AFRICAN GOVERNANCE AND DEVELOPMENT INSTITUTE

A G D I Working Paper

WP/11/013

Law, Finance and Investment: does legal origin matter in Africa?

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 WP/11/013

AGDI Working Paper

Research Department

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November 2011

Abstract

This paper assesses if legal origin explains domestic, foreign, private and public investments through financial intermediary channels of depth, efficiency, activity and size. The findings show that legal origin matters in the finance-investment nexus, though its ability to explain aggregate investment dynamics only through financial intermediary channels is limited in the cases of private and public investments.

JEL Classification: E22; K20; K40 ; P50
Keywords: Law; Finance; Investment; Developing countries

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1. Introduction

The law-finance nexus pioneered by La Porta et al. (1998a, b) has been the subject of much economic research, debate and controversy. One of the controversies centers around the dominance of English common law countries in financial development prospects (Asongu, 2013a,b; Asongu, 2011a). In accordance with Agbor (2011), most empirical studies have fallen short of establishing a direct nexus between legal origin and economic growth. In recent findings, Acemoglu & Johnson (2005) and Klerman et al (2008) have concluded that legal origin cannot explain economic prosperity. While Roe & Siegel (2009) have also presented a range of conceptual and factual evidence in support of why the legal origin explanations are flawed, recent African-focused legal origin findings suggest the contrary (Agbor, 2011; Asongu, 2013a,b; Asongu, 2011a). As far as we have reviewed, two important dimensions are significantly missing in the legal origins debate: investment and Africa.

Investment and finance undoubtedly remain key determinants of growth and development in the African continent. The issue addressed in this paper is the importance of legal origins in explaining cross-country differences in financial factors that are exogenous to aggregate investment dynamics. The work contributes to the law-finance (growth) literature by providing a hitherto unexplored dimension of the Legal Origins Theory. The current summary of the legal origins literature (La Porta et al., 2008) fails to account for an African study that has focused on the effects of colonial legacy in the finance-investment nexus. A reason for this missing component could be traceable to scanty statistics on law indicators before 1996. Therefore, another appeal of this paper is its use of novel data collected after pioneering works on the law-finance nexus to assess hypotheses resulting there-from.

The Legal Origin Theory on which this work is based traces the different strategies of common and civil laws to different ideas and strategies about law (and its purpose) that England and France developed centuries ago. These broad strategies and ideas were incorporated into specific legal rules, but also into the organization of the legal system, as well as the human beliefs and capital of its participants. With conquest of new territory and colonization, human capital, legal ideologies and rules were transplanted as well. In spite of much legal evolution and amendment of law over time (La Porta et al., 1998b), the fundamental strategies and assumptions of each legal system survived and have continued to exert substantial influence on financial and investment outcomes. This theory may be summed-up in one sentence from Zweigert & Kötz (1998): *"the style of a legal system maybe marked by an ideology, that is, a religious or political conception of how economic and social life should be organized"* (p. 72). This paper seeks to assess how *these styles* (of different legal systems) have survived over the years and continue to exert substantial influence on aggregate investment factors through financial dynamics in the African continent. The novel approach of classifying *these styles* into English, French, French sub-Saharan African, Portuguese and North African countries provides exhaustive and thorough insights into an African perspective of the legal origin debate. These new categorizations are meant to provide results with more targeted policy implications. Moreover it is important to distinguish North African countries because their proximity to Europe rewards them with significantly greater development as compared with more remote Sub-Saharan countries. For clarity of purpose and motivation, the literature pertaining to this paper will be classified into two main strands: why legal origin matter in economic performance and scope of the law-finance nexus.

1.1 Why does legal origin matter in economic performance?

For organizational purposes the literature that has been devoted to addressing the question could be classified in four main categories.

In the first category, several papers have considered ownership of particular economic activities and government regulation. Djankov et al. (2002) observe the number of steps an entrepreneur must complete in order to begin operating a business legally, a number that in 1999 varied from two in Australia and Canada to twenty-one in the Dominican Republic. They assess the impact of such entry-regulation on corruption and the size of the unofficial economy. Djankov at al. (2003a) examine government ownership of the media which remains extensive around the world, especially the television. Botero et al. (2004) construct indices of labor market regulation and assess their influence on labor force participation rates and unemployment. Mulligan and Shleifer (2005a, 2005b) examine one of the ultimate forms of government intervention in private military conscription.

The second category of papers assesses the effects of legal origins on the features of the judiciary and other government organs on the one hand; and on the other hand, the effects of those (features of the judiciary) on the security of property rights and contract enforcement. Djankov et al. (2003b) investigate the formalism of judicial procedures in various countries and its effects on the time it takes to evict a nonpaying tenant or to collect a bounced check. This factor can be given a broader interpretation as the efficiency of contracts enforcement by courts and in fact turns out to be significantly correlated with the efficiency of debt collection in Djankov et al. (2006). La Porta et al. (2004) adopt a very different approach and collect data from national constitutions on judicial independence and the acceptance of appellate court

rulings as a source of law. They examine whether judicial independence contributes to the security of property rights and the quality of contract enforcement.

In the third category, several studies after La Porta et al. (1997, 1998a) have assessed the effects of legal origins on investor protection on the one hand, and the effect of investor protection on financial development on the other hand. Some literature pertaining to this category is focused on stock markets. The La Porta et al. (1998a) measure of anti-director rights has been replaced by a measure of shareholder protection through securities laws (La Porta et al., 2006) and by another measure of shareholder protection from self-dealing by corporate insiders via corporate law (Djankov et al., 2008). As dependent variables, these studies use such measures as dividend payouts (La Porta et al., 2000a), the ratio of stock market capitalization to GDP, the voting premium, the pace of public offering activity (Dyck & Zingales, 2004), Tobin's Q (La Porta et al., 2002) and ownership dispersion (La Porta et al., 1999a). Forecast for each of these variables emanate from standard agency models of corporate governance in which investor protection guides external finance (Shleifer & Wolfenzon, 2002). Another strand of the literature in this category has focused on creditor rights. A case in point is the La Porta et al. (1997, 1998a) measure from bankruptcy law that has been updated by Djankov et al. (2007) who have examined several subjective assessments of the quality of private debt markets. La Porta et al. (2002) focus on the State's involvement in financial markets by assessing government ownership of banks. Djankov et al. (2006) use a different approach to creditor protection by looking at the actual efficiency of debt enforcement, as appreciated by creditor recovery rates in a hypothetical case of a firm that is insolvent. These latter studies examine the common criticism that it is law enforcement, rather that rules of books, which count in investor protection by integrating legal rules and features of efficiency measure.

In the last category, we devote space to explaining why English common law countries are expected to perform economically better than their French civil law counterparts. Consistent with Agbor (2011), Maddison (1971) has argued that one of the important legacies of British colonization is that its former colonies inherited relatively lower levels of taxation because the indirect rule is less expensive to administer compared to direct rule. Austin (2008, p. 1011) has also disputed that until very late in the colonial period, there was no direct taxation in southern Ghana and Nigeria, which are two of the most successful British colonies in tropical Africa. Accordingly, this implies that former British colonies are associated with relatively lower levels of distortions in economic activity via taxation which in turn provide incentives for greater private investment or more domestic free trade. Moreover, there is a wealth of literature showing that educational policy was potentially the area of greatest distinction between different imperial administrations of colonies. In essence, it is widely believed that England pursued more enlightened educational policies in its colonies than did France whose prime motivation was substantially to train personnel for colonial bureaucracy (Agbor, 2011)[2]. As far as we have reviewed, Agbor is the first to simultaneously examine a range of feasible transmission mechanisms between colonial origin and economic performance in Africa. Results from the study for the period 1960-2000 suggest that former British colonies marginally have higher income levels than former French colonies due to differences in trade openness and human capital, attributable to colonial legacies.

[2] "*mission teachers in British Africa not only taught their pupils how to read and write, but also taught them how to try their hands at many different jobs because the teachers themselves, besides giving lessons, were also engaged in such diverse activities as constructing their own buildings, cultivating their own crops, experimenting in agriculture and building roads*" (Gann & Duignan, 1970, p. 354).

In light of the above, legal origins plays an important role in financial development and growth. In order to understand the investment dimension of the paper, it is important to examine the current scope and positioning of the law-finance (growth) nexus in the debate.

2.2 The scope of the law-finance nexus

Before we position the paper, it is first of all interesting to discuss the scope of the literature on the law-finance nexus. Four main strands summarize this scope.

The first strand consists of a growing body of work which suggests that cross-country variances in legal origin explain cross-country differences in financial development. La Porta at al. (1997, 1998a,b) pioneered this strand and ever since, many authors have followed suit in the assertion that English common law countries have better prospects for financial development than their French civil law counterparts. They postulate that countries with common law legacies (French civil law origins) provide for the strongest (weakest) legal protection to creditors and shareholders (La Porta et al., 1998a, b; 2000a, b). The edge common law countries have over those with civil law has been extended to other aspects of government and management: better institutions with less corrupt governments (La Porta et al., 1999b), more informative accounting standards (La Porta et al., 1998b) and more efficient courts (Djankov et al., 2003b). Whereas this strand has been largely dedicated to understanding "if" legal-origin count in financial development, the concern of "why" legal origin matter constitutes the second strand.

For the sake of clarity and avoidance of monotony, among studies identified in the second strand, we shall elaborate on Beck et al. (2003) not highlighted in Section 2.1. They have shed light on the issue of "why" legal origin matter in financial development by empirically assessing two channel-oriented theories. The political channel lays emphasis on how legal traditions differ in the priority they attribute to the rights of individual investors vis-à-vis the

State. Thus, championing investors rights should induce financial development. The adaptability channel postulates that legal traditions vary in their capacity to adapt to changing business conditions. Therefore, countries in which legal systems provide for adjustments with regard to changing and evolving circumstances should naturally be rewarded with higher levels of financial development. In summary, this strand sheds some light on the "why" puzzle by asserting that legal origin matters in financial development because, traditionally legal origins differ in their ability to adjust and adapt efficiently to changing and evolving economic conditions.

In the third strand, we find literature championing the law-finance (growth) nexus which is based on a positive finance-led-growth nexus (McKinnon, 1973). This assertion is shared at country-level (King & Levine, 1993; Levine & Zervos, 1998; Allen et al., 2005), as well as at industry- and firm-levels (Jayaratne & Strahan, 1996; Rajan & Zingales, 1998). Thus we find evidence of the link among law, finance and economic growth at firm, industry and country levels (Demirguc-Kunt & Maksimovic, 1998; Beck & Levine, 2002).

The fourth strand that focuses on African countries is pioneered by the Mundell (1972) conjecture, which theorized that Anglophone countries shaped by British activism and openness (to experiment) would naturally be rewarded with higher levels of financial development than their French counterparts (shaped by Francophone reliance on monetary stability and automaticity)[3]. Recent legal origin literature has either wholly (Agbor, 2011) or partially (Asongu, 2013a) confirmed the superiority of English common law over French civil law legal

[3] "*The French and English traditions in monetary theory and history have been different… The French tradition has stressed the passive nature of monetary policy and the importance of exchange stability with convertibility; stability has been achieved at the expense of institutional development and monetary experience. The British countries by opting for monetary independence have sacrificed stability, but gained monetary experience and better developed monetary institutions*" (Mundell, 1972; pp.42-43).

systems in growth and finance prospects respectively[4]. From a historical perspective, the partition of sub-Saharan Africa (SSA) into British and French spheres in the 19th century resulted in the implementation of different colonial policies[5]. An important finding in Asongu (2013a)[6] has debunked the dominance of English common law countries in prospects of financial development. Accordingly, Asongu (2011a)[7] has also used an "inflation-uncertainty" theory to substantiate the theoretical validity and empirical justification of why French civil law countries have higher levels of financial allocation efficiency. Another line in this debate has reflected human development, with Asongu (2011b) assessing the link among law, economic and human development.

In light of the scope of this literature, as far as we have reviewed the influence of colonial legacies on financial development has been substantially covered (La Porta et al., 1998b, 1999b, 2000b; Djankov, 2003b; Beck et al., 2003). However the investment dimension of the legal

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[4] While Agbor (2011) investigates how legal traditions affect economic performance, Asongu (2013a) has proposed four theories in assessing why legal origin matter in growth and welfare. Both studies are focused on the sub-Saharan part of Africa.

[5] The British and French implemented two very different colonial policies. While the French imposed a highly centralized bureaucratic system that clearly underlined empire-building, the British administered decentralized, flexible and pragmatic policies. Economic ambitions dominated British colonial activities who sought to transform their colonies into commercially viable trading countries through the indirect-rule: producing raw material and consuming British manufactures. The French on their part propagated an imperial ambition through the policy of assimilation.

[6] *"This paper proposes and empirically validates four theories of why legal origin influences growth and welfare through finance. It is a natural extension of "Law and finance: why does legal origin matter?" by Thorsten Beck, Asli Demirgüç-Kunt and Ross Levine (2003). We find only partial support for the Mundell (1972), La Porta et al. (1998) and Beck et al. (2003) hypotheses that English common-law countries tend to have better developed financial intermediaries than French civil-law countries. While countries with English legal tradition have legal systems that improve financial depth, activity and size, countries with French legal origin overwhelmingly dominate in financial intermediary allocation efficiency. Countries with Portuguese legal origin fall in-between"* (Asongu, 2013a; p.1).

[7] *"The dominance of English common-law countries in prospects for financial development in the legal-origins debate has been debunked by recent findings. Using exchange rate regimes and economic/monetary integration oriented hypotheses, this paper proposes an "inflation uncertainty theory" in providing theoretical justification and empirical validity as to why French civil-law countries have higher levels of financial allocation efficiency. Inflation uncertainty, typical of floating exchange rate regimes accounts for the allocation inefficiency of financial intermediary institutions in English common-law countries. As a policy implication, results support the benefits of fixed exchange rate regimes in financial intermediary allocation efficiency"* (Asongu, 2011a; p.1).

origins debate remains missing for the African continent. A reason for this missing component could be traceable to scanty statistics on law indicators in the continent before 1996. Hence, the aim of the present paper is to assess how legal origin matters in the effect of finance on investment. The contributions of the study to the literature have already been discussed in Section 1. The remainder of the paper is organized in the following manner. Section 2 discusses hypothetical financial channels linking aggregate investment dynamics to legal origins. Data sources and methodology are discussed and outlined respectively in Section 3. Empirical analysis and discussion of results are covered in Section 4. We conclude with Section 5.

2. Law, legal origin, finance and investment theory

The nexus between investment and finance is postulated in terms of financial channels of depth, activity, efficiency and size.

On the financial depth mechanism, borrowing from Demirgüç-Kunt et al. (1999) and Asongu (2013a), we postulate that the quantity of money supply in the economy (M2/GDP) and the amount of money held by deposit money banks (liquidity liabilities) broadly represent the financial depth channel. From monetary theory, financial depth is directly linked to the velocity of money which depends on economic activity. Economic activity is exogenous to investment and thus financial depth is a channel to investment. Consistent with the law-finance theory, financial depth should be higher in countries with English common law than in countries with French civil law legacy because the former provides for a more appealing atmosphere for openness and competition. It results that economic conditions that favor openness and competition will naturally be rewarded with higher levels of financial depth at overall economic (M2/GDP) and bank (liquidity liabilities) levels.

The positive link between financial allocation efficiency and investment is intuitively clear. In line with Asongu (2011a), French civil law countries will turn to experience higher levels of financial intermediary allocation efficiency both at bank (banking system efficiency) and economic (financial system efficiency) levels. This is partly due to the low level of inflation typical of fixed exchange rate regimes that characterize most French civil law countries in the African continent. It logically follows that French civil law countries should be rewarded with higher levels of investment through allocation efficiency.

On the financial size channel, the relative importance of openness and competition should induce a broader financial system in common law countries than in those with French civil law. With a competitive atmosphere (in which a country is opened to trade and capital as emphasized by common law tradition), improvements in financial transactions and institutions will have a direct impact on broadening the size of the financial system. Thus it logically follows that on average; the financial size of civil law countries is likely correlated with less investment than that of their common law counterparts.

Financial activity is a corollary to financial depth as the latter is a direct result of the former (Asongu, 2013a). In light of the explanation provided in Section 2.1, we should expect English common law countries to experience higher levels of financial activity and correspondingly better levels of investment.

3. Data and Methodology

3.1 Data

We assess a sample of 38 African countries with French, British and Portuguese legal origins (see Appendix 1). Consistent with legal amendments over time (La Porta et al., 1998b), we add dummies of French sub-Sahara and North Africa to the list of instrumental variables. The

non-financial data is obtained from African Development Indicators (ADI) of the World Bank (WB) and range from 1996 to 2007 due to constraints in the availability of law indicators (which only date from 1996). Financial intermediary variables are in line with the Financial Development and Structure Database (FDSD) of the WB by Demirgüç-Kunt et al. (1999). As highlighted by Beck et al. (2003) from Berkowitz et al. (2002), it is important to distinguish between legal origin countries (United Kingdom, the U.S.A, France, Germany, Austria and Switzerland) which make-up the legal traditions from transplant countries which received the legal legacies. For the purpose of this work, this fact does not represent an issue because legal origins are fundamentally used as instruments.

3.1.1 Financial channels

We are unable to collect data on financial markets because Côte d'Ivoire is the only country in Francophone SSA with information on stock markets. Moreover, the regional structure of its market makes it difficult to disentangle individual contributions of the eight West African countries that constitute the regional stock market (seven French legal origin countries and one Portuguese legal tradition country). Conversely, there are many English law tradition countries with stock market information (Ghana, Kenya, Malawi, Mauritius, Namibia, Nigeria, Swaziland, Tanzania, Uganda, Zambia, Zimbabwe…etc). The four North African countries also have stock market data. However since majority of countries do not, this disparity poses a practical hitch of coming-up with harmonious evaluation criteria for the financial market data. We are therefore poised to limit the analysis to the financial intermediary sector. The financial channels are narrowed from a plethora of financial development indicators (see Appendix 2). First and foremost, we take all financial intermediary development indicators of the FDSD into account. Then we perform a correlation analysis based on the conceptual framework for financial

dynamics of depth, efficiency, size and activity (Demirgüç-Kunt et al., 1999). Last, our selection of variables pertaining to each dynamic is shaped by: (1) usages in the finance-growth literature and; (2) the desire to obtain robust results for each financial intermediary dynamic.

a) Financial depth

We evaluate financial depth both from overall-economic and financial system perspectives with indicators of broad money supply (*M2/GDP*) and financial system deposits (*Fdgdp*) respectively. Whereas the former represents the monetary base (M0) plus demand, saving and time deposits, the latter denotes liquid liabilities (or deposits) of the financial system. It is relevant to distinguish these proxies because a great chunk of the monetary base does not transit through the formal banking sector of developing countries. The reason we use the M2/GDP ratio as an explanatory variable of investment is that it includes savings deposits of various types or durations. Such savings provide funds for businesses to finance their investments. Both variables in ratios of GDP should robustly check one another as either account for over 97% of information in the other (see Appendix 3).

b) Financial efficiency

By financial efficiency, we neither refer to the profitability-focused concept of financial efficiency nor to the production efficiency of decision making units in the financial sector (through Data Envelopment Analysis). What we seek to emphasis is the ability of banks to effectively fulfill their fundamental role of transforming mobilized deposits into credit for economic operators. We account for two measures: banking-system-efficiency and financial-system-efficiency, respectively 'bank credit on bank deposits: *Bcbd'* and 'financial system credit on financial system deposits: *Fcfd'*. These two financial intermediary allocation efficiency proxies can also check each other as either represents more than 88% of variability in the other

(see Appendix 3). The intuition for including financial allocation efficiency is that it reflects the ability of banks to grant credit (relative to deposits) in the financing of investment operations.

c) Financial size

Borrowing from the FDSD, we measure financial intermediary activity as the ratio of 'deposit bank assets' to 'total assets' (deposit bank assets on central bank assets plus deposit bank assets: *Dbacba*). Unfortunately we could not find another indicator of financial size despite an exhaustive search, thorough literature review, numerous computations and correlation analyses. Assets in this definition refer to the amount of credit granted by banks. Hence, the greater the financial size, the more credit available for investment opportunities.

d) Financial activity

The paper defines financial intermediary activity as the ability of banks to grant credit to economic operators. We appreciate banking system activity with 'private domestic credit by deposit banks: *Pcrb*' and measure financial system activity with 'private credit by deposit banks and other financial institutions: *Pcrbof*'. For robustness purpose, the latter indicator checks the former as it represents more than 93% of information in the former (see Appendix 3). The motivation for including this measure of financial development is that, it broadly mirrors the amount of credit granted by banks for the financing of investment activities.

3.1.2 Investment dynamics

The investment variables entail: Gross Domestic Investment, Foreign Direct Investment, Gross Public Investment, Gross Private Investment and Gross Fixed Capital Formation. The very high correlation between domestic investment and fixed capital formation (see Appendix 3) compels us to drop the latter in preference for the former.

3.1.3 Instrumental variables

We assess traditional legal origin dummies for the French, English and Portuguese colonial legacies. In order to improve our contribution to the literature, we add dummies for North Africa and SSA. The dummies are primarily used as instruments. But for the SSAfrican French dummy which reflects about 85% of the French legal origin dummy, all other dummies reflect quite distinct information or variability (see Appendix 3). The use of legal origin dummies as instrumental variables has been substantially documented in the law-finance literature (Beck et al., 2003; Asongu, 2011 a,b; Asongu, 2012a,b; Asongu, 2013a,b).

3.1.4 Control variables

The control variables are in line with the finance-growth literature (Levine & King, 1993; Hassan et al., 2011). We shall thus control for trade, population growth, inflation, GDP growth, GDP per capita growth as well as government's general final consumption expenditure in the investment-finance regressions. From intuition, we expect trade, population growth, GDP growth, GDP per capita growth and government expenditure to broadly positively influence investment and financial development, while inflation should have the opposite effect.

3.1.5 Choice of endogenous explaining variables for control at the second-stage of the 2SLS

The choice of endogenous covariates for control at the second-stage of the 2SLS estimation method is very imperative for goodness of fit and model specification. These covariates must a priori be justified by an underlying theory in which they are endogenous to the instruments. Borrowing from the law-finance literature (La Porto at al., 1998b; Beck et al., 2003; Asongu 2013b), we control for regulation quality and the rule of law at the second-stage of the 2SLS approach.

3.1.6 Brief comparative analysis

Table 1 below shows comparative summary statistics for the English, French, French sub-Saharan, Portuguese and North African countries. A close look suggests that while English, Portuguese (with the exception of Private investment) and North African (but for Foreign investment) are above average (data mean) in investment dynamics, French sub-Saharan and French countries are well below continental averages. Sub-Saharan French countries on average have lower levels of investment than the overall French mean. Regarding law variables: only English common law and North African countries are above the continental averages and; French countries surpass French SSAfrican and Portuguese countries with the latter (but for the rule of law) having an edge on the latest.

Turning to financial development variables, contrary to popular consensus, North African countries on average dominate in financial intermediary aspects of depth, size and activity. This could be due to the proximity with Europe. What is also quite remarkable and consistent with recent law-finance literature is the overwhelming dominance of countries with French civil law origin in financial intermediary efficiency (Asongu, 2013a,b; Asongu, 2011a). Law indicators are also found to be least in Portuguese and French sub-Saharan countries and highest on average in North African countries. This heterogeneity justifies the basis of including sub-Saharan and North African dummies in the empirical strategy.

While countries with French civil law have the lowest levels of inflation, English common law countries (with the exception of Portuguese countries) reflect the highest level of trade. These preliminary findings from comparative summary statistics are in line with our

expectations and consistent with the law-finance (growth) literature (Asongu, 2013a,b; Agbor, 2011)[8].

3.1.7 Brief analysis of tests of difference in means

The purpose of the test for the difference in means between samples (legal origins) of the population (African continent) is to assess whether differentiating various indicators by legal origin is really worthwhile. Therefore, statistically significant differences in the means between various instruments across variables indicate that classifying African countries by legal origins helps explain cross-country variations in the indicators under consideration.

In Table 2 (but for private investment in Panel B) there is significant evidence of differences in instrument-means across variables. It is not unexpected that not all tests should be significant to justify the adoption of legal origin dummies as instruments (La Porta et al., 1998b; pp. 1131-1148).

3.2 Methodology

Consistent with the law-finance (growth) literature, we adopt the Two Stage Least Squares (2SLS) estimation technique with legal origin dummies as instrumental variables (Beck et al., 2003; Agbor, 2011; Asongu, 2011 a,b; Asongu, 2012a,b; Asongu, 2013a,b). This estimation method has the particular advantage of addressing the concern of endogeneity. The Instrumental Variable (IV) estimator can therefore avoid the bias that Ordinary Least Squares (OLS) estimates experience when covariates in the regression are correlated with the error term.

[8] With the exception of Portuguese countries, English countries reflect higher levels of trade because they traditionally have legal systems that provide for openness (in trade and capital) and competition: this is in line with Agbor (2011). Conversely it is not unexpected that countries with French legal tradition should have the lowest levels of inflation. French colonial monetary legacy is focused on lowering levels of inflation because their former colonies have sacrificed financial independence and monetary experience for exchange stability (Asongu 2013a,b).

More so, an IV estimation strategy is typically consistent with the problem statement: the examination of how legal origins affect investment dynamics through financial channels. The following steps are adopted in the approach:

-first, we justify our preference for a 2SLS over an OLS estimation method with the Hausman test for endogeneity;

-second, we verify that the instrumental variables are exogenous to the endogenous components of explaining variables (financial channels), conditional on other covariates (control variables);

-last, the validity of the instruments is assessed with an overidentifying restrictions (OIR) test.

The highlighted methodology entails the following models.

First-stage regression:

$$Finance_{it} = \gamma_0 + \gamma_1(British)_i + \gamma_2(French)_i + \gamma_3(Portuguese)_i + \gamma_4(NorthAfrica)_i + \alpha_i X_{it} + \mu_{it} \quad (1)$$

$$Finance_{it} = \beta_0 + \beta_1(British)_i + \beta_2(Frenchssa)_i + \beta_3(Portuguese)_i + \beta_4(NorthAfrica)_i + \delta_i X_{it} + \eta_{it} \quad (2)$$

Second-stage regression:

$$Investment_{it} = \lambda_0 + \lambda_1(Finance)_{it} + \sigma_i X_{it} + \upsilon_{it} \quad (3)$$

In the three equations, X is a set of control variables. For the first, second and third equations, μ_{it}, η_{it} and υ_{it} denote the disturbance terms respectively. The instruments are the five legal origin dummies with *Frenchssa*: representing the French SSAfrican dummy.

Table 1: Comparative Summary Statistics

Stats	Data	Financial Intermediary Indicators							Investment Variables					Law Vles		Control Variables						Instrumental Variables				
		Depth		Efficiency		Activity		Size																		
		M2	Fd	Bcbd	Fcfd	Pcrb	Pcrbf	Dba	GDI	FDI	PrivI	PubI	FCF	R.Q	R.L	Infl	Tra	Popg	G.E	GDPg	GDPpc	Eng.	Frch.	Port.	Frssa.	Nafri.
	English	0.377	0.32	0.60	0.68	0.20	0.24	0.71	23.2	4.36	13.3	7.42	20.7	0.37	0.40	10.4	87.3	2.10	16.1	4.61	2.45	---	---	---	---	---
	French	0.26	0.18	0.84	0.86	0.14	0.15	0.71	19.7	2.18	12.8	6.36	19.3	0.30	0.27	3.3	64.4	2.59	12.7	4.12	1.52	---	---	---	---	---
Mean	Portuguese	0.34	0.24	0.49	0.48	0.13	0.13	0.68	21.4	4.67	10.7	10.6	21.4	0.26	0.25	121	93.9	2.19	13.0	6.31	3.80	---	---	---	---	---
	Frenchssa	0.19	0.12	0.86	0.88	0.10	0.10	0.67	18.3	2.04	12.1	6.15	18.3	0.28	0.24	3.37	62.6	2.85	12.1	4.04	1.19	---	---	---	---	---
	Northafrica	0.64	0.53	0.72	0.75	0.38	0.41	0.88	24.8	2.83	14.3	8.38	22.9	0.41	0.47	3.63	66.7	1.45	14.9	4.58	3.10	---	---	---	---	---
	Data	0.31	0.24	0.70	0.75	0.17	0.19	0.71	21.2	3.31	12.9	6.96	20.0	0.33	0.32	19.4	76.8	2.35	14.2	4.56	2.15	0.42	0.47	0.10	0.39	0.10
	English	0.27	0.25	0.27	0.49	0.19	0.30	0.26	10.4	5.89	7.65	4.22	9.45	0.18	0.21	15.2	46.0	0.88	5.77	3.78	3.58	---	---	---	---	---
	French	0.17	0.15	0.28	0.30	0.13	0.15	0.17	7.74	4.03	6.60	2.78	7.14	0.14	0.17	8.86	28.7	1.19	4.71	4.31	4.06	---	---	---	---	---
S.D	Portuguese	0.21	0.20	0.18	0.18	0.13	0.13	0.27	4.37	2.52	4.58	1.57	4.37	0.16	0.25	597	35.8	0.37	4.54	7.33	7.08	---	---	---	---	---
	Frenchssa	0.05	0.05	0.24	0.25	0.05	0.05	0.14	7.58	4.27	6.66	2.61	7.36	0.13	0.15	9.68	30.2	1.13	4.83	4.58	4.22	---	---	---	---	---
	Northafrica	0.17	0.15	0.36	0.42	0.19	0.21	0.10	4.58	2.52	5.73	3.47	3.30	0.13	0.14	3.06	19.1	0.33	2.57	2.34	2.35	---	---	---	---	---
	Data	0.23	0.21	0.30	0.40	0.16	0.23	0.22	8.95	5.08	7.01	3.56	8.16	0.17	0.21	201	39.5	1.04	5.41	4.56	4.34	0.49	0.49	0.30	0.48	0.30
	English	0.00	0.00	0.17	0.20	0.00	0.00	0.01	3.48	-5.7	0.27	0.09	3.48	0.04	0.02	-10	17.8	-1.0	5.41	-16.7	-17.1	---	---	---	---	---
	French	0.06	0.02	0.14	0.14	0.02	0.02	0.33	4.30	-8.6	-2.4	1.39	4.31	0.05	0.01	-10	21.5	0.59	2.65	-12.6	-15.1	---	---	---	---	---
Min	Portuguese	0.10	0.05	0.13	0.13	0.01	0.01	0.11	18.3	1.63	5.97	8.55	18.3	0.04	0.01	-3.5	36.8	1.45	6.33	-28.1	-29.6	---	---	---	---	---
	Frenchssa	0.06	0.02	0.21	0.22	0.02	0.02	0.33	4.30	-8.6	-2.4	1.39	4.31	0.05	0.01	-10	21.5	0.70	2.65	-12.6	-15.1	---	---	---	---	---
	Northafrica	0.31	0.23	0.14	0.14	0.04	0.04	0.62	16.8	0.26	2.40	3.56	16.3	0.15	0.10	0.33	38.3	0.59	10.3	-2.22	-3.59	---	---	---	---	---
	Data	0.00	0.00	0.13	0.13	0.00	0.00	0.01	3.48	-8.6	-2.4	0.09	3.48	0.04	0.01	-10	17.8	-1.0	2.65	-28.1	-29.6	0.00	0.00	0.00	0.00	0.00
	English	1.27	1.05	1.40	2.60	0.75	1.52	0.99	63.7	33.2	43.9	25.0	63.5	0.77	0.81	132	224	4.23	35.1	27.4	22.6	---	---	---	---	---
	French	0.97	0.78	1.71	1.64	0.60	0.66	0.99	60.1	34.5	49.5	13.7	59.7	0.69	0.61	31.1	156	10.5	28.7	33.6	29.0	---	---	---	---	---
Max	Portuguese	0.78	0.71	0.80	0.80	0.44	0.44	0.99	30.9	8.58	21.7	13.9	30.9	0.55	0.76	4145	179	3.03	21.2	20.6	17.1	---	---	---	---	---
	Frenchssa	0.36	0.27	1.71	1.64	0.24	0.27	0.99	60.1	34.5	49.5	13.7	59.7	0.69	0.51	31.1	156	10.5	28.7	33.6	29.0	---	---	---	---	---
	Northafrica	0.97	0.80	1.27	1.61	0.60	0.66	0.99	33.6	10.4	27.2	15.1	31.2	0.68	0.61	18.6	108	1.92	19.3	12.2	10.5	---	---	---	---	---
	Data	1.27	1.05	1.71	2.60	0.75	1.52	0.99	63.7	34.5	49.5	25.0	63.5	0.77	0.81	4145	224	10.5	35.1	33.6	29.0	1.00	1.00	1.00	1.00	1.00
	English	187	187	191	187	187	187	186	143	157	153	167	164	144	143	178	192	192	179	192	192	---	---	---	---	---
	French	210	210	214	210	210	210	214	208	159	198	203	208	162	162	203	212	216	210	216	216	---	---	---	---	---
Obs	Portuguese	48	48	48	48	48	48	48	12	12	12	12	12	36	36	48	36	36	36	48	48	---	---	---	---	---
	Frenchssa	174	174	178	174	174	174	178	172	135	168	173	172	135	135	167	176	180	174	180	180	---	---	---	---	---
	Northafrica	48	48	48	48	48	48	48	48	36	42	42	48	36	36	48	48	48	48	48	48	---	---	---	---	---
	Data	445	445	453	445	445	445	448	363	328	363	382	384	342	341	429	440	444	425	456	456	456	456	456	456	456

S.D: Standard Deviation. Min: Minimum. Max: Maximum. Obs: Observations. M2: Money Supply. Fd: Financial system deposits. Bcbd: Bank credit on Bank deposits. Fcfd: Financial system credit on Financial system deposits. Pcrb: Private domestic credit by deposit banks. Pcrbf: Private domestic credit by financial institutions. Dba: Deposit bank assets on central bank assets plus deposit bank assets. R.Q: Regulation Quality. RL: Rule of Law. Infl: Inflation. Tra: Trade. Popg: Population growth. GE: Government Expenditure. GDPg: GDP growth. GDPpc: GDP per capita growth. Popg: Population growth. Vles: Variables.GDI: Gross Domestic Investment. FDI: Foreign Direct Investment. PrivI: Gross Private Investment. PubI: Gross Public Investment. . Eng: English legal origin. Frch: French legal origin. Frssa: French Sub Saharan Africa. Port: Portuguese legal origin. Nafri: North Africa.

Table 2: Test of difference in means

Panel A: Financial Intermediary Development Dynamics

		Financial Depth										**Financial Efficiency**									
		Money Supply					**Financial System Deposits**					**Banking System Efficiency**					**Financial System Efficiency**				
		Eng	Fr	Por	Frssa	Nafri	Eng	Fr	Por	Frssa	Nafri		Eng	Fr	Por	Frssa	Nafri	Eng	Fr	Por	Frssa	Nafri
	Eng	0	**5.12**	0.84	**8.63**	**-6.42**	0	**6.74**	**1.97**	**10.1**	**-5.39**	Eng	0	**-8.7**	**2.74**	**-9.85**	**-2.52**	0	**-4.4**	**2.71**	**-4.68**	-0.93
Legal origin	Fr		0	**-2.79**	**4.98**	**-14.0**		0	**-2.37**	**5.03**	**-14.3**	Fr		0	**8.34**	-0.79	**2.56**		0	**8.25**	-0.55	**2.04**
dummies	Por			0	**8.10**	**-7.62**			0	**7.14**	**-7.79**	Por			0	**-10.0**	**-3.91**			0	**-10.0**	**-4.09**
(Instruments)	Frssa				0	**28.9**				0	**-29.6**	Frssa				0	**3.25**				0	**2.55**
	Nafri					0					0	Nafri					0					0

		Financial Activity										**Financial Size**				
		Banking System Activity					**Financial System Activity**									
		Eng	Fr	Por	Frssa	Nafri	Eng	Fr	Por	Frssa	Nafri		Eng	Fr	Por	Frssa	Nafri
	Eng	0	**3.00**	**2.07**	**6.18**	**-5.92**	0	**3.68**	**2.37**	**5.81**	**-3.53**	Eng	0	-0.16	0.76	**1.80**	**-4.35**
Legal origin	Fr		0	0.52	**3.95**	**-9.90**		0	0.81	**4.00**	**-9.60**	Fr		0	1.19	**2.75**	**-6.55**
dummies	Por			0	**2.52**	**-7.29**			0	**2.25**	**-7.57**	Por			0	-0.27	**4.82**
(Instruments)	Frssa				0	**-17.2**				0	**-17.1**	Frssa				0	**9.27**
	Nafri					0					0	Nafri					0

Panel B: Investment Dynamics

		Domestic and Foreign Investments										**Private and Public Investments**									
		Domestic Investment					**Foreign Investment**					**Private Investment**					**Public Investment**				
		Eng	Fr	Por	Frssa	Nafri	Eng	Fr	Por	Frssa	Nafri		Eng	Fr	Por	Frssa	Nafri	Eng	Fr	Por	Frssa	Nafri
	Eng	0	**3.58**	0.60	**4.87**	-1.03	0	**3.83**	-0.18	**3.78**	1.51	Eng	0	0.60	1.13	1.48	-0.85	0	**2.87**	**-2.64**	**3.32**	-1.36
Legal origin	Fr		0	-0.72	**1.87**	**-4.36**		0	**-2.10**	0.27	-0.93	Fr		0	1.08	1.04	-1.41		0	**-5.29**	0.74	**-4.08**
dummies	Por			0	1.40	**-2.35**			0	**2.08**	**2.17**	Por			0	0.69	**2.02**			0	**5.89**	**2.20**
(Instruments)	Frssa				0	**-5.70**				0	-1.05	Frssa				0	**-2.03**				0	**-4.61**
	Nafri					0					0	Nafri					0					0

Eng: English. Fr: French. Por: Portuguese. Frssa: French Sub-Saharan Africa. Nafri: North Africa. Values in bold are t-statistics of at least 10% significance level. Significance of t-statistics is governed by both one and two tailed p-values.

4. Cross-country regressions

In this section, we present results from cross-country regressions to assess the importance of legal origin in explaining cross-country variances in investment, the ability of legal origin to explain cross-country differences in the financial channels and, the ability of the exogenous components of the financial channels to account for cross-country differences in investment.

4.1 Legal origins and investments

As presented in Table 3, we regress investment dynamics on the French, British, French sub-Saharan, Portuguese and North African legal origin dummies and then test for their joint significance. Panel B (A) presents results with (out) control variables. In either case we find significant evidence at the 1% level that distinguishing countries by legal origin helps explain cross-country differences in aggregate investment dynamics (*F*-statistics). It is also worth noting that (but for population growth) all the control variables have the rights signs and enter significantly in all regressions. Hence, the inferences from Table 3 will be based on Panel B because it incorporates control variables.

On average, results indicate that French legal origin countries have substantially lower levels of foreign investment, but overwhelmingly dominate in private investment. Portuguese countries are dominant in domestic, foreign and public investments. On the dominance of Portuguese countries in domestic investment, the inference is based on an intuitive average of estimated coefficients (Models 5 and 5*). But for foreign investment and slightly public investment, sub-Saharan French countries stand significantly below French civil law countries' averages in domestic and private investments. Whereas English common law countries and Portuguese countries almost tie in domestic and foreign investments, North

African countries joint them only in the tie of domestic investment and have significantly slimmer levels of foreign investments. Results of the control variables are broadly consistent with the relevance of trade, inflation, government expenditure, GDP growth and GDP per capita growth in investment.

From the perspective of private investment, the initial findings are not consistent with the law-finance literature (La Porta et al., 1998b; Beck et al., 2003) in which, English common law countries which champion private property rights vis-à-vis those of the State should inherently reflect higher levels of private investment than French civil law countries that emphasize State-power. The overwhelming dominance of French and French sub-Saharan African countries (Models 7 and 7*) in prospects of private investment may debunk this consensus in the law-finance literature[9]. Reasons for this contradiction could entail the following. (1) The time series properties of our data. While La Porta et al. (1998b) and Beck et al. (2003) do not provide time spans for their data because such was not necessary (since their studies were founded on facts for the most part), this paper is based on data spanning from 1996 to 2007. Accordingly, the data is collected after the pioneering work of La Porta et al. (1998b). (2) With increasing globalization and economic integration, it is logical to expect that certain civil law traditions might be influenced by common law traditions and vice-versa. A case in point in the African continent is the presence civil law UEMOA[10] countries in ECOWAS[11]: largely dominated by countries of common law traditions like Nigeria and

[9]While the contradictory findings may be seen as though the consensus on the theoretical underpinnings is questionable or not taken seriously, we argue that 'theoretical consensus' is not absolute. This is the reason applied econometrics is meant to either refute or accept existing theoretical consensus along different empirical frameworks. The scope and positioning of the study is clearly aimed at verifying the consensus in Africa to complement existing literature. Hence, since the exploratory analyses do not lead us to validate the consensus, we have provided some explanations. We have further taken a minimalistic approach in not inferring causality by using 'may' to elucidate the contradiction.

[10] Economic and Monetary Union of West African States.

[11] Economic Community of West African States.

Ghana. This explanation is consistent with the literature on the amendment of laws over time. (La Porta et al., 1998b, p. 1119). (3) Another insight is consistent with Asongu (2011a) who has concluded that French civil law countries are characterized with low levels of inflation resulting from their fixed exchange rate regimes[12]. Hence, more inflation-predictability could be the source of their overwhelming dominance in private investment. This interpretation is consistent with the significant negative inflation coefficient in the private investment regressions.

Table 3: Investment and legal origins

		Panel A: Investment regression without control variables							
		Domestic Investment		**Foreign Investment**		**Private Investment**		**Public Investment**	
		Model 1	**Model 1***	Model 2	**Model 2***	Model 3	**Model 3***	Model 4	**Model 4***
	English	**22.842*** (31.10)**	**21.625*** (26.28)**	**4.368*** (10.82)**	**4.253*** (10.47)**	**13.300*** (22.61)**	**12.450*** (19.96)**	**7.279*** (27.20)**	**6.961*** (25.68)**
	French	**18.924*** (29.30)**	---	**2.195*** (5.256)**	---	**12.838*** (24.83)**	---	**6.075*** (23.92)**	---
Legal origin	Frenchssa	---	**18.300*** (24.65)**		**2.049*** (4.739)**	---	**12.110*** (20.57)**	---	**6.158*** (23.36)**
Dummies									
(Instruments)	Portuguese	**21.409*** (8.547)**	**21.409*** (7.616)**	**4.671*** (3.245)**	**4.671*** (3.221)**	---	**10.742*** (4.877)**	**10.667*** (10.81)**	**10.667*** (10.66)**
	Northafrica	**4.959*** (3.650)**	**19.457*** (13.70**	**-0.081 (-0.091)**	**1.420* (1.675)**	---	**10.828*** (9.094)**	**1.963*** (3.479)**	**6.393*** (11.83)**
F-test for Legal origin		**8.972***	**417.24***	**5.334***	**38.491***	**563.95***	**248.637***	**11.793***	**391.14***
Adjusted R^2		0.061	0.821	0.038	0.315	0.756	0.732	0.078	0.803
Number of observations		363	363	328	328	363	363	382	382

		Panel B: Investment regressions with control variables							
		Domestic Investment		**Foreign Investment**		**Private Investment**		**Public Investment**	
		Model 5	**Model 5***	Model 6	**Model 6***	Model 7	**Model 7***	Model 8	**Model 8***
	English	**13.265*** (8.974)**	**10.856*** (7.445)**	**6.067*** (8.977)**	**4.505*** (9.134)**	**5.527*** (4.808)**	**3.474*** (3.059)**	**4.767*** (9.003)**	**4.465*** (8.325)**
	French	**11.326*** (10.81)**	---	**4.056*** (4.784)**	---	**6.713*** (7.968)**	---	**4.218*** (9.993)**	---
Legal origin	Frenchssa	---	**9.557*** (8.528)**	---	**2.208*** (5.023)**	---	**5.609*** (6.228)**	---	**4.293*** (9.812)**
Dummies									
(Instruments)	Portuguese	**12.688*** (5.238)**	**12.540*** (4.906)**	**6.956*** (4.608)**	**4.830*** (3.300)**	**4.391** (2.244)**	**4.229** (2.006)**	**8.493*** (8.087)**	**8.841*** (8.617)**
	Northafrica	**5.081*** (4.441)**	**10.185*** (6.950)**	-0.850 (-0.957)	1.076 (1.291)	**2.220** (2.259)**	**4.683*** (3.719)**	**2.173*** (3.972)**	**4.660*** (7.624)**

[12] "*The dominance of English common–law countries in prospects for financial development in the legal– origins debate has been debunked by recent findings. Using exchange rate regimes and economic/monetary integration oriented hypotheses, this paper proposes an 'inflation uncertainty theory' in providing theoretical justification and empirical validity as to why French civil–law countries have higher levels of financial allocation efficiency. Inflation uncertainty, typical of floating exchange rate regimes accounts for the allocation inefficiency of financial intermediary institutions in English common–law countries. As a policy implication, results support the benefits of fixed exchange rate regimes in financial intermediary allocation efficiency*". (Asongu, 2011a, p. 1). While the discussion on inflation uncertainty may not be in line with Quantity Theory of Money in the perspective that, fixity and flexibility of exchange rates may have nothing to do inflation, the inference is based on a recent empirical in African countries (Asongu, 2011a, p. 1).

	Inflation	**-0.081** **(-2.553)**	**-0.071** **(-2.057)**	**-0.071*** **(-3.531)**	**-0.074*** **(-3.652)**	**-0.071*** **(-2.760)**	---		---
	Trade	**0.086*** **(7.941)**	---	---	---	**0.072*** **(8.341)**	---	**0.022*** **(5.024)**	---
Control Variables	GDPg	**0.542*** **(5.361)**	---	---	---	**0.338*** **(4.103)**	---	**0.094**** **(2.338)**	---
	GDPpcg	---	**0.675*** **(5.666)**	---	**0.151*** **(1.749)**	---	**0.331*** **(3.638)**	---	**0.092**** **(2.099)**
	Popg	---	---	**-0.551**** **(-2.068)**	---	---	---	---	---
	Gov. Exp	---	**0.676*** **(9.084)**	---	---	---	**0.518*** **(8.403)**	---	**0.145*** **(4.942)**
F-test for Legal origin		**25.491***	**350.00***	**6.567***	**27.958***	**18.803***	**219.66***	**13.502***	**285.06***
Adjusted R^2		0.303	0.878	0.084	0.350	0.240	0.783	0.140	0.817
Number of observations		338	338	302	302	338	363	382	382

Frenchssa: French Sub-Saharan Africa. GDPg: GDP growth. GDPpcg: GDP per capita growth. Gov. Exp. Government Expenditure. Popg: Population growth rate. *, **,***; significance at 10%, 5% and 1% respectively.

4.2 Legal origins and financial channels

Table 4 assesses whether legal origin explains cross-country differences in the indicators which characterize the financial channel. This is the first condition for the Instrumental Variable (IV) estimation technique which requires that the instruments (legal origins) explain financial channels conditional on other covariates (control variables). This is in line with Eqs (1) and (2) specified in Section 3.2. We regress the proxies for financial dynamics of depth, efficiency, size and activity on the legal origin dummy variables. Due to issues related to over-parametization and multicolinearity the paper avoids using the French and French sub-Saharan dummies in the same regressions. We assess whether the exogenous components of legal origins explain financial indicators both in the presence (Panel B) and absence (Panel A) of control variables, such that we have eight regressions for each panel. We report the Fisher (F)-test of whether legal origin dummy variables taken together significantly explain cross-country variations in financial channels. Clearly from the significance of estimated coefficients, the instruments are exogenous to cross-country variations in financial depth, efficiency, activity and size. Also the validity of the *F*-test at the 1% significance level

illustrates that legal origins taken together jointly elucidate financial development differences across countries. Most of the significant control variables have the expected signs.

The outcome in Table 4 also shows that while English legal origin countries on average have substantially higher levels of financial intermediary depth, size and activity, their French legal origin counterparts on average exert dominance in financial intermediary efficiency. Countries with Portuguese legal origin fall in-between. These are consistent with Asongu (2013a,b; 2011a) and Agbor (2011). The addition of two dummies to the analysis sheds some light on the nature of North African countries and their French SSAfrican neighbors. While the former dominates English legal origin countries in financial depth and activity, the latter (SSA-French) has on average lower levels of financial depth, efficiency and size when compared to average levels of other countries within the French legal origin influence. A logical inference is that French civil law North African countries dominate their SSA-French counterparts in financial intermediary dynamics of depth, activity and size.

Table 4: Financial development and legal origins

		Panel A: Financial dynamic regressions without control variables							
		Financial Depth		**Financial Efficiency**		**Financial Activity**		**Financial Size**	
		M2gdp	Fdgdp	BcBd	FcFd	Pcrb	Pcrbof	Dbacba	Dbacba
		Model 9	**Model 9***	Model 10	**Model 10***	Model 11	**Model 11***	Model 12	**Model 12***
	English	**0.350*** **	**0.294*** **	**0.609*** **	**0.648*** **	**0.183*** **	**0.223*** **	**0.702*** **	**0.668*** **
		(25.58)	**(23.03)**	**(30.92)**	**(21.67)**	**(17.22)**	**(14.00)**	**(43.16)**	**(35.81)**
	French	**0.189*** **	---	**0.860*** **	---	**0.104*** **	---	**0.685*** **	---
		(13.81)		**(43.56)**		**(9.783)**		**(42.59)**	
Legal origin	Frenchssa	---	**0.123*** **	---	**0.884*** **	---	**0.108*** **	---	**0.673*** **
Dummies			**(9.416)**		**(28.72)**		**(6.609)**		**(35.58)**
(Instruments)	Portuguese	**0.341** **	**0.245*** **	**0.490*** **	**0.488*** **	**0.138*** **	**0.138*** **	**0.681*** **	**0.681*** **
		(12.72)	**(9.805)**	**(12.59)**	**(8.331)**	**(6.621)**	**(4.413)**	**(21.49)**	**(18.70)**
	Northafrica	**0.415*** **	**0.458*** **	**-0.072***	**0.597*** **	**0.263*** **	**0.357*** **	**0.197*** **	**0.720*** **
		(14.32)	**(18.13)**	**(-1.735)**	**(10.12)**	**(11.68)**	**(11.32)**	**(5.776)**	**(19.60)**
Fisher-test for Legal origin		**81.551*** **	**291.307*** **	**40.035*** **	**382.97*** **	**50.42*** **	**108.35*** **	**11.496*** **	**872.67*** **
Adjusted R^2		0.352	0.723	0.205	0.774	0.250	0.492	0.065	0.886
Number of observations		445	445	453	445	445	445	448	448

		Panel B: Financial dynamic regressions with control variables							
		Financial Depth		**Financial Efficiency**		**Financial Activity**		**Financial Size**	
		M2gdp	Fdgdp	BcBd	FcFd	Pcrb	Pcrbof	Dbacba	Dbacba
		Model 13	**Model 13***	Model 14	**Model 14***	Model 15	**Model 15***	Model 16	**Model 16***
	English	**0.247*** **	**0.257*** **	**0.849*** **	**0.424*** **	**0.311*** **	**0.274*** **	**0.809*** **	**0.353*** **
		(8.907)	**(8.588)**	**(14.67)**	**(6.482)**	**(15.63)**	**(5.644)**	**(28.74)**	**(9.815)**
	French	**0.101*** **	---	**1.104*** **	---	**0.223*** **	---	**0.834*** **	---
		(4.354)		**(18.78)**		**(9.800)**		**(25.05)**	
Legal origin	Frenchssa	---	**0.145*** **	---	**0.715*** **	---	**0.158*** **	---	**0.385*** **
Dummies			**(4.541)**		**(13.10)**		**(3.274)**		**(13.56)**

(Instruments)	Portuguese	**0.257*** (6.055)**	**0.272*** (7.308)**	**0.835*** (11.40)**	**0.435*** (4.502)**	**0.283*** (9.958)**	**0.268*** (4.410)**	**0.802*** (18.90)**	**0.574*** (11.74)**
	Northafrica	**0.424*** (15.06)**	**0.395*** (13.60)**	**-0.144*** (-3.198)**	**0.430*** (6.062)**	**0.208*** (8.932)**	**0.318*** (7.765)**	**0.120*** (3.408)**	**0.478*** (13.51)**
	Inflation	**-0.0001** (-2.499)**	---	---	---	**-0.003*** (-4.446)**	**-0.003*** (-3.045)**	---	**-0.001* (-1.787)**
	Trade	**0.001*** (6.598)**	---	**-0.001*** (-3.456)**	**-0.001** (-2.569)**	---	**-0.0005* (-1.858)**	---	**0.001*** (5.422)**
	GDPg	**-0.004** (-2.126)**	---	---	---	---	---	**0.006*** (2.704)**	---
Control Variables	Popg	---	**-0.047*** (-5.923)**	**-0.057*** (-3.923)**	---	**-0.038*** (-5.218)**	**-0.037*** (-3.170)**	**-0.062*** (-5.701)**	---
	Gov. Exp	---	**0.009*** (6.949)**	---	**0.021*** (5.541)**	---	**0.008*** (4.213)**	---	**0.0150*** (7.698)**
Fisher-test for Legal origin		**53.054***	**248.029***	**21.836***	**243.46***	**42.61***	**61.134***	**14.106***	**759.39***
Adjusted R^2		0.436	0.782	0.197	0.784	0.338	0.560	0.130	0.933
Number of observations		404	414	425	402	408	379	436	380

M2gdp: Money Supply. Fdgdp: Financial system deposits. 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 financial institutions. Dbacba: Deposit bank assets on central bank assets plus deposit bank assets. Frenchssa: French Sub-Saharan Africa. GDPg: GDP growth. GDPpcg: GDP per capita growth. Gov. Exp. Government Expenditure. Popg: Population growth rate. *, **,***; significance at 10%, 5% and 1% respectively.

4.3 Examination of financial channels using an instrumental variable procedure

The fifth and sixth tables below address two key issues: (1) the concern of whether the exogenous components of financial channels explain investment and; (2) if legal origin explains investment dynamics through other mechanisms beside financial channels. To make these investigations we use the 2SLS regressions. Thus we involve Eq (3) in the first-stage regressions (first and second equations). While the first issue is addressed by the significance of estimated coefficients, the second is tackled by the overidentifying restrictions (OIR) test whose null hypothesis postulates that the instruments (legal origins) are not correlated with the error term in the equation of interest (Eq. (3)). Therefore, a rejection of the null hypothesis of the OIR test is a rejection of the view that legal origin explains investment only through the financial channel. In the second-stage regressions, we control for law in terms of regulation quality and the rule of law. Our choice of these control variables is in line with the law-finance literature and has been elucidated in Section 3.1.5. In all 32 regressions, control variables are significant for the most part, with the right signs.

It is also interesting to note that, the equations are still worth considering even with 1% and 2% variations in the dependent variables. This is essentially because we have issues with degrees of freedom needed for the OIR test for instrument validity. Accordingly, with four instruments, we could not use more than three endogenous explaining variables because of concerns in exact-identification (instruments equal to endogenous explaining variables) and under-identification (instruments less than endogenous explaining variables). This explanation is consistent with the position that an improvement in the adjusted R^2 depends on the number of explaining variables included in the equations. There is also a wealth of literature with less than 1% of variations in the dependent variables (Muller, 2005, pp. 107-109).

Table 5 presents results for domestic (Panel A) and foreign (Panel B) investments. We begin by validating our choice of a 2SLS estimation method with a Hausman test of endogeneity for model specification. The null hypothesis of this test is the position that estimated coefficients by OLS are efficient and consistent; implying they do not suffer from endogeneity because the variables in the equation of interest are not correlated with the error term. Hence, when the Hausman test fails to reject the null hypothesis, we do not proceed with the 2SLS. This is not the case of all sixteen regressions in the two panels. We also report the Cragg-Donald statistics of the weak instrument test in first-stage regressions.

Table 5: Investment and financial development (2SLS regressions)

		Panel A: Domestic Investment regressions							
		Model 17	Model 17*	Model 18	Model 18*	Model 19	Model 19*	Model 20	Model 20*
Financial Depth	M2gdp	-13.803 (-1.644)	---	---	---	---	---	**-15.747*** **(-1.662)**	---
	Fdgdp	---	**-16.982*** **(-1.709)**	---	---	---	---	---	**-18.836*** **(-1.676)**
Financial Efficiency	BcBd	-1.531 (-0.415)	---	-0.499 (-0.150)	---	---	---	**8.456***** **(3.282)**	---
	FcFd	---	-2.750 (-0.708)	---	-0.426 (-0.129)	---	---	---	**7.022**** **(2.325)**
Financial Activity	Pcrb	---	---	-12.915 (-1.497)	---	-12.815 (-1.491)	---	---	---
	Pcrbof	---	---	---	-10.848 (-1.330)	---	-10.754 (-1.325)	---	---
Financial Size	Dbacba	**20.308***** **(3.160)**	**20.284***** **(3.147)**	**21.122***** **(3.582)**	**21.183***** **(3.578)**	**20.366***** **(6.606)**	**20.528***** **(6.663)**	---	---

	Reg. Qua.	---	---	---	---	---	---	---	---
Control Variables	Rule of L.	**35.789** **(2.372)**	**38.111** **(2.415)**	**24.620** **(2.474)**	**23.537*** **(2.379)**	**25.179*** **(2.730)**	**24.009*** **(2.612)**	**60.495*** **(4.595)**	**62.268*** **(4.393)**
Hausman test		**92.631***	**89.815***	**64.917***	**66.604***	**57.883***	**60.359***	**191.30***	**197.07***
OIR(Sargan) test		**1.766**	**1.551**	2.998*	3.489*	**3.015**	**3.499**	7.775**	7.539**
P-values		**[0.183]**	**[0.212]**	[0.083]	[0.061]	**[0.221]**	**[0.173]**	[0.020]	[0.023]
Cragg- Donald		3.055	2.823	6.051	6.167	6.731	6.742	4.965	4.335
Adjusted R^2		0.213	0.220	0.218	0.217	0.219	0.217	0.144	0.145
F-stats		**389.09***	**389.72***	**454.45***	**455.29***	**607.30***	**608.43***	**336.90***	**336.63***
Observations		257	257	257	257	257	257	260	260

Panel B: Foreign Investment regressions

		Model 21	Model 22	Model 23	Model 24	Model 25	Model 25*	Model 26	Model 26*
Financial Depth	M2gdp	-4.364 (-1.098)	-0.832 (-0.276)	---	---	---	---	0.531 (0.050)	---
	Fdgdp	---	---	-5.021 (-1.063)	---	---	---	---	-5.962 (-0.454)
Financial Efficiency	BcBd	**-4.815*** **(-1.820)**	---	**-5.422*** **(-1.812)**	---	---	---	-1.417 (-0.845)	---
	FcFd	---	---	---	-2.861 (-1.200)	---	---	---	-3.779 (-1.175)
Financial Activity	Pcrb	---	---	---	---	**-13.550**** **(-2.119)**	---	-13.056 (-1.167)	---
	Pcrbof	---	---	---	**-15.36*** **(-1.873)**	---	-13.88 (-1.572)	---	-11.767 (-1.007)
Financial Size	Dbacba	---	---	---	---	-1.325 (-0.561)	-2.379 (-0.738)	---	---
Control Variables	Reg. Qua.	**22.779*** **(2.894)**	**10.059*** **(3.195)**	**23.738*** **(2.697)**	---	---	---	---	---
	Rule of L.	---	---	---	**25.512*** **(2.690)**	**20.156*** **(2.665)**	**23.775**** **(2.017)**	**18.995**** **(2.442)**	**29.854**** **(2.164)**
Hausman test		**75.302***	**48.383***	**83.220***	**57.366***	**25.545***	**23.361***	**32.138***	**30.737***
OIR(Sargan) test		**1.337**	**6.210**	**1.411**	**0.931**	**2.266**	**3.245**	**1.159**	**0.638**
P-values		**[0.512]**	**[0.101]**	**[0.493]**	**[0.627]**	**[0.321]**	**[0.197]**	**[0.281]**	**[0.424]**
Cragg- Donald		5.536	12.206	4.627	1.277	4.048	1.263	2.038	1.271
Adjusted R^2		0.004	0.041	0.001	0.027	0.010	0.018	0.012	0.012
F-stats		**24.952***	---	**24.921***	**22.256***	**32.541***	**27.009***	**24.657***	**15.203***
Observations		236	236	236	235	232	232	235	235

M2gdp: Money Supply. Fdgdp: Financial system deposits. 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 financial institutions. Dbacba: Deposit bank assets on central bank assets plus deposit bank assets. Reg. Qua: Regulation Quality. Rule of L: Rule of Law. *, **,***; significance at 10%, 5% and 1% respectively. (): z-statistics. Chi-square statistics for Hausman test. LM statistics for Sargan test. [ ]: p-values. Weak I. Test (F-stats): Cragg-Donald statistics for Weak Instrument test in first stage regression. OIR: overidentifying restrictions.

The first issue of Panel A (with respect to domestic investment) is addressed by the significance of estimated coefficients which are valid for: financial depth at overall economic (Model 20) and financial system (Models 17* and 20*) levels; financial allocation efficiency from banking system (Model 20) and financial system (Model 20*) standpoints; and financial size (Models 17 to 19). As concerns the second issue, but for Models 18(18*) and 20(20*), the null hypothesis of the OIR test is not rejected for the average part; implying legal origins explain domestic investment only through financial channels. Conversely for Models 18(18*)

and 20(20*), the instruments also explain domestic investment through some other mechanisms beside the financial depth and efficiency channels.

In the second panel, the significance of banking system efficiency (Models 21 and 23) and banking system (financial system) activity in Model 25(24) address the first concern. For the second concern, the null hypothesis of the OIR test is not rejected in all eight regressions. It follows that legal origins significantly elucidate foreign investment through no other mechanisms beside banking system efficiency, banking system activity and financial system activity channels.

Table 6 presents results for private (Panel A) and public (Panel B) investments. Justification for the 2SLS methodology is provided by the overwhelming rejection of the null hypothesis of the Hausman test in all sixteen regressions. With regard to the first issue, financial system depth (Model 30*), banking system efficiency (Models 27 and 28), banking system activity (Model 29) and financial size (Models 29, 29*, 30 and 30*) are all significant determinants of private investment. For the second concern, the instruments also explain private investment through some other mechanisms beside the significant financial channels highlighted above. With respect to public investment, banking system activity (Model 32), financial system activity (Model 33*) and financial size (Models 34, 34*) all constitute significant determinants (first issue). However legal origins also explain public investment beyond these determinants (second issue).

Table 6: Investment and financial development continued (2SLS regressions)

		Panel A: Private Investment regressions							
		Model 27	Model 27*	Model 28	Model 28*	Model 29	Model 29*	Model 30	Model 30*
Financial Depth	M2gdp	-2.841 (-0.569)	---	---	---	---	---	-8.637 (-1.642)	----
	Fdgdp	---	-4.924 (-0.699)	---	---	---	---	---	**-12.047* (-1.911)**
	BcBd	**5.109***	---	**9.204*****	---	---	---	---	---

Financial		**(1.843)**		**(5.004)**					
Efficiency	FcFd	---	4.409	---	4.351	---	---	---	---
			(1.056)		(1.049)				
	Pcrb	---	---	-8.954	---	**-16.778***	---	---	---
Financial				(-0.786)		**(-1.674)**			
Activity	Pcrbof	---	---	---	-7.560	---	-16.449	---	---
					(-0.698))		(-1.172)		
Financial	Dbacba	---	---	---	---	**14.897*** **	**13.617*** **	**15.441*** **	**13.610*** **
Size						**(5.716)**	**(3.563)**	**(6.106)**	**(4.599)**
	Reg. Qua.	**29.830*** **	**31.689** **	---	**32.592** **	---	---	---	---
Control		**(3.140)**	**(2.254)**		**(2.155)**				
Variables	Rule of L.	---	---	**23.271*** **	---	15.495	19.466	13.765	**18.801***
				(2.611)		(1.605)	(1.201)	(1.534)	**(1.819)**
Hausman test		**107.86*** **	**140.17*** **	**98.71*** **	**157.32*** **	**25.173*** **	**25.098*** **	**34.204*** **	**34.500*** **
OIR(Sargan) test		7.144**	6.534**	14.329***	7.453**	8.177**	8.424**	7.623**	6.592**
P-values		[0.028]	[0.038]	[0.000]	[0.024]	[0.016]	[0.014]	[0.022]	[0.037]
Cragg- Donald		5.658	2.428	3.044	0.976	3.251	0.797	5.089	3.946
Adjusted R^2		0.009	0.007	0.031	0.014	0.120	0.102	0.098	0.100
F-stats		**229.70*** **	**212.89*** **	**280.00*** **	**240.69*** **	**346.08*** **	**308.04*** **	**325.26*** **	**323.72*** **
Observations		260	260	259	260	256	256	256	256

Panel B: Public Investment regressions

		Model 31	Model 31*	Model 32	Model 32*	Model 33	Model 33*	Model 34	Model 34*
	M2gdp	-0.132	---	---	---	---	---	---	---
Financial		(-0.058)							
Depth	Fdgdp	---	-0.958	---	---	---	---	---	---
			(-0.399)						
	BcBd	---	---	**4.222*** **	---	---	---	---	---
Financial				**(5.517)**					
Efficiency	FcFd	---	---	---	1.026	---	---	---	---
					(0.737)				
	Pcrb	---	---	---	---	-7.482	---	---	---
Financial						(-1.326)			
Activity	Pcrbof	---	---	---	---	---	**-20.07*** **	---	---
							(-2.819)		
Financial	Dbacba	---	---	---	---	---	---	**8.076*** **	**6.832*** **
Size								**(6.563)**	**(2.621)**
	Reg. Qua.	**20.172*** **	**20.810*** **	---	**17.907*** **	---	---	---	5.552
Control		**(8.485)**	**(10.01)**		**(5.774)**				(0.987)
Variables	Rule of L.	---	---	**11.224*** **	---	**23.323*** **	**31.895*** **	2.724	---
				(7.036)		**(7.441)**	**(6.982)**	(1.046)	
Hausman test		**183.54*** **	**200.05*** **	**131.94*** **	**222.97*** **	**205.22*** **	**224.57*** **	**107.65*** **	**99.53*** **
OIR(Sargan) test		12.040***	11.800***	17.601***	7.420**	32.128***	15.321***	9.928**	9.372**
P-values		[0.007]	[0.008]	[0.000]	[0.024]	[0.000]	[0.001]	[0.019]	[0.024]
Cragg- Donald		16.923**	22.000**	27.471**	12.952**	7.521	2.658	15.723**	4.812
Adjusted R^2		0.009	0.009	0.010	0.001	0.084	0.159	0.005	0.0003
Observations		275	275	280	275	274	274	277	278

M2gdp: Money Supply. Fdgdp: Financial system deposits. 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 financial institutions. Dbacba: Deposit bank assets on central bank assets plus deposit bank assets. Reg. Qua: Regulation Quality. Rule of L: Rule of Law. *, **,***; significance at 10%, 5% and 1% respectively. (): z-statistics. Chi-square statistics for Hausman test. LM statistics for Sargan test. [ ]: p-values. Weak I. Test (F-stats): Cragg-Donald statistics for Weak Instrument test in first stage regression. OIR: overidentifying restrictions.

4.4 Caveats

As a caveat to the theoretical underpinnings of the paper, it is interesting to note that some doubt have been documented about the 'law and property rights theory', which suggest that British common law supports innovation development to a greater extent than civil law

systems (Asongu, 2012c). Accordingly, the legal origins theory from which the underlying theory is derived suggests that common law systems (strong property rights, the role of the judiciary…etc) promote innovation better than civil law systems. Four points are worth noting to clarify this position and balance the discussion. (1) Some scholars have expressed doubts on whether the distinction between Common law and Civil law can be justified from a historical standpoint (Deakin & Siems, 2010, p. 10). (2) Today, with internationalization and the advent to globalization, modern trends make the Common law/Civil law distinction less persuasive. (3) It is also not clear why in substance we should expect differences in Common law and Civil law systems on the pure assumption that Common law tradition is characterized by independent judges and juries (relatively weaker reliance on statutes and the preference for contracts and private litigation as a means of dealing with social harms), whereas Civil law tradition is characterized by state-employed judges, great reliance on legal and procedural codes, and a preference for state regulation over private regulation. (4) The categorization of countries into Common law and Civil law does not take into account: the ongoing influence of their pre-transplant law; the mixture and modification at the moment when some copying of foreign law occurs; and the post-transplant period (in which the transplanted law may be altered or applied differently from the origin country).

5. Conclusion

The motivations of this paper (inter alia) have been the importance of investment and finance in the development of the African continent and, the neglect of Africa in the legal origins debate. Appealing features of the work are its usage of updated data on law indicators and the addition of French sub-Saharan and North African dummies to those used in mainstream literature.

We have observed from the findings that contrary to the current moderate consensus (La Porta et al., 1998b; Beck et al., 2003), French civil law countries dominate in both private investment and financial allocation efficiency. The fact that French countries also explain private investment through other mechanisms beside financial allocation efficiency is not unexpected. Accordingly, inflation that is typical of fixed exchange rate regimes in most French SSA countries remains a significant determinant (Asongu, 2011a).

Most significantly, legal origins are instrumental in the positive relation between financial size and investment (domestic, private and public). Legal origin generally matters in investment and finance, though its ability to explain aggregate investment dynamics only through financial intermediary channels is limited in the cases of private and public investments.

Appendices

Appendix 1: Countries selected for the study

Colonial legacy	Countries	Num.
English	Botswana, Egypt, Gambia, Ghana, Kenya, Lesotho, Malawi, Mauritius, Nigeria, Seychelles, Sierra Leone, South Africa, Sudan, Swaziland, Tanzania, Zambia.	16
French	Algeria, Benin, Burkina Faso, Burundi, Cameroon, Central African Republic, Chad, Congo Republic, Côte d'Ivoire, Gabon, Madagascar, Mali, Morocco, Niger, Rwanda, Senegal, Togo, Tunisia.	18
Portuguese	Angola, Cape Verde, Guinea-Bissau, Mozambique.	4
French sub-Saharan Africa	Benin, Burkina Faso, Burundi, Cameroon, Central African Republic, Chad, Congo Republic, Côte d'Ivoire, Gabon, Madagascar, Mali, Niger, Rwanda, Senegal, Togo.	15
North Africa	Algeria, Egypt, Morocco, Tunisia.	4

Num: Number of countries.

Appendix 2: Correlation analyses for financial intermediary variable selection

	Dbacba	M2gdp	Cbagdp	Dbagdp	Pcrbgdp	Pcrbofgdp	Bdgdp	Fdgdp	Bcbd
Dbacba	1.000	0.269	-0.519	0.475	0.515	0.464	0.380	0.381	0.271
M2gdp	0.269	1.000	0.099	0.822	0.651	0.551	0.943	0.952	-0.134
Cbagdp	-0.519	0.099	1.000	-0.024	-0.102	-0.112	0.041	0.036	-0.164
Dbagdp	0.475	0.822	-0.024	1.000	0.930	0.839	0.894	0.879	0.254
Pcrbgdp	0.515	0.651	-0.102	0.930	1.000	0.912	0.734	0.716	0.459
Pcrbofgdp	0.464	0.551	-0.112	0.839	0.912	1.000	0.660	0.658	0.350
Bdgdp	0.380	0.943	0.041	0.894	0.734	0.660	1.000	0.991	-0.129
Fdgdp	0.381	0.952	0.036	0.879	0.716	0.658	0.991	1.000	-0.145
Bcbd	0.271	-0.134	-0.164	0.254	0.459	0.350	-0.129	-0.145	1.000

Dbacba: deposit bank assets on central bank assets plus deposit bank assets. M2gdp: Money Supply. Cbagdp: Central bank assets on GDP. Dbagdp: Deposit bank assets on GDP. Pcrbgdp: Private domestic credit on GDP. Pcrbofgdp: Private domestic credit of banks and other financial institutions on GDP. Bdgdp: Bank deposits on GDP. Fdgdp: Financial system deposits on GDP. Bcbd: Bank credit on bank deposits

Appendix 3: Correlation Matrix

Financial Intermediary Determinants							Investment Dynamics				Control Variables								Instruments (Legal origins)					
Fin. Depth		F. Efficiency		F. Activity		F.Size					First-Stage Control Variables						2nd Stage							
M2	Fdgdp	BcBd	FcFd	Pcrb	Pcrbof	Dbacb	GDI	FDI	PriI	PubI	Infl	Trad	GDPg	P.C	G.E	Popg	R.Q	R.L	Eng.	Frch.	Frssa	Port.	Nafri	
1.00	0.974	-0.07	0.00	0.74	0.602	0.398	0.26	0.13	0.25	0.06	-0.06	0.29	-0.05	0.05	0.35	-0.45	0.38	0.62	0.21	-0.23	-0.43	0.03	0.49	M2
	1.000	-0.05	0.06	0.80	0.684	0.466	0.29	0.11	0.27	0.06	-0.06	0.32	-0.01	0.10	0.39	-0.48	0.46	0.68	0.29	-0.28	-0.46	-0.00	0.45	Fdgdp
		1.00	0.88	0.39	0.418	0.256	-0.2	-0.2	-0.1	-0.2	-0.11	-0.24	-0.09	-0.09	-0.08	0.00	0.19	-0.01	-0.29	0.44	0.43	-0.24	0.01	BcBd
			1.00	0.53	0.674	0.290	-0.2	-0.2	-0.1	-0.2	-0.08	-0.23	-0.09	-0.08	0.03	-0.05	0.28	0.09	-0.13	0.27	0.26	-0.22	0.00	FcFd
				1.00	0.932	0.526	0.16	-0.08	0.17	-0.09	-0.06	0.09	-0.02	0.07	0.24	-0.40	0.60	0.62	0.15	-0.11	-0.30	-0.06	0.45	Pcrb
					1.000	0.469	0.16	-0.09	0.13	-0.15	-0.05	0.04	-0.03	0.05	0.26	-0.35	0.56	0.53	0.19	-0.14	-0.28	-0.08	0.32	Pcrbof
						1.000	0.35	-0.00	0.31	0.07	-0.09	0.21	0.06	0.13	0.29	-0.30	0.50	0.47	0.00	0.02	-0.14	-0.04	0.26	Dbacba
							1.00	0.52	0.81	0.51	-0.16	0.46	0.19	0.26	0.37	-0.21	0.36	0.45	0.18	-0.18	-0.30	0.00	0.15	GDI
								1.00	0.47	0.28	-0.14	0.44	0.04	0.09	0.31	-0.17	-0.17	0.05	0.19	-0.21	-0.20	0.05	-0.03	FDI
									1.00	0.09	-0.22	0.44	0.12	0.17	0.27	-0.14	0.21	0.33	0.04	-0.01	-0.11	-0.05	0.07	PriI
										1.00	-0.00	0.24	0.13	0.15	0.17	-0.01	0.13	0.25	0.11	-0.17	-0.20	0.18	0.14	PubI
											1.00	0.10	0.08	0.07	-0.15	0.04	-0.09	-0.09	-0.03	-0.07	-0.06	0.17	-0.02	Infl.
												1.00	0.004	0.09	0.38	-0.39	0.04	0.23	0.23	-0.30	-0.29	0.12	-0.08	Trade
													1.00	0.97	-0.02	0.22	0.01	-0.00	0.01	-0.09	-0.09	0.13	0.00	P.C
														1.00	0.06	-0.01	0.07	0.07	0.05	-0.13	-0.17	0.13	0.07	GDPpc
															1.00	-0.33	0.18	0.33	0.30	-0.26	-0.32	-0.06	0.04	G.E
																1.00	-0.27	-0.34	-0.20	0.22	0.39	-0.04	-0.29	Popg
																	1.00	0.79	0.21	-0.13	-0.23	-0.13	0.17	R.Q
																		1.00	0.30	-0.22	-0.32	-0.11	0.23	R.L
																			1.00	-0.80	-0.68	-0.29	-0.11	Eng.
																				1.00	0.85	-0.32	0.18	Frch.
																					1.00	-0.27	-0.27	Frssa
																						1.00	-0.11	Port.
																							1.00	Nafri.

M2: Money Supply. Fdgdp: Financial system deposits. 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 financial institutions. Dbacba: Deposit bank assets on central bank assets plus deposit bank assets. R.Q: Regulation Quality. RL:Rule of Law. Infl: Inflation.Trad: Trade. Popg: Population growth. GE: Government Expenditure. GDPg: GDP growth. P.C: GDP per capita growth. Popg: Population growth. Vls: Variables. Lend: Lending rate. Spread: Interest rate spread.GDI: Gross Domestic Investment. FDI: Foreign Direct Investment. PriI: Gross Private Investment. PubI: Gross Public Investment. . Eng: English legal origin. Frch: French legal origin. Frssa: French Sub Saharan Africa. Port: Portuguese legal origin. Nafri: North Africa. 2nd Stage: Second-Stage control variables.

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