

Governance, Financial Liberalization, and Financial Development in Sub-Saharan Africa

John A Karikari¹

Assistant Director
Center for Economics
US Government Accountability Office (GAO)
441 G St NW, mailstop 6K17E
Washington, DC 2-548
karikarij@gao.gov

September 24, 2010

DRAFT: PLEASE DO NOT QUOTE

Abstract

An analysis of the roles of governance and financial liberalization in the financial development of 37 Sub-Saharan Africa (SSA) countries yields several interesting results using data from 1996 to 2008. Contrary to previous studies, financial liberalization did not have a favorable independent impact on financial development; overall, financial liberalization efforts reduced financial development, particularly from 1996 to 2002. But, good governance has improved financial development over time, especially due to reduced political instability. The effect of the origin of legal systems suggests that civil laws are less favorable to financial development than mixed legal systems that include both civil and common laws. From 1996 to 2002, the impact of financial liberalization was reduced with good governance, probably due to governments' forbearance of weak state-owned banks; but, since 2003 good governance has increased the impact of financial liberalization on financial development. Finally, the banking crises that affected a large number of countries about two decades ago may have had protracted effects on financial development, particularly, liquid liabilities.

JEL: G210, G280, O160, O550

Keywords: Financial development, financial liberalization, governance, Sub-Saharan Africa

¹ The opinions expressed herein are those of the author and do not necessarily reflect those of the GAO or the US federal government. Paper has been accepted for presentation at the African Development Bank's 2010 African Economic Conference, Tunisia, Oct. 27-29, 2010. I wish to thank Kwabena Gyimah-Brempong and the AEC Scientific Committee for their valuable comments. Any remaining errors are mine alone.

Governance, Financial Liberalization, and Financial Development in Sub-Saharan Africa

John A. Karikari

1. Introduction

Countries in Sub-Saharan Africa (SSA) face the challenge of deepening and strengthening their financial sectors to ensure that they are efficient and well-functioning given the low levels of financial development. Although efforts have been made to liberalize financial markets and improve macroeconomic stability, they may not be enough given that several other significant structural challenges remain, particularly the lack of quality institutions or good governance. In fact, SSA countries lag substantially behind other regions of the world in the quality of their institutions and in measures of the cost of doing business. These challenges may have contributed to small and shallow financial systems with limited outreach and financial intermediation. This study investigates factors that determine financial development in SSA countries, paying particular attention to the roles of governance and financial liberalization.

The depth and breadth of financial markets in SSA countries are generally limited, and varies greatly across countries. This implies low financial intermediation by formal institutions, which is the matching of idle funds with investment opportunities by channeling money from lenders to borrowers. In particular, the banking systems, which are the dominant financial institutions, are small and the range of financial institutions is narrow, especially in the low-income countries in SSA. Beck, Demirgüç-Kunt, and Levine (2009) indicate that while financial systems across the world deepened over the past few decades along many dimensions as standards of financial intermediary and market development have increased, the progress has been uneven across countries in different income groups and regions of the world. Specifically,

while financial deepening has been concentrated in high-income countries, middle-income and low-income countries, which includes SSA, has experienced no significant deepening.

McDonald and Schumacher (2007) indicate that some measures of financial intermediation may have even declined between the early 1980s and 2004 in SSA countries—in particular, excluding the top 15 countries, the ratio of private sector bank credit to GDP declined by about 50 percent, on average, from 17.2 percent to 8.7 during this period.

The low level of financial development in SSA is a major factor that affects poverty reduction and growth, especially of the low-income countries. In particular, limited and inadequate access to credit contributes to low productivity in agriculture in rural areas, limits the contributions of small- and medium- enterprises to private sector development, and can slow the deepening of the banking sectors in oil exporting countries since declining export revenues affect their foreign assets.² Also, it is found that countries that performed better in attracting private capital inflows had bigger and more developed financial sectors, higher measures of institutional quality, and were more integrated into the global economy with respect to financial and trade flows; see IMF (2010).

The literature suggests that the major factors that determine financial development include financial liberalization and political and legal institutions.³ During the 1980s and early 1990s, financial sector reforms were an integral part of the far-reaching economic reforms that SSA countries undertook, conducted within the framework of structural adjustment programs supported by the IMF and the World Bank. The reforms included liberalizing interest rates, restructuring banks and improving bank supervision, and liberalizing current and capital accounts. It has been argued that the reforms largely did not achieve their expected outcomes for

² See AfDB *et al.* (2010).

³ See, for e.g., Beck, Demirgüç-Kunt and Levine (2002, 2004), Chinn and Ito (2006), Keefer (2005), McDonald and Schumacher (2007), and Roe and Siegel (2007).

several reasons, including insufficient legal institutions and information sharing (see, for e.g., McDonald and Schumacher, 2007; NEPAD-OECD, 2009).⁴ Furthermore, the time needed to improve the financial infrastructure in SSA countries has generally been underestimated given that the public sector is the major borrower and the institutional capacity is weak. These observations suggest that the roles of financial liberalization and institutions in the development of financial markets are intertwined in SSA.

In SSA, the importance of institutions to financial development reflects the strong consensus that good governance is a precondition for sustainable economic growth.⁵ A study of governance in Africa based on a survey, the *African Governance Indicators* (AGI), of perceptions of households and experts at the country level from 2001 to 2004 suggested that governance generally improved during that period compared to the 1990s.⁶ The improvement in governance during the 2000s is generally supported by the overall index of the World Bank's *World Governance Indicators* (WGI). In the survey, the AGI for political representation received the highest scores; followed by indicators for the effectiveness of institutions for all the three branches of government, efficiency of government services, the control of corruption, transparency and accountability of the civil service, and lastly, the decentralization of government structures and corruption in the tax system. The latest report on governance in Africa suggests that since 2005 there has only been marginal progress on governance. The gains on political governance have been mixed, while economic governance has been marked by

⁴ See UNECA (undated). Reinhart and Tokatlidis (2000) indicate that the financial reforms seemed to have had little effect on SSA countries in terms of mobilizing savings, deepening intermediation and promoting investment.

⁵ The early studies on the relationship between financial development and economic growth include McKinnon (1973); for more recent studies, see for example, King and Levine (1993), and Levine (2005); and for studies on SSA countries see, for e.g., Ahmed (2008), Aziakpono (2004), and Allen and Ndikumana (2000). See also, for e.g., Beck, Demirgüç-Kunt and Levine (2004) on financial intermediation and income inequality.

⁶ See UNECA (2005).

progressive policies. Nonetheless, there are still challenges to good governance, including a poor tax system and corruption.⁷

In addition to the political influences from governance through checks and balances, the literature recognizes that legal traditions are different in their abilities to evolve as conditions change. So, a legal system that is slow to change would have adverse implications for financial market development. In particular, it has been argued that civil law, based on the French legal system, would tend to hinder financial development compared to the common law, which is based on the British system.⁸

Lastly, economic growth and stability provides opportunities to increase income and wealth, and thus stimulates the need for formal intermediation to facilitate saving, investing, or the transfer of these gains. In contrast, economic stagnation or decline and instability lead to dissaving and disinvesting to cover financial hardships and losses, threatening the long-term viability of financial intermediaries.

The extent to which the challenges of liberalizing financial markets and improving institutions hamper the development of financial markets in SSA is generally unclear. Although several studies have been done on financial development, very few of them focus on SSA, which has a unique situation given the tremendous challenges the countries face; the few studies include McDonald and Schumacher (2007), and Singh, Kpodar, and Ghural (2009).⁹ Given the paucity of research, I contribute to our understanding of the financial development process in SSA countries by focusing on the roles of financial liberalization and institutions, and their

⁷ See UNECA (2009).

⁸ See, for e.g., Keefer (2005), and LaPorta *et al.* (2004).

⁹ Studies that included SSA countries in their sample but did not focus on SSA include Chinn and Ito (2008), and Klein and Olivei (2006).

potential interaction effects. In particular, I attempt to address the following questions: What are the roles of financial liberalization and institutions to financial development in SSA? To what extent does financial development in SSA depend on both political and legal institutions? And, which dimensions of the political and legal institutions are powerful for financial development in SSA?

This study differs from previous research on financial development in SSA countries in several ways that, in combination, makes it unique. First, this study examines the independent effects of financial liberalization and governance on financial development, as well as their potential interaction effects. Second, I incorporate in the analysis all aspects of institutions—political, economic and legal—to assess their independent effects, and identify the dimensions of governance most relevant to financial development. I also control for the potential effects of oil-exporting countries and the banking crises that affected a number of countries about two decades ago. Third, I use the most recent data on financial development, financial liberalization, and institutions from 1996 to 2008 for 37 SSA countries, recognizing the change in the rate of increase in financial development since 2002 that is strongly related to the effects of financial liberalization and governance. Fourth, I use the most comprehensive measures of financial liberalization, the Chinn-Ito index, and of governance, the World Bank's *World Governance Indicators* (WGI).

The analysis yields several interesting results, including the following. Contrary to previous studies, financial liberalization did not have an independent favorable impact on financial development; there was actually an overall decline in financial development from 1996 to 2008 probably due to lack of sustained financial openness, especially in the earlier period. On the other hand, improved governance has had increased financial development over time.

Furthermore, legal origin also impacts financial development, independent of political influences; in particular, legal systems based on civil laws are less favorable to financial development compared to mixed legal systems. Also, there is a strong interaction between financial liberalization and governance. From 1996 to 2002, the interaction between financial liberalization and governance was negative while it was positive in the 2003-2008 period. This means that in the earlier period good governance reduced the impact of financial liberalization on financial development while in the second period the effect of financial liberalization was enhanced.

The rest of this study is organized as follows. The next section discusses previous studies related to financial development in SSA. Section 3 introduces the econometric model, and section 4 presents the estimation results. Section 5 concludes with a discussion of the key findings of this study.

2. Previous Studies on Financial Development in Sub-Saharan Africa

McDonald and Schumacher (2007) examine the role of certain aspects of legal institutions—creditor rights and information sharing—on financial markets in SSA countries. They use data for 37 countries for selected years between 1983 and 2004, and construct three data points of averages for 1983 to 1987, 1993 to 1997, and 2000 to 2004. Financial development is measured as the ratio of private credit by deposit banks to GDP, a measure typically used in studies of financial development, especially for less developed countries. In their analysis, they regress private bank credit on an index of financial liberalization, legal/institutional variables, and control for macroeconomic factors. The index of financial liberalization that they use, based on Gelbard and Leite (1999), ranges between 0 and 100, and is

an aggregation of the following conditions—whether interest rates are liberalized, the number of years real lending and deposit rates have been positive, the existence of a significant informal financial sector, and directed credit allocation mechanisms.

They find, among others, that financial liberalization, by itself, promotes financial deepening. Furthermore, given the level of financial liberalization, countries with better legal institutions—specifically, protection of creditor rights, improvement in the prediction of borrower defaults by reducing information asymmetries, and efficient judicial system and rule of law—experience higher financial development.¹⁰ Also, countries with civil legal origins, inspired by the French, seem to have been less successful in promoting financial development. They, however, use narrower measures of financial liberalization and governance than I use in this study do not account for potential interaction between financial liberalization and governance.

Using a methodology based largely on McDonald and Schumacher (2007), and a panel data for a sample of 40 countries for the 1992-2006 period, Singh, Kpodar, and Ghural (2009) study why financial depth in the CFA franc zone is shallower than in the rest of SSA. They find that, similar to McDonald and Schumacher (2007), the gap in financial development can be explained by differences in legal institutional quality—such as availability of credit information, and strength and enforcement of property rights.

Chinn and Itoh (2006) investigate whether financial openness leads to financial development, over the period from 1980 to 2000 for 108 countries, including 30 SSA countries

¹⁰ Some of the studies that find a weak link between financial intermediation and economic growth in SSA have attributed that outcome to the pervasive inefficiencies in the credit allocation mechanism that is probably due to the lack of effective financial sector reform and institutional and structural problems, especially for smaller countries; see, for e.g., Aziakpono (2004).

as part of a broader set of developing or emerging countries. After controlling for legal institutions, they find that a higher level of financial openness directly promotes the development of equity markets and indirectly through its interaction with legal and institutional development; albeit, the latter effect requires a certain threshold of institutional development. Their results are more relevant to emerging economies than developing countries since they focused on equity markets. Nonetheless, their study seems to support the argument that an appropriate legal and institutional infrastructure is necessary for financial liberalization to be effective. They also find that trade openness is a precondition for capital account liberalization and the development of the banking system is required for equity market development.

Klein and Olivei (2006) show that capital account liberalization increases financial development and ultimately economic growth in a wide cross-section of countries between 1976 and 1995. Their results, however, pertained largely to developed countries implying that less developed countries had not benefited from capital account liberalization. In particular, the results for 27 SSA countries, which they represent with a dummy variable in the regression equation, showed that financial development in Africa was lower than in non-African countries. While this result is useful it does not explain why Africa has a shallow level of financial development. They also argue that less developed countries require higher levels of economic, legal, and social institutions, similar to developed countries, to fully benefit from capital account liberalization. The authors account for the possibility that the link between financial liberalization and financial development is conditional on the quality of institutions in a country, measured with an index of the likelihood that a country will not repudiate its contracts.¹¹

¹¹ See also, Klein (2005).

Keefer (2005) finds that political actions promote financial sector development. In particular, contrary to other studies, the author finds that political determinants of financial development are significant after controlling for legal origin; furthermore, legal origin seems to proxy for political phenomenon. The analysis is done using data from 1975 to 2000 for countries around the world.¹²

Roe and Siegel (2009) find that political instability, especially in non-democratic settings, hampers financial development and is a primary determinant of differences in financial development around the world. They argue that political instability is robust to the view that legal institutions are critical to financial development, and that political instability explains financial development more powerfully.¹³ While the cross-section analysis includes some Sub-Saharan Africa countries, the focus is worldwide. Furthermore, the focus is on stock market capitalization, an aspect of financial markets that is not well-developed in SSA.

3. Economic Methodology

Based largely on economic reasoning, data availability, and previous studies on financial development, I develop a model to examine the impact of financial liberalization and governance, among other factors, on financial development.¹⁴ I specify a model of financial development for country i in time t as follows.

$$(1) \text{ FDEV}_{it} = \beta_0 + \beta_1 \text{FLIB}_{it} + \beta_2 \text{WGI}_{it} + \beta_3 \text{LGO}_i + \delta_i \text{FLIB}_{it} * (\text{WGI}_{it} + \text{LGO}_i) + \text{X}_{it} \Phi + \mu_{it}.$$

FDEV is a measure of financial development. *FLIB* is a measure of financial liberalization. *WGI* is a measure of governance—both political and legal institutions, and *LGO* represents the origin

¹² There is not enough information in Keefer (2005) to determine, how many, if any of the countries are in SSA.

¹³ Investor protection has been linked to factors such as legal origin, trade openness, and colonial conditions; see, for e.g., World Bank (2006).

¹⁴ See, for example, McDonald and Schumacher (2007), Chinn and Ito (2006), and Klein and Olivei (2006).

of legal systems. I allow for interactions between *FLIB* and *WGI* ($FLIB * WGI$) and between *FLIB* and *LGO* ($FLIB * LGO$). And, X is a vector of control variables that largely capture macroeconomic conditions and other conditions that likely impact financial development. The macroeconomic variables are the real GDP per capita, inflation rate, government expenditure, and net official development aid. Also, I include variables for the countries that experienced banking crises in the late 1980s and early 1990s, and countries that are oil exporters.

There are several basic indicators of the size of the financial development (*FDEV*) of a country, and the problem of selecting the most appropriate measure is exacerbated when the countries being studied have varied levels of financial systems. A traditional and broad measure of financial development is liquid liabilities (which is currency, held outside the banking system, plus demand and interest-bearing liabilities of banks and other financial intermediaries relative to the GDP).¹⁵ This measure reflects the overall size of the financial intermediary sector, but it does not distinguish between the allocation of capital to the private sector and to the public sector (comprising governmental and quasi-governmental agencies).

In SSA countries, because public ownership of financial institutions is pervasive and the major borrowers are often from the public sector, it is better to focus on the extent of financial intermediation in the private banking sector as a measure of market-based financial development. I use the ratio of private credit by deposit banks to the GDP, which represents the claims of the private banking sector on the private sector and is therefore a better representation of the overall development of banking markets in the private sector. This measure isolates private sector credit from credit to the public sector, and excludes credits issued by the Central Bank. Typically, this

¹⁵ This measure, which indicates the potential amount of capital available for financial development, was originally used by King and Levine (1993).

indicator of financial development is preferred in the empirical literature.¹⁶ The data are from Beck, Demirgüç-Kunt, and Levine (2009) who use information from the *International Financial Statistics* and other databases, available from 1960 to 2008.

The measure of financial liberalization (*FLIB*) is based on an index constructed by Chinn and Ito (2008), the Chinn-Ito index. This is a comprehensive and intensive measure based on four major categories of restrictions on cross-border financial transactions in the IMF's *Annual Report on Exchange Arrangements and Exchange Restrictions*—they are the existence of multiple exchange restrictions, openness of the current account, openness of the capital account, and the stringency of requirements for the repatriation and/or surrender of export proceeds. By construction the series has a mean value of zero with higher values implying more cross-border financial transactions or openness. For the SSA countries in our sample the index ranges from –1.40 to +2.53, and the data are available from 1970 to 2007. This measure of financial openness is appropriate to SSA countries since the formal financial institutions, especially banks, generally provide credit for trade-related activities. Previous studies that have used this data include Ahmed (2008), and Chinn and Ito (2006). In theory, I expect *FLIB* to positively impact financial development.

I use the World Bank's *Worldwide Governance Indicators* (WGI) to measure governance, which is generally defined as the traditions and institutions by which authority in a country is exercised—and it encompasses political, economic, and legal dimensions. There are six dimensions of the *WGI*: government effectiveness, control of corruption, rule of law, political stability and absence of violence/terrorism, voice and accountability, and regulatory quality.¹⁷

¹⁶ Several studies on developing countries have used this measure of financial development, including McDonald and Schumacher (2007).

¹⁷ *Government effectiveness* measures the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility

The data have been available since 1996 and are available for most years up to 2008; the data availability for governance was a major motivation for using 1996 as the starting year of our study.¹⁸ The *WGI* is constructed such that almost all of the scores for governance range between -2.5 and $+2.5$; with a normalized mean of zero and a standard deviation of one across all countries in the dataset; higher scores correspond to better outcomes.

I use the governance measure in two ways. First, I use the average of the six dimensions of governance to reflect the overall level of institutional development since the dimensions are very much correlated. Furthermore, the combined measure is useful since financial markets are generally affected by uncertainty irrespective of whether the source is economic, political, or legal. Second, I use each of the dimensions separately to help identify which dimension is closely related to financial development, if any. Governance is expected to positively affect financial development because there is a consensus among both academics and policymakers that good governance provides creates an overall conducive environment for the economic development of a country.

The data for the origin of the legal system (LGO) is based on data compiled by the University of Ottawa's (Canada) *World Legal Systems Research Group* (JuriGlobe).¹⁹ The data

of the government's commitment to such policies; *Control of corruption* measures the extent to which public power is exercised for private gain, including petty and grand forms of corruption, as well as "capture" of the state by elites and private interests.; *Rule of law* measures the extent to which agents have confidence in and abide by the rules of society, in particular the quality of contract enforcement, the police, and the courts, as well as the likelihood of crime and violence; *Political stability* and absence of violence/terrorism measures the perceptions of the likelihood that the government will be destabilized or overthrown by unconstitutional means, including domestic violence and terrorism; *Voice and accountability* measures the extent to which country's citizens are able to participate in selecting their government, as well as freedom of expression, freedom of association, and a free media; and *Regulatory quality* measures ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development.

¹⁸ Other sources of data for governance include the *African Governance Indicators* (AGI), the World Bank's *Country Policy and Institutional Assessment* (CPIA), which is not publicly available, and the Country Assessment Reports Service of The Fund for Peace, which has been available only since 2006. We could not obtain data from these other sources because of data limitations.

¹⁹ See <http://www.juriglobe.ca/eng/index.php>. The data was last accessed on September 8, 2010.

identifies five categories of legal systems—common law, civil law, Muslim Law, customary law, and mixed law (which is any combination of the first four). Since my focus is to determine the impact of the origin of legal systems on financial markets, the legal origins of the company law or commercial law of each country is of primary importance rather than laws that concern personal issues such as marriage or religion. I consider a country to have a civil or common law if this is one of the legal systems assigned to that country in the database; if both the common law and the civil law are assigned to a country then I regard the system to be mixed. Using this approach there are 10 common law countries, 21 civil law countries, and 6 mixed law countries in the sample; three dummy variables—*LGO_CMN*, *LGO_CVL*, and *LGO_MXD*—are constructed to correspond to the three legal systems, respectively. *LGO_CVL* is used as the reference category in the regression. Based on previous studies, I expect civil law to be less effective in promoting financial development compared to either common law or mixed law.

Similar to previous studies, I control for effect of the macroeconomy using economic output, inflation rate, government expenditure, and net official development aid.²⁰ Financial depth may depend on a country's output and level of development since higher economic output would increase the financial resources available for mobilization; the variable is measured as the natural log of the real GDP per capita (*GDPPC*), the data are from the *Penn World Tables*. The inflation rate (*INFLATION*) is measured as the percentage change in the consumer price index; government expenditure is the ratio of government expenditure to the GDP (*GOVEXPN*), and aid is the ratio of net official development aid to GDP (*NETODA*);²¹ all these variables are from the

²⁰ Some authors include the degree of trade openness (the ratio of the sum of exports and imports to the GDP) as another variable; see, for e.g., Chinn and Ito (2005), and Klein and Olivei (2006). I exclude this variable because it may be a prerequisite for financial liberalization, which is typically measured as capital account openness; also, when included, its impact on private credit was insignificant similar to the previous studies.

²¹ I used the government expenditure because there were not enough data for fiscal imbalances.

World Bank's *World Development Indicators* database. Apart from measuring macroeconomic stability, the inflation rate is included because of its relationship to savings, upon which financial intermediation is based; it is expected to have a negative impact on financial development.²² Government expenditure is important to financial development because of its potential to crowd out private credit, if viable investment opportunities are available in the private sector; its impact will be negative if there is crowding out.²³ And aid is likely to positively impact financial development since financial aid generally increases the resources available for financial intermediation.

Finally, I include a dummy variable to control for the potential continued effects of the banking crises that a large number of countries experienced during the late 1980s and early 1990s (*BCRISIS*). A negative effect is expected. I also include a dummy variable for oil-exporting countries (*OILEXPRTTR*) since the incomes of oil-exporting countries are vulnerable to vagaries of international crude oil prices they may experience adverse impact on financial development. Both data are based on IMF (2006).

I measure the level of financial development, as well as the non-dummy covariates, at their average levels for two separate periods: 1996 to 2002 and 2002 to 2008. While using the average values limits the number of observations per country it has the potential benefit of increasing the number of countries in the sample by reducing the number of missing observations; this approach also minimizes random variations in the indicator of financial development.

²² See, for e.g., Boyd, Levine and Smith (2001) who find a link between inflation and financial development.

²³ Gulde, Patillo, and Christensen (2006) provide evidence that banking systems in SSA are likely to have excess liquidity, suggesting that the government spending may not be actually limiting private credit.

The breakpoint at 2002 was motivated by the change in the overall rate of increase of financial development before and after that time. The level and change (in percents) in financial development are shown in Figure 1, Panels A and B, respectively. As shown, the increases in financial development were smaller between 1996 and 2002—financial development increased from about 11.4 percent to 14.2 percent at an average increase of about 0.47 percent per year; but, from 2002 to 2008 the increases were larger—financial development increased from about 14.2 percent to 19.0 percent at an average increase of about 0.8 percent per year, almost double that of the previous period.

I present descriptive statistics of the key variables in Table 1 for 37 SSA countries. The data indicate more than 3 percent increase, on average, in financial development (*FDEV*) between the two time periods, 1996 to 2002 and 2003 to 2008. In both periods there was a wide variation in the levels of financial development, ranging from about 2 percent to over 60 percent. The index of financial liberalization (*FLIB*) also increased slightly between the two periods, from -0.614 to -0.502 .

Different measures of institutional quality are reported—an average measure of the six dimensions of *WGI* and a separate measure for each of the dimensions. The overall measure shows a very small increase between the two periods. For the individual measures, the changes varied. Regarding the origin of legal systems, there are more countries with civil laws (mostly French-speaking) than common laws. For the macroeconomic variables, the GDP per capita shows an increase latter period of about \$300. Inflation decreased drastically, while government expenditure and official development aid increased slightly between the two periods. Sixteen countries experienced banking crises and six countries are oil exporters.

In Table 2, I classify the countries by their levels of financial development, financial liberalization, and overall governance measure. Two broad categories are created—high and low levels of financial development—and four subgroups under each. All the groups are created depending on whether the countries were above or below the average levels of these variables in each period. For example, the group 1 countries are those with high levels of financial development, financial liberalization, and governance. For each variable, these are countries that have values that are above average in both periods or have values below the average in the earlier period but improved to above the average in the latter period.

Only 13 countries have high financial development levels compared to 24 with low levels. Majority of the countries with deep financial markets also have high levels of financial liberalization but low levels of governance. Also, the level of financial development was much higher if financial liberalization was higher, irrespective of the level of governance. For the countries with low financial development, almost all have low levels of governance.

While the descriptive data in Tables 1 and 2 suggest some interesting outcomes of financial development for various levels of financial liberalization and governance, a more rigorous analysis is necessary to determine any possible linkages. This requires controlling for potential confounding factors, including macroeconomic factors and unobserved time and country effects. This is what I do in the next section.

4. Estimation Results

The regression results of estimating Equation 1, and variations of it, are presented in Table 3. All the estimated equations include country-specific effects (not reported), and time-specific effects ($PER = 0$ if 1996 to 2002, 1 if 2003-2008) to control for potential differences across

countries and time not captured by the other covariates; and the standard errors of the coefficients are robust. All the estimated equations are highly significant at the 1 percent level or better; furthermore, all the R-squares are over 90 percent.

In column 1 of Table 3, the model is estimated without interaction terms. The covariates are generally not significant, except for the time period (*PER*) and mixed legal systems (*LGO_MXD*). The former shows that financial development increased between the two time periods, as expected from the descriptive statistics in Table 1 and Figure 1. The latter means that mixed legal systems are more favorable to financial development than civil law systems, the reference category.

To account for potential interaction between financial development and institutions, and given that there is a significant difference in financial development between the two periods, I use interaction terms between *FLIB*, *WGI*, and *PER*, and between *FLIB*, *LGO*, and *PER*. Focusing initially on the estimates of the interaction terms in column 2, the results indicate that the interaction between *FLIB* and *WGI* (denoted as *FLIB*WGI*) and the between *FLIB*, *WGI*, and *PER* (denoted as *FLIB*WGI*PER*) are highly significantly negative (-8.870) and positive (3.426), respectively. The estimates indicate that, between 1996 and 2002, the impact of financial liberalization was reduced in countries with high governance while during the 2003-2008 period the impact of financial liberalization was higher in countries with high governance.

Although the result for the earlier period seems perplexing, it could imply that a certain level of good governance is necessary in order for financial liberalization to be effective, and that threshold may have been achieved in the 2000s as several countries sought to improve governance. Also, it is possible that during the earlier period forbearance by governments as

governance strengthened left a number of weak banks, mostly state-owned, that performed poorly as financial intermediaries.

The interactions between financial liberalization and the origin of legal systems suggest that financial liberalization promoted financial development in common law countries, compared to civil law countries, only in the earlier period (*FLIB*CMN*). The results are not significant in the latter period for none of the legal systems.

I also calculate the total impacts of financial liberalization, governance, and origin of legal systems using the estimates in column 2 of Table 3. The results, presented in Table 4, indicate that overall financial liberalization, by itself, was associated with lower financial development, due primarily to what happened from 1996 to 2002. This could be due to the lack of sustained financial liberalization efforts during this period. The finding is partly supported by the observed relationship between financial development and liberalization from 1996 to 2002, in Figure 2, Panel A. The result contradicts some of the findings in previous studies for SSA (e.g. McDonald and Schumacher, 2007), but it is consistent with the view that developing countries require higher levels of good governance to benefit fully from financial liberalization.²⁴

Although the overall governance measure is not significant—it has a negative impact in the earlier period—the effect was positive in the latter period. The impact of governance from 2003 to 2008 is consistent with the observed relationship shown in Figure 2, Panel B. The results for financial liberalization and governance combined suggest that governance, relative to financial liberalization, is a key determinant of financial development.

²⁴ See, for e.g., Klein and Olivei (2006).

The results in Table 4 also indicate that the origin of legal systems, by itself, improved financial development in countries with mixed legal systems compared to civil laws, consistent with the view that civil laws are less favorable to financial development.

I discuss the effects of the other control variables used in the model based on column 2 of Table 3. The coefficient for economic output is positive but not significant. As expected, inflation has a negative effect on financial development, while aid improved it. Government expenditure is positive and significant, implying that these expenditures did not crowd out private credit, and probably were complementary to it. Countries that experienced banking crises seem to perform less on financial development, suggesting a protracted impact of the crises. Lastly, oil-exporting countries have lower levels of financial development, as hypothesized.

I performed several checks of robustness for the results. First, I excluded South Africa, a country with much higher income and financial development than the rest of the SSA countries, to determine whether the results were influenced by it. The results, presented in column 3 of Table 3 are generally similar to what has been discussed. Second, I checked if there is potential endogeneity bias since financial liberalization could be the outcome of a deep and efficient financial system. To check for this possibility, I reverse the role of financial development and financial liberalization by making the latter the dependent variable and the former a covariate. None of the covariates for financial development (including interaction terms with governance) was significant suggesting no reverse causality.²⁵

Third, in column 3 of Table 3, I replace the dependent variable with liquid liabilities, a broader measure of financial development that does not focus on private credit flows. The

²⁵ Chinn and Ito (2006) use a similar approach and found no evidence of endogeneity. Klein and Olivei (2006) also rejected evidence of endogeneity using an instrumental variable technique.

results are generally not as significant as using private credit by banks. In particular, the interaction between financial liberalization and governance is not significant in the second period, although negative in the earlier period. The banking crises appear to have had a substantial impact on liquid liabilities than private credit.

Fourth, in Table 5, I replace the overall governance indicator with the individual dimensions of quality— political stability (PS), rule of law (LW), control of corruption (CC), government effectiveness (GE), regulatory quality (RQ), and voice and accountability (VA), respectively. The estimates show that the interaction between financial liberalization and governance is positive in the second period ($FLIB*WGI*PER$) for only political (in)stability in column 1, even though it is negative in the earlier period ($FLIB*WGI$). Thus improved political stability increased the impact of financial liberalization on financial development. The powerful role of political instability to financial development is different from the role of the rule of law supported in the studies by McDonald and Schumacher (2007), and Chinn and Itoh (2006). The results also show that almost all the different dimensions of governance, by themselves, have improved financial development over time.

Finally, the standard least squares estimation method that I use estimates of the effect of the conditional mean of explanatory variables on the dependent variable (marginal effect). While this might be sufficient in some cases, it may be necessary to obtain the marginal effect at other quantiles of the explanatory variables, allowing for estimation of heterogeneous marginal effects. Unfortunately, this approach is not appropriate for the data I used because they are average values. I could not, however, obtain reliable estimates when the sample was divided into countries with low and high levels of financial development.

5. Discussion and Conclusion

I examine the role of financial liberalization and governance in financial development in SSA countries, using data from 1996 to 2008, and more comprehensive measures of financial liberalization and governance than in previous studies, and controlling for the origin of legal systems, macroeconomic factors, and other conditions likely to affect financial development.

Several major conclusions can be drawn from the study. Contrary to what has been found in previous studies, financial liberalization, by itself, did not improve financial development in SSA countries during that period. Improved financial liberalization actually resulted in lower financial development, particularly from 1996 to 2002—this could be the result of the lack of sustained efforts at financial liberalization. On the other hand, the impact of governance on financial development has improved over time—the negative impact during the 1996-2002 period has been offset with positive effects from 2003 to 2008. The effect of origin of legal systems also shows that countries with civil laws were less successful in promoting financial development, compared to mixed legal systems.

I also find that the impact of financial liberalization on financial development in SSA countries from 1996 to 2008 depends on the quality of institutions. In particular, during the 1996 to 2002 period improved governance (measured by the World Bank's World Governance Indicators, *WGI*) may have resulted in lower financial development. A possible reason is governments' forbearance of a large number of weak banks, mostly state-owned, as governance was strengthened. This puzzling result requires further investigation. There is also the potential issue of the endogeneity of the governance variables, especially since economic variables drive political outcomes.

On the other hand, from 2003 to 2008, financial liberalization resulted in financial deepening for countries. These results are consistent with what has been found in previous studies. These results suggest that the massive financial liberalization that SSA countries undertook in the 1980s and early 1990s could have been successful if good governance was practiced in those countries. Moreover, political stability appears to be more powerful for financial development than rule of law, contrary to some previous studies.

Finally, the banking crises experienced by some countries in the late 1980s and early 1990s may have had protracted adverse effects on financial development, particularly on liquid liabilities.

References:

- African Development Bank (AfDB), the Committee of Ten, United Nations Economic Commission for Africa, and the African Union Commission, in collaboration with the Korea Institute for International Economic Policy (KIEP). *Africa's Voice on Development: Proposals for G20 Summit in Seoul*. Seoul, September 14-17, 2010.
- Ahmed, Abdullahi. Financial liberalization, Financial Development and Growth in Sub-Saharan Africa's Economic Reform: An Empirical Investigation. 2008.
- Aziakpono, Meshach. Financial Intermediation and Economic Growth in Economic Integration: The Case of SACU, 2004. www.csae.ox.ac.uk/conferences/.../3m-Aziakpono-CSAE2004.pdf
- Allen, Donald and Leonce Ndikumana. Financial Intermediation and Economic Growth in Southern Africa. *Journal of African Economies*, 9(2), 2000, 132-160.
- Beck, Thorsten, Asli Demirgüç-Kunt and Ross Levine. Law and Finance: Why Does Legal Origin Matter? *Journal of Comparative Economics* 31, 2002, 654-675.
- Beck, Thorsten, Asli Demirgüç-Kunt and Ross Levine. Finance, Inequality and Poverty: Cross Country Evidence. (Washington: World Bank, 2004).
- Beck, Thorsten, Asli Demirgüç-Kunt and Ross Levine. Financial Institutions and Markets Across Countries and Over Time: Data and Analysis, World Bank Development Research Working Paper No. 4943, May 2009.
- Boyd, John, Ross Levine and Bruce Smith. The Impact of Inflation on Financial Sector Performance. *Journal of Monetary Economics* 47, 2001, 221-248.
- Chinn, Menzie and Hiro Ito. What Matters for Financial Development? Capital Controls,

- Institutions, and Interactions? *Journal of Development Economics*, 81, 2006, 163-192.
- Chinn, Menzie and Hiro Ito. A New Measure of Financial Openness. *Journal of Comparative Policy Analysis*, 10(3), 2008, 309-322.
- Gelbard, Enrique and Sergio Leite. Measuring Financial Development in Sub-Saharan Africa. WP/99/105. Washington: International Monetary Fund, 1999.
- Gulde, Anne-Marie, Catherine Patillo and Jakob Christensen. *Sub-Saharan Africa: Financial Sector Challenges* (Washington: IMF), 2006.
- International Monetary Fund. Financial Sectors: Issues, Challenges and Reform Strategies”, in *Regional Economic Outlook: Sub-Saharan Africa*. May 2006. (IMF: Washington, DC).
- International Monetary Fund. Private External Financing Flows and the Global Financial Crisis”, in *Regional Economic Outlook: Sub-Saharan Africa: Back to High Growth?* April 2010. (IMF: Washington, DC).
- Keefer, Philip. Beyond Legal Origin and Checks and Balances: Political Credibility, Citizen Information, and Financial Sector Development. Unpublished paper, 2005. Available at <http://ssrn.com/abstract=960272>.
- Klein, Michael. Capital Account Openness, Institutional Quality and Economic Growth. *NBER Working Paper*, no 11-112, 2005.
- Klein, Michael and Giovanni Olivei. Capital Account Liberalization, Financial Development, and Economic Growth. 2006.
- King, Robert and Ross Levine. Finance and Growth: Schumpeter Might Be Right. *Quarterly Journal of Economics* 108, 1993, 717-738.
- La Porta, R., F. Lopez-de-Silanes, C. Pop-Eleches and A. Shleifer. Judicial Checks and Balances. *Journal of Political Economy* 112 (2), 2004, 445-470.

- Levine, Ross, Norman Loayza and Thorsten Beck. Financial Intermediation and Growth: Causality and Causes. *Journal of Monetary Economics* 46, 31-77.
- McDonald, Calvin and Liliana Schumacher. *Financial Deepening in Sub-Saharan Africa: Empirical Evidence on the Role of Creditor Rights Protection and Information Sharing*. WP/07/203. Washington: International Monetary Fund, 2007.
- McKinnon, R. *Money and Capital in Economic Development*. Brookings Institution, Washington: 1973.
- NEPAD-OECD. *Deepening African Financial Markets For Growth and Investment*. Ministerial Meeting and Expert Roundtable, NEPAD-OECD Africa Investment Initiative, 11-12 November 2009.
- Reinhart, Carmen and Ioannis Tokatlidis. Financial Liberalization: The African Experience. *Journal of African Economies* 12/2, 2003, 53-88.
- Roe, Mark and Jordan Siegel. 2007. Political Instability and Financial Development, Its Roots in the Severity of Economic Inequality. Unpublished paper. 2007.
- http://papers.ssrn.com/sol3/papers.cfm?abstract_id=963214. Accessed on September 7, 2010.
- Singh, Raju, Kangni Kpodar and Dhaneshwar Ghura¹. Financial Deepening in the CFA Franc Zone: The Role of Institutions. WP/09/113. Washington: International Monetary Fund, 2009.
- UNECA. *Striving for Good Governance in Africa: Synopsis of the 2005 African Governance Report Prepared for the African Development Forum IV*. Economic Commission for Africa. 2005.
- UNECA. *African Governance Report II*. Economic Commission for Africa and Oxford

University Press. 2009.

UNECA. *Financial Sector Reforms in Africa: Realities and Problems*.

http://www.uneca.org/eca_resources/Major_ECA_Websites/6finmin/cmffin1.htm

(undated). Accessed on June 15, 2010.

World Bank. *Institutional Foundations for Financial Markets*. 2006. Available at

<http://siteresources.worldbank.org/inttopaccfinser/Resources/Institutional.pdf>.

World Bank. *The Africa Competitiveness Report 2009*. Publication. World Economic Forum,

World Bank, African Development Bank.

Table 1: Summary Statistics

Variable	1996-2002 (N=37)				
	Mean	Median	Std Dev	Min	Max
FDEV (%)	12.970	9.305	12.404	2.088	63.439
FLIB	-0.614	-1.131	1.041	-1.471	2.532
WGI	-0.571	-0.495	0.590	-1.583	0.671
WGI_GE	-0.599	-0.635	0.545	-1.389	0.753
WGI_CC	-0.568	-0.712	0.556	-1.323	0.616
WGI_LW	-0.631	-0.656	0.651	-1.6533	0.787
WGI_PS	-0.554	-0.428	0.938	-2.320	1.047
WGI_VA	-0.564	-0.777	0.729	-1.802	0.943
WGI_RQ	-0.510	-0.467	0.565	-1.646	0.717
LGO_CMN	0.270	0	0.450	0	1
LGO_CVL	0.568	1	0.502	0	1
LGO_MXD	0.162	0	0.374	0	1
GDPPC (\$)	2,572	1,063	3,850	354	17,173
INFLATION (%)	32.063	4.899	141.230	0.456	866.22
GOVEXPN (%)	14.843	13.127	7.127	6.637	42.826
NETODA (%)	11.109	10.627	8.959	0.358	44.605
BCRISIS	0.410	0	0.498	0	1
OILEXPTR	0.162	0	0.374	0	1

Table 1: Summary Statistics (contd)

Variable	2003-2008 (N=37)				
	Mean	Median	Std Dev	Min	Max
FDEV (%)	16.160	12.418	14.938	2.841	68.239
FLIB	-0.502	-1.131	1.271	-1.471	2.532
WGI	-0.556	-0.502	0.565	-1.497	0.740
WGI_GE	-0.644	-0.681	0.557	-1.503	0.750
WGI_CC	-0.577	-0.671	0.545	-1.272	0.934
WGI_LW	-0.632	-0.664	0.597	-1.507	0.853
WGI_PS	-0.452	-0.265	0.846	-2.134	0.937
WGI_VA	-0.489	-0.508	0.669	-1.658	0.829
WGI_RQ	-0.543	-0.543	0.483	-1.257	0.613
LGO_CMN	0.270	0	0.450	0	1
LGO_CVL	0.568	1	0.502	0	1
LGO_MXD	0.162	0	0.374	0	1
GDPPC (\$)	2,864	1,203	4,074	348	17,933
INFLATION (%)	8.171	7.169	7.414	1.819	44.522
GOVEXPN (%)	15.436	13.956	6.4643	6.3323	39.329
NETODA (%)	11.685	8.691	10.099	0.352	44.021
BCRISIS	0.405	0	0.498	0	1
OILEXPTR	0.162	0	0.374	0	1

Notes to Table 1:

FDEV: The ratio of private credit by deposit banks to GDP (in percent).

FLIB: An index of financial liberalization.

WGI: An average of all six dimensions of the World Governance Indicators (WGI).

WGI_GE: Government effectiveness dimension of the WGI.

WGI_CC: Control of corruption dimension of the WGI.

WGI_LW: Rule of law dimension of the WGI.

WGI_PS: Political stability dimension of the World Governance Indicators.

WGI_VA: Voice and accountability dimension of the WGI.

WGI_RQ: Regulatory quality dimension of the WGI.

LGO: Legal origins of a country's laws.

LGO_CMN: Equals 1, if country's legal origins include common law, but not civil law, 0 otherwise.

LGO_CVL: Equals 1, if country's legal origins include civil law, but not common law, 0 otherwise.

LGO_MXD: Equals 1, if country's legal origins include both civil law and common law, 0 otherwise.

GDPPC: Real Gross Domestic Product (GDP) per capita (in US dollars).

INFLATION: Percentage change in Consumer Price Index, CPI (in percent).

GOVEXPN: Ratio of government expenditure to GDP (in percent).

NETODA: Ratio of net official development aid to GDP (in percent).

BCRISIS: Equals 1, if country experienced banking crisis in the late 1980s and early 1990s, 0 otherwise.

OILEXPTR: Equals 1, if country is an oil exporter, 0 otherwise.

Table 2: Financial Liberalization, Governance, and Financial Development: Country Groups

Group: Country	Financial Development		Financial Liberalization	Governance
High Financial Development	Index	Level	Level	Level
Group 1: Botswana, Gambia, Mauritius, Seychelles	33.8	High	High	High
Group 2: Cape Verde, Mali, Mauritania, Senegal, South Africa	34.2	High	High	Low
Group 3: Kenya	23.0	High	Low	High
Group 4: Burundi, Ethiopia, Togo	18.7	High	Low	Low
Low Financial Development	Index	Level	Level	Level
Group 1: Madagascar, Zambia	8.5	Low	High	High
Group 2: Benin, Burkina Faso, Gabon, Ghana, Lesotho, Mozambique, Malawi, Tanzania	10.9	Low	High	Low
Group 3: Nigeria, Sudan, Uganda	9.3	Low	Low	High
Group 4: Angola, Central African Republic, Chad, Cote d'Ivoire, Cameroon, Congo, Guinea-Bissau, Niger, Rwanda, Sierra Leone, Swaziland	7.3	Low	Low	Low

Table 3: Regression Estimates of Financial Development in SSA (1996 to 2008)

VARIABLES	FDEV (1)	FDEV (2)	FDEV (3)	FDEV (4)
FLIB	0.664 (2.778)	-17.872** (7.067)	-17.843** (6.840)	-36.557 (23.755)
WGI	-0.504 (2.755)	-12.653*** (2.901)	-12.407*** (2.861)	-22.073** (9.732)
PER	2.285** (0.872)	7.219*** (0.844)	6.950*** (1.281)	11.237*** (2.647)
LGO_CMN	10.211* (5.993)	-6.988 (15.096)	25.393** (9.595)	109.200 (74.559)
LGO_MXD	3.885 (5.785)	48.853*** (9.252)	49.512*** (9.791)	136.142** (51.840)
FLIB*WGI		-8.870*** (2.005)	-8.706*** (1.936)	-21.096** (8.077)
FLIB*PER		1.737 (1.340)	1.675 (1.465)	5.698** (2.407)
WGI*PER		9.241*** (1.488)	8.736*** (2.421)	8.169 (5.265)
FLIB*WGI*PER		3.426* (1.691)	3.217 (2.085)	5.437 (4.013)
FLIB*CMN		12.099* (6.938)	11.891* (6.767)	9.219 (23.311)
FLIB*MXD		12.374 (7.961)	12.168 (7.764)	30.271 (25.749)
FLIB*CMN*PER		0.562 (1.023)	0.548 (1.026)	1.972 (2.138)
FLIB*MXD*PER		3.464 (2.968)	3.928 (3.853)	4.060 (4.102)
GDPPC	7.555 (6.146)	1.638 (4.117)	1.940 (3.987)	1.978 (8.117)
INFLATION	0.000 (0.004)	-0.007*** (0.002)	-0.007*** (0.002)	0.004 (0.005)
GOVEXPN	-0.028 (0.283)	0.287* (0.165)	0.273 (0.173)	-0.007 (0.407)
AID	0.099 (0.107)	0.208** (0.075)	0.206** (0.077)	0.306* (0.174)
BCRISIS	2.864 (6.575)	-21.755*** (5.180)	-22.519*** (6.554)	-97.493*** (33.969)
OILEXPTR	-6.055 (10.318)	-45.826*** (8.583)	-14.207 (10.055)	2.824 (41.174)
Constant	-50.469 (42.463)	3.675 (39.824)	-29.861 (25.536)	-47.254 (99.230)
Observations	74	74	72	74
R-squared	0.974	0.994	0.991	0.988
Adj. R-squared	0.938	0.982	0.970	0.960

Notes to Table 3:

The dependent variable (FDEV) is the ratio of private credit by deposit banks to GDP for all the estimates, except in column 4 where it is liquid liabilities. Robust standard errors are in parentheses. ***: $p < 0.01$, **: $p < 0.05$, and *: $p < 0.10$. The estimates for the country fixed-effects are not reported. Governance (WGI) is measured as the average of all the six dimensions of the WGI. The estimates in column 3 exclude South Africa.

Table 4: Effects of Financial Liberalization, Governance, and Legal Origin on Financial Development

A. All Countries

Variable	1996-2002	2003-2008	1996-2008
FLIB	-7.570** (3.62)	0.524 (0.648)	-7.046* (3.461)
WGI	-7.243*** (2.113)	7.528*** (1.207)	0.285 (0.2.139)
LGO_CMN	NA	NA	-13.904 (14.780)
LGO_MXD	NA	NA	41.057*** (6.637)

Notes to Table 4:

Robust standard errors in parentheses. ***: $p < 0.01$, **: $p < 0.05$, *: $p < 0.10$.

The estimate of *FLIB* for 1996-2002 is obtained, using the coefficients from column 2 of Table 3 as follows:

$-17.872 - 8.870 * \overline{WGI} + 12.099 * \overline{CMN} + 12.374 * \overline{MXD}$, where \overline{WGI} , \overline{CMN} , and \overline{MXD} are the averages of WGI (-0.57), LGO_CMN (0.27) and LGO_MXD (0.16), respectively, in 1996-2002.

The estimate of *FLIB* for 2003-2008 is obtained, using the coefficients from column 2 of Table 3 as follows:

$1.737 + 3.426 * \overline{WGI} * \overline{PER} + 0.562 * \overline{CMN} * \overline{PER} + 3.464 * \overline{MXD} * \overline{PER}$, where $\overline{WGI} * \overline{PER}$, $\overline{CMN} * \overline{PER}$, and $\overline{MXD} * \overline{PER}$, are the averages of WGI (-0.56), LGO_CMN (0.27) and LGO_MXD (0.16), respectively, in 2003-2008.

The estimate of *FLIB* for 1996-2008 is the sum of the estimates for 1996-2002 and 2003-2008.

The estimates for WGI, LGO_CMN, and LGO_MXD are obtained using a similar approach.

Table 5: Regression Estimates of Financial Development in SSA (1996 to 2008): Dimensions of Governance

VARIABLES Governance	FDEV PS	FDEV LW	FDEV CC	FDEV GE	FDEV RQ	FDEV VA
FLIB	-8.634 (8.298)	-8.820* (4.388)	-15.138* (8.097)	-13.006 (7.687)	-12.052 (8.557)	-36.246*** (8.961)
WGI	-4.264*** (1.236)	-6.008** (2.151)	-3.321* (1.826)	-6.273 (4.337)	1.772 (2.083)	-10.996*** (2.268)
PER	4.137*** (0.889)	6.144*** (0.924)	6.312*** (1.074)	7.216*** (0.966)	4.972*** (1.654)	6.997*** (1.142)
LGO_CMN	-9.817 (12.224)	-6.088 (7.385)	-5.959 (12.556)	-4.742 (14.505)	0.396 (17.519)	65.776*** (15.901)
LGO_MXD	35.677*** (9.366)	49.121*** (6.507)	41.126*** (9.094)	34.553*** (9.552)	33.992*** (9.669)	44.275*** (12.268)
FLIB*WGI	-2.632*** (0.880)	-1.823 (1.389)	-4.881*** (1.180)	-5.509 (3.842)	2.709 (1.732)	-4.502** (2.030)
FLIB*PER	0.810 (1.164)	0.646 (1.233)	1.124 (1.441)	1.566 (1.774)	-0.081 (1.951)	4.158** (1.493)
WGI*PER	4.671*** (0.849)	6.893*** (1.206)	5.911*** (1.306)	7.519*** (1.999)	2.905 (2.635)	2.595** (1.247)
FLIB*WGI*PER	1.518*** (0.510)	1.783 (1.287)	0.926 (1.946)	2.709 (2.366)	-2.579 (2.553)	-0.329 (1.169)
FLIB*CMN	10.268 (8.703)	9.903* (5.002)	12.837 (8.194)	8.456 (8.172)	13.383 (10.416)	24.612** (9.304)
FLIB*MXD	5.297 (9.241)	3.407 (4.979)	11.686 (9.444)	5.058 (8.597)	5.806 (9.440)	29.799*** (9.145)
FLIB*CMN*PER	-0.297 (1.285)	-0.104 (0.939)	-0.587 (1.161)	0.432 (1.207)	-1.033 (1.367)	-1.412 (1.603)
FLIB*MXD*PER	3.370 (2.793)	3.134 (3.085)	3.577 (2.796)	4.642 (2.908)	5.402** (2.580)	2.174 (2.311)
GDPPC	2.923 (4.787)	0.307 (3.345)	0.009 (4.172)	0.811 (4.467)	5.657 (5.067)	8.586 (6.342)
INFLATION	-0.006** (0.003)	-0.008*** (0.002)	-0.005* (0.003)	-0.005** (0.002)	-0.005* (0.003)	-0.003 (0.003)
GOVEXPN	0.320 (0.199)	0.426*** (0.125)	0.178 (0.231)	0.221 (0.202)	0.144 (0.217)	0.291 (0.183)
AID	0.182* (0.091)	0.117** (0.056)	0.115 (0.093)	0.143 (0.095)	0.174* (0.094)	0.232** (0.084)
BCRISIS	-14.332** (6.520)	-28.815*** (6.440)	-19.173*** (4.385)	-17.198** (7.152)	-15.514** (7.163)	8.406 (12.398)
OILEXPTR	-37.236*** (4.146)	-35.035*** (2.991)	-32.356*** (6.224)	-34.468*** (3.224)	-32.711*** (6.515)	-10.647*** (3.271)
Constant	-5.639 (40.620)	6.829 (26.059)	16.626 (36.056)	9.043 (39.002)	-27.771 (45.422)	-114.589* (55.345)
Observations	74	74	74	74	74	74
R-squared	0.992	0.995	0.994	0.992	0.991	0.992
Adj. R-squared	0.974	0.983	0.980	0.974	0.970	0.974

Notes to Table 5:

The dependent variable (FDEV) is the ratio of private credit by deposit banks to GDP for all the estimates. Robust standard errors are in parentheses. ***: $p < 0.01$, **: $p < 0.05$, and *: $p < 0.10$. The estimates for the country fixed effects are not reported.

PS is political stability; *LW* is rule of law; *CC* is control of corruption; *GE* is government effectiveness; *RQ* is regulatory quality; and *VA* is voice and accountability dimension of the WGI.

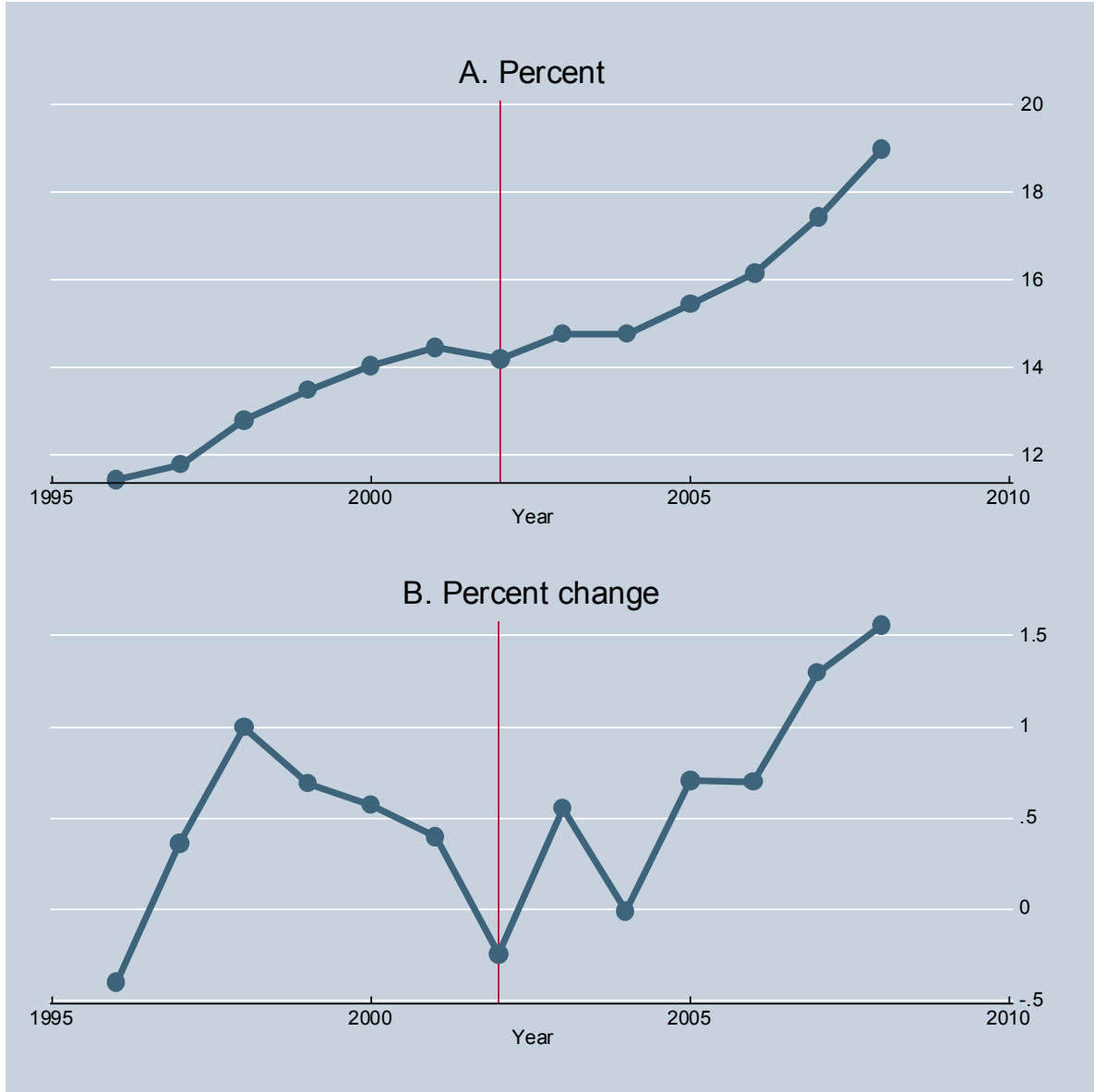
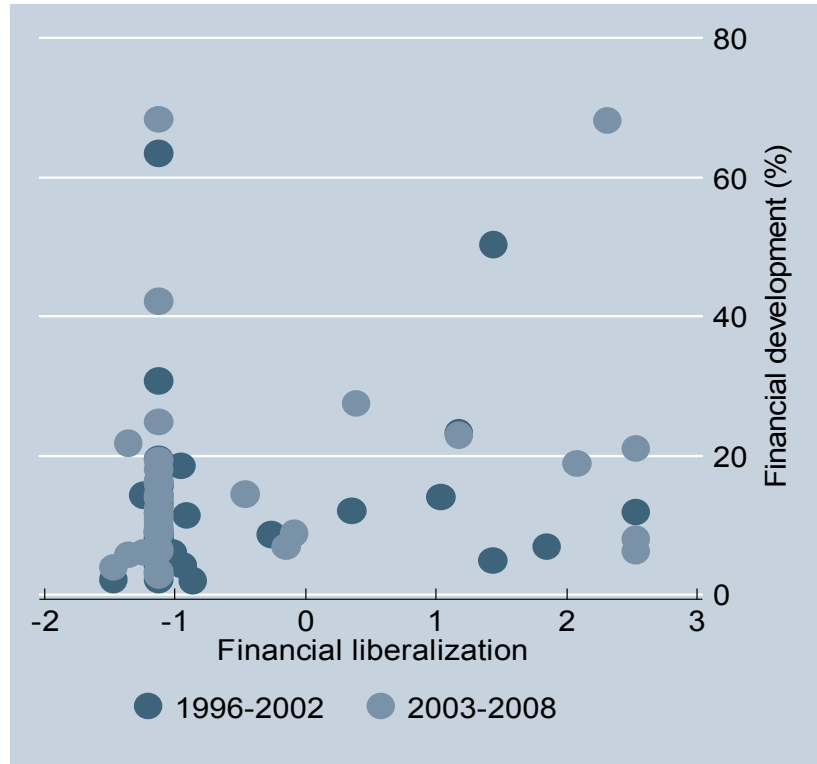
Fig. 1: Financial Development in SSA Countries: 1996-2008

Fig. 2: Financial Development in SSA Countries and ...**A. Financial Liberalization****B. Governance**