness	Trade	Imports (of goods and services) plus Exports (of goods and services) on GDP	World Bank (WDI)
Public Investment	PubI	Gross Public Investment (% of GDP)	World Bank (WDI)
Population growth	Popg	Average annual population growth rate	World Bank (WDI)
Growth of GDP	GDPg	Average annual GDP growth rate	World Bank (WDI)
Economic financial depth(Money Supply)	M2	Monetary Base plus demand, saving and time deposits (% of GDP)	World Bank (FDSD)
Financial system depth(Liquid liabilities)	Fdgd	Financial system deposits (% of GDP)	World Bank (FDSD)
Banking system allocation efficiency	BcBd	Bank credit on Bank deposits	World Bank (FDSD)
Financial system allocation efficiency	FcFd	Financial system credit on Financial system deposits	World Bank (FDSD)
Banking system activity	Pcrb	Private credit by deposit banks (% of GDP)	World Bank (FDSD)
Financial system activity	Pcrbof	Private credit by deposit banks and other financial institutions (% of GDP)	World Bank (FDSD)
Financial size	Dbacba	Deposit bank assets on Central banks assets plus deposit bank assets	World Bank (FDSD)

Trade: Openness. G.E: Government Final Expenditure. Popg: Population growth rate. GDPg: GDP growth rate. M2: Money Supply. Fdgd: Liquid liabilities. BcBd: Bank credit on Bank deposits. FcFd: Financial system credit on Financial system deposits. Pcrb: Private domestic credit by deposit banks. Pcrbof: Private domestic credit by deposit banks and other financial institutions. Dbacba: Deposit bank assets on Central bank assets plus deposit bank assets. WDI: World Development Indicators. FDSD: Financial Development and Structure Database.

Appendix 4: Presentation of Countries

Instruments	Instrument Category	Countries	Num
Law	English Common-Law	Botswana, The Gambia, Ghana, Kenya, Lesotho, Malawi, Mauritius, Nigeria, Sierra Leone, South Africa, Sudan, Swaziland, Uganda, Zambia, Tanzania.	15
	French Civil-Law	Algeria, Burkina Faso, Burundi, Cameroon, Central African Republic, Chad, Ivory Coast, Egypt, Equatorial Guinea, Ethiopia, Gabon, Madagascar, Mali, Morocco, Niger, Rwanda, Senegal, Togo, Tunisia.	19
Religion	Christianity	Botswana, Burundi, Cameroon, Central African Republic, Ivory Coast, Equatorial Guinea, Ethiopia, Gabon, Ghana, Kenya, Lesotho, Madagascar, Malawi, Mauritius, Rwanda, South Africa, Swaziland, Togo, Uganda, Zambia, Tanzania.	21
	Islam	Algeria, Burkina Faso, Chad, Egypt, The Gambia, Mali, Morocco, Niger, Nigeria, Senegal, Sierra Leone, Sudan, Tunisia.	13
Income Levels	Low Income	Burkina Faso, Burundi, Central African Republic, Chad, Ethiopia, The Gambia, Ghana, Kenya, Madagascar, Malawi, Mali, Niger, Rwanda, Sierra Leone, Togo, Uganda, Zambia, Tanzania.	18
	Middle Income	Algeria, Botswana, Cameroon, Ivory Coast, Egypt, Equatorial Guinea, Gabon, Lesotho, Mauritius, Morocco, Nigeria, Senegal, South Africa, Sudan, Swaziland, Tunisia.	16
	Lower Middle Income	Cameroon, Ivory Coast, Egypt, Lesotho, Morocco, Nigeria, Senegal, Sudan, Swaziland, Tunisia.	10
	Upper Middle Income	Algeria, Botswana, Equatorial Guinea, Gabon, Mauritius, South Africa.	6

Num: Number of cross sections (countries)