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BODY:

This study examines the relationship between financial sector development and private investment in Sub-Saharan Africa. It uses panel data covering the period 1991-2004 from 18 countries in Africa. The main findings of the study are as follows: there is a negative relationship between interest rate and private investment, signaling large interest rate spreads in African economies. It is also found that both the credit to the private sector and the turnover ratio have significant relationships with private investment. However, the effect of turnover ratio on investment is insignificant. The insignificance of the stock market indicator reflects the low stage of stock market development in most of the African economies. In addition, it is found that the informal sector is still large and has positive effects on private investment and that institutional variables play a key role in determining the level of private investment in Africa.

1 Introduction

A vibrant private sector is an essential pre-requisite for triggering economic dynamism, enhancing productivity, diffusing new industrial technologies, maintaining competitiveness, contributing to entrepreneurship development and reducing poverty (Niklaus, 2005). Although government actions and external support are undoubtedly necessary, the required level of growth will only be attained and maintained as a result of sustained private sector activity. The private sector is known to generate wealth to stimulate growth, revenue to improve public services, and employment to lift people out of poverty. However, the degree to which the private sector contributes to growth and poverty alleviation greatly depends on its ability to gain access to critical financial services.

The financial sector in most African countries has been rapidly developing, particularly after the 1990s when these economies adopted reforms in the financial sector. Consequently, both the banking sector and capital markets have

grown substantially in most African countries in the last decade. The menu of offered financial instruments has expanded in the 1990s compared to the 1980s both in the banking and capital market sectors. The development efforts in both sectors have been complemented by the dynamism in the ICT sector, leading to expansion in the number innovative financial products in a number of African countries. Whether these developments in the financial sector contributed in any way to growth of the private investment in Africa is an empirical question.

Substantial theoretical literature dating back to Bagehot (1873), Hicks (1969) Schumpeter (1911), McKinnon (1973) and Shaw (1973) places significant importance on the positive contributions of financial systems to investment and economic growth. According to this literature, financial instruments, markets and institutions arise to ameliorate the effects of information asymmetry, enforcement and transaction costs, which in turn, influences saving rates, investment decisions, technological innovations and steady-state growth rates. Here it is recognized that well functioning financial systems ease external financial constraints that impede firm and industrial expansion and hence growth (Acharya, Amanulla, & Joy, 2009; Boyd & Prescott, 1986; Burcu, 2009; Greenwood & Jovanovic, 1990; King & Levine, 1993a, 1993b; Levine, 1997).

Other authors argue that the existence of well-functioning financial market institutions is a fundamental vehicle for local and international sources of finance necessary for facilitating economic growth. In this respect, financial markets are viewed as an essential part of the engine that generates growth and development, through risk diversification, corporate governance enhancement, provision of information, mobilisation and pooling of savings and facilitation growth (Bencivenga, Smith, & Starr, 1996; Devereux & Smith, 1994; Irving, 2000; King & Levine, 1993a; Levine & Zervos, 1996; Obstfeld, 1994; Levine & Zervos, 1996, 1998; Saint-Paul, 1992; Senbet & Otchere, 2005; Shleifer & Vishny, 1995).

However, most of the available evidence on this area of research has to a large extent ignored the link between financial development and private investment and instead concentrated on the effects of financial development on economic growth. The objective of resource mobilisation through the financial intermediaries and capital market development is geared towards provision of finance for private investment which is in conformity with theoretical postulations that financial development first impacts capital formation or investment, then it is translated into economic growth. In the literature, few, if any, studies have focused on this transmission mechanism. This issue is important because theory does not provide clear predictions on the sign of the relationship between financial development and investment. Gregorio and Guidotti (1995) have argued that one area of controversy in the finance-investment literature concerns the channel of transmission mechanism from financial development to growth. While some studies find support for the McKinnon (1973) and Shaw (1973) proposition, which identifies a positive relationship from financial deepening to investment; others conclude that there is no clear relationship between financial development, savings and investment.

Furthermore, most of the studies in this area mainly focus on high-income and middle-income developing countries with little reference to African economies. Even among the few studies focusing on Africa no clear partitioning of the role played by the financial development via the stock market and the banking sector is evident. These studies assume that the two sub-sectors play complementary roles to investment and growth when it is possible that they may be substitutes. Studies we have seen in this area either explore the linkage between the banking sector and growth or the stock market and growth. The studies on Africa focusing on stock markets are qualitative in nature; the few that are quantitative in nature such as by Agarwal (1999) have limited scope of countries and period. This particular study focuses on growth while ignoring the relationship between stock market development and investment. Although Ndikumana (2000) focuses on investment, the study concentrates on the banking indicators of the financial system.

The study is organised as follows. The next section provides trend analysis of financial sector variables and private investment. The theoretical framework and methodology is provided in Section 3. Section 4 provides analysis of the empirical results while Section 5 provides conclusions and policy implications.

2 Review of the performance of the financial sector and investment in Sub-Saharan africa

2.1 Stock market development and private investment performance

In the 1990s, many African economies established stock exchange markets to facilitate privatisation and commercialisation efforts (Cohn, 2000). Currently, there are eighteen operational stock exchanges and two non operational stock exchanges in Africa.¹ The performance of the stock markets in the African economies has been impressive in the recent past. Table 1 illustrates the key indicators of the stock markets in Africa, measured by stock market size and liquidity in the African economies.

It can be observed from Table 1 that stock market capitalisation volume increased in ten of the stock markets between 1995 and 2003. Similarly, stock market capitalisation as a share of gross domestic product (GDP) also increased for a majority of the countries under review over the same period. In terms of the annual percentage growth rates over the period 1995-2003, stock market capitalisation as a share of GDP increased for fourteen of the eighteen countries in the sample countries. Similar increasing trends in stock market capitalisation as a share of GDP were observed over the period 2004-2008 for 10 countries out of the 12 countries whose data was available. Phenomenal increases were also observed in the average annual growth rates over the period 1995-2003 and 2004-2008. The impressive improvements in stock market growth in the African economies may be attributed to privatisation of the state enterprises through the stock exchange and the quest for investors to obtain alternative sources of financing besides the banking sector.

However, analysis of private investment trends during the same period when the stock market registered impressive performance as illustrated in Table 1 shows that private investment as a share of GDP has declined or stagnated during the period under review. For instance, relative to GDP, private investment registered negative growth rates in 10 out of the 18 countries sampled from 1995 to 1998. Although, in 1999-2003, there were fewer countries with negative growth rates of private investment as a share of GDP compared to the previous period, more than half of the countries in the sample registered either negative trends or declining trends between 1995 and 1998 and 1999-2003. Similar trends are observed for the 2004-2008 where only six countries show marginal positive growth of credit to the private sector. Even for these countries with relative improvements in private investment rates, the increments are marginal and far below the millennium development goals (MDGs) threshold.

The observations from Table 1 are contrary to the outcome that is expected from financial sector development. It was expected that stock market development in Africa would boost domestic savings and provide complementary sources of long-term financing that would in turn increase both the quality and quantity of investment. The unexpected outcome may be explained in a broader context that compares the stock market trend with other emerging markets. Although the stock market development in Africa exhibit upward trends, the average capitalisation (excluding South Africa) of about 27% of GDP is lower than in most emerging markets. Malaysia and Singapore, for example, had a capitalisation ratio of about 160% on average during the period under review which would explain why such countries have realised greater investment levels compared to those in Africa.

These observation on the stock market development-private investment trends would also be explained by arguing that most investors in African countries are small and medium scale who do not qualify to list on the stock exchange and therefore, do not obtain funds through the stock market. The investors would be relying on the informal sector, which has thrived due to limited scope of securities market and the oligopolistic nature of the banking sector.

2.2 Credit to the private sector and interest rate margin in Africa

A large number of countries in Africa eliminated administrative control of interest rates and credit in the late 1980s and early 1990s, and replaced them with market determined policies. At the same time, African economies also shifted from direct monetary policy to indirect monetary policy instruments, which focused on instruments such as open market operations. The major objective of these developments was to allow the private sector to access credit, thus the expectation of the period following reforms would be an increase of credit to the private sector.

However, as it can be observed from Fig. 1, on average, credit to the private sector as a percentage of GDP grew modestly by approximately 2-4% from 1995 to 2008. However, underneath this growth is mixed performance by various markets in Africa where those markets in larger economies such as South Africa registered impressive growth while those markets in struggling countries such as Zimbabwe registered poor performance after financial sector developments. In majority of the countries in the sample, if credit to the private sector did not decline, it stagnated or showed inconsistencies. This observed scenario would be attributed to stringent collateral conditions imposed by banks, information asymmetry, and the huge public sector role in the banking industry, which persists in some African countries even after liberalisation.

The interest rate margin refers to the gap between the deposit rates and lending rates. It was expected that the developments in the banking sector including interest rates liberalisation would create effective competition within the banking industry, encourage savings, which in turn would increase resources available for investment and reduce the cost of lending. Thus, interest rate spreads were expected to narrow after interest rate liberalisation and other banking sector developments. However, it can be observed from Fig. 1, that on average the interest rate margin was increasing for the countries in the sample. This is due to the oligopolistic nature of bank ownership in Africa leading to limited deposit and lending competition, high reserve requirements, and huge public sector borrowings.

3 Methodology and theoretical framework

3.1 The model

The literature proposes several theories that explain the behaviour of private investment. The earliest strands of models to explain the behaviour of investment include: the accelerator theory, the neoclassical theory, the Tobin q theory, and the cash flow theory (Bazoumana, 2005; Cherian, 1998; Kopcke, 1985; Koyck, 1954; Kul & Mavrotas, 2005; Tobin, 1969). However, these theoretical models of investment were formulated to analyse investment behavior of firms in industrial economies. A close look at all these models suggests that, except, the simple accelerator or neoclassical models, the rest of the models are not feasible to investigate the behavior of investment in developing countries. First, these countries do not have quality data which can be used to make meaningful empirical analysis using these models, Second, the incompatibility of the institutional and structural peculiarities of developing countries with the underlying assumptions of the basic models such as perfectly competitive markets, little or no government investment, information symmetry and absence of liquidity constraints suggest that these models cannot be useful to analyse investment behavior in Africa (Ronge & Kimuyu, 1997; Sioum, 2002). More importantly, the developing/African countries are primary products exporters dependent on imported intermediate goods and imported raw materials for their manufacturing sectors. They also suffer from financial repression, huge debt overhangs, political tensions and macroeconomic instabilities, special conditions, which some of the models do not capture thus rendering them unsuitable to analyse investment behavior in these countries.

Consequently, more relevant models have been developed and applied in developing countries to incorporate elements that capture specific characteristics of these economies. In the literature most studies investigate private investments in a manner that captures McKinnon (1973) and Shaw (1973) financial repression, debt overhang, irreversibility and uncertainty issues, complementarity/substitutability of public investment, institutional structure and governance issues among other variables (Bazoumana, 2005; Blejer & Khan, 1984; Mlambo and Oshikoya, 2001; Ramírez, 1994; Sioum, 2002).

In this study an extended simple accelerator model is used. Assuming constant elasticity of substitution (σ) between capital and variable inputs, the following relation between desired capital stock (K), the expected level of output (Y) and the expected rental cost of capital (C) is observed: where α is a constant. The subscripts $i=1, \dots, N$ and $t=1, \dots, T$ refer to the cross-section and time series dimensions of the data. Differencing Eq. (1) while abstracting from the cost of capital (C) term yields: where the Δ is the difference operator. In order to obtain an expression for the relationship between desired capital stock and investment, we use the following capital accumulation identity: Where I is investment while δ is a capital depreciation parameter. Eq. (3), can be rewritten as follows:

Rearranging Eq. (4), assuming $\epsilon = 0$ and solving for I_{it} yields the following expression:

Substituting Eq. (5) into Eq. (2) yields an expression in log form (where lower cases henceforth denote the log form of the variables) as:

Eq. (6) represents the basic investment function. To account for the slow adjustment of the actual capital stock to the desired capital stock, Eq. (6) is amended as: where $y_{i,t-1}$ represents lagged growth rate of output while $\epsilon_{i,t}$ is the idiosyncratic error term. The first two terms on the right hand side are lagged investment and growth rate of output, respectively. Eq. (7) represents the baseline model to be estimated. However, it does not encompass the financial sector development indicators. To allow for financial sector variables, we amend Eq. (7) as: where β_{it} is a vector of control variables and FDV is a vector of financial development variables used in this study. To capture financial development we use three financial development variables, including credit to the private sector; interest rate on deposits and, turnover ratio. The credit to the private sector indicator captures the effect of relaxed credit controls in which case, it is expected that increased volumes of credit following liberalisation is associated with higher level of private investment. The interest rate on deposits is used as a measure of financial development based on the theoretical arguments in McKinnon (1973) and Shaw (1973). The apriori sign for this relationship is positive with the understanding that financial deregulation encourages increased yields in deposit interest rates which consequently encourage savings and therefore private investment. Other studies have used turnover ratio (TUR) (Henry, 2000; Sarkar, 2007; Tswamuno, Pardee, & Wunnava, 2007) to measure the effect of stock market development, where, high stock market turnover represents low transaction costs and high stock market liquidity. A liquid equity market allows savers to sell their shares easily if they so desire, thereby making their shares relatively more attractive investments. As savers become comfortable in investing for the longer term in equities, they are likely to rebalance their portfolio towards equities and away from shorter-term financial investments. This rebalancing lowers the cost of shifting to more profitable longer term projects. It is therefore expected that higher turnover will be positively related to private investment growth.

In standard private investment models a number of control variables are also used, including public investment, institutional variables and policy variables. The level of public investment is included in the model to capture the complementarity/substitutability hypothesis between government and private investment. The apriori sign is ambiguous since public investment can either crowd out or crowd in private investment depending on the nature of public investment.

To be able to capture the institutional dynamics in Africa, three different variables are used. A proxy for corruption which stems from vast literature that point out that high levels of corruption have a negative effect on the private investment, a corruption perception index is used (Everhart & Sumlinski, 2001; Mauro, 1995; Mina & Ndikumana, 2008). Corruption increases the cost of doing business and raises uncertainty over expected returns to capital. A proxy for economic freedom (economic freedom of the world index) is used based on arguments that countries with high level of economic freedom tend to register high levels of private investment (Abdiweli & Crain, 2002; Niclas, 2003; Stocker, 2005). In addition, a proxy for checks and balances is also used in this study. Checks capture the number of decision makers whose agreement is necessary before policies can be changed. Countries with multiple decision makers may offer greater protection of individuals and minorities from arbitrary government action. Thus, existence of numerous checks and balances tend to encourage private investment.

The role of the informal sector is also included as an independent variable explaining private investment so as to capture the developmental stage of the financial system in African economies, where dual financial sectors exist. Theoretically, no consensus exists in the literature regarding the apriori sign for the informal market variable. Some studies have argued that informality impedes investment. This is because businesses that operate outside the tax and regulatory net have a hard time accessing credit, limiting the scale of their operations and exploitation of investment opportunities. Moreover, the informal economic activity undermines the ability of governments to raise revenue and therefore denies the public sector resources that would otherwise play a complementary role to private investment through infrastructural development or facilitation of business environment. In addition, the informal sector facilitates undemocratic decision making and misguided policies since it does not have property rights hence the participants are

not empowered to influence policy making. In addition, the existence of the informal sector not only threatens the collapse of the formal sector as the formal sector mimics the informal sector so as to avoid taxes but it also erodes competitiveness since the remaining formal sector shoulders the tax burden as the informal sector evades taxes thus undermining investment (Loayza, 1996).

On the other hand, other studies view informal employment as a lifeline for the poor or as a legitimate response to over-burdensome regulation, implying positive relationships between the informal sector and investment. In this case, the informal sector provides the economy with a dynamic and entrepreneurial spirit, which in turn can lead to more competition, innovation, higher efficiency and increased investment (Barro, 2000; Schneider & Klinglmaier, 2004).

3.2 Data type and sources

This study uses annual data from 18 countries covering the period 1990-2004. The data for the private investments, GDP growth rates, fiscal deficit, interest rates and credit to the private sector are obtained from the world bank: African development indicators. Data on the stock market turnover is obtained from the world bank: world development indicators.

The data for the informal market activities is obtained from the index of the economic freedom dataset published by the heritage foundation and downloadable from website. It is constructed with a scale of 1-5, where 1 represents an economy with free market economy and minimum informal market activities while 5 represents a country with an informal sector that is larger than the formal sector. The corruption perception index is obtained from transparency international and it is constructed with a scale of 1-10 where the country with a value of 1 is the most corrupt while a value of 10 is the least corrupt. The economic freedom of the world index is obtained from the freedom house website available at . The index is ranked from 1 to 5, with 1 representing an economic environment or a set of policies that are most conducive to economic freedom. Apriori, a negative sign is expected. The checks and balances index is obtained from the database of political institutions with a scale of 1-5 where a low value represents political exclusion implying a positive relationship of the variable with private investment.

4 Empirical results

The baseline estimation results are reported in Table 2. Four different results of the baseline model using Eq. (7) are reported. Columns 1 and 2 report baseline results of the simple accelerator model of investment using a fixed effects model while in Columns 3 and 4 some additional variables highlighted in previous sections of this study are added. Tests for the validity of the fixed effects model are performed in all the estimations shown in Tables 2 and 3. In addition, the tests for the validity of the random effects model are conducted for the models reported on Columns 5-8 in Table 3. All the validity tests revealed a preference for the fixed effects model over the pooled model. This is because the fixed effects model acknowledges cross-section heterogeneity and assumes a different intercept for each country included in the sample. The presence of these effects is apparent since the *F*-test for fixed effects clearly rejects the null hypothesis of a homogenous cross-section. In addition, the LM-test shown in Table 3 suggests that the random effects model is preferred to the pooled model.

Estimations based on the fixed effect models show that there are country specific conditions² that influence private investment. Among the countries included in the study, it is found that Zambia, Zimbabwe and Cote D'Ivoire appear to have specific conditions that inhibit private investment. Other than Zambia, the other two countries suffered economic and political problems during the period under review. In the case of Cote D'Ivoire, the civil wars experienced during the period under study may have contributed to the rapid decline in domestic and foreign private investment. In Zimbabwe, the radical land process initiated by the government and the political tensions coupled with macroeconomic instability, such as hyperinflation and massive exchange rate depreciation may have acted as a disincentive to both public and private investment. However, other countries such as South Africa, Botswana, and Kenya experienced relatively stable country specific conditions that induced private investment.

From the estimated results it appears that in the baseline scenario, GDP growth has the expected positive signs but is not significant at the conventional levels of testing. Adding other variables to the model improves the level of significance to 10% but leaves the sign of the parameter unchanged. Analysis of the combined effect of all these results suggests that private investment reacts to GDP growth. These findings are consistent with the accelerator model and support the findings of Bazoumana (2005), Dehn (2000) and Oshikoya (1994).

To account for the slow adjustment process the lagged GDP growth and lagged private investments are incorporated in the model. From the estimation results, both in Tables 2 and 3, the estimated coefficients of lagged private investment are positive and significant in most of the estimations. GDP growth coefficients are found to be positive and significant at the conventional levels. These results suggest that private investments are partly driven by the past actions in terms of the performance of the economy and its own momentum. This finding supports the propositions of the accelerator model and also supports the empirical findings of Dehn (2000) and Oshikoya (1994).

In the baseline estimations, it is found that the estimated coefficient of public investment is negative but not significant at the conventional levels of testing. The negative sign suggests that there is a tendency for the public sector investment to crowd out private investment but the empirical evidence presented here do not appear strong. Inclusion of the institutional factors as well as the financial development variables to the simple accelerator model does not seem to improve the level of significance of this variable neither does it occasion change of sign. As shown in Table 3, this variable is significant at 10% level in only one estimation. This evidence does not support the notion that public investments tend to crowd out private investment neither does it support those studies which found that the public investment crowds out the private investment. It however supports the work of Dehn (2000) who found that the public sector does not have a significant effect on the performance of the private sector.

As shown in the baseline models (Columns 3 and 4) in Table 2 the estimated coefficient of fiscal deficit³ is negative and significant at 5% level, including other variables in the investment model as shown in Table 3 leave the estimated coefficients of fiscal deficit negative, as expected, and significant at the conventional levels of testing. This finding is not surprising because high fiscal deficits are expected to be financed to a large extent through domestic borrowing which may hurt the volume of credit going to the private sector for investment. In the African context, quite often the banks are not willing to lend to the private sector due to the high level of loan default rate by individuals and lack of collateral from small investors, who constitute the majority of investors, leaving the banks with excess liquidity which they invest in the government securities market.

The financial development indicators are incorporated in the simple accelerator model and reported in Table 3. The turnover ratio measures the volume of domestic shares traded on domestic stock market exchange relative to the size of the market where high turnover is often used as an indicator of low transaction costs. Table 3 shows the results based on the fixed and random effects models and it is evident that the estimated coefficients of the stock market turnover is positive as expected but is not significant at the conventional levels of testing. The positive sign is an indication that private investments are partly driven by the performance of the stock market implying that high stock market turnover which is a manifestation of low transaction costs tends to support higher level of private investment. However, the insignificance of the estimated coefficient may be as a result of the low level of development of the stock markets in the countries in our study. Most of these countries have stock markets which are characterised by low traded volumes and a small number of companies listed in the market. All these therefore, suggest that the share of the stock market turnover relative to the market may be small and this will show in form of insignificant estimated coefficient. The insignificant coefficient may also be explained by the huge role of the informal sector credit still prevalent in these economies as discussed elsewhere in this paper. The positive sign, although insignificant, conforms to economic theory which postulates that enhanced market liquidity increases resources available for investment. Moreover, with high liquidity, shares become easily acceptable as collateral for bank lending, which boosts credit and investment.

The credit to the private sector (PVC) is used in the model to capture relaxed liquidity constraints that were expected following implementation of bank reforms. As shown in Columns 1 and 5, Table 3, both the fixed effects model and the random effects model show that the estimated coefficients of credit to the private sector are positive and

significant at five percent level of significance. This finding is consistent with the economic theory and supports the work of Oner (2008); Oner et al. (2006) and Erden and Holcombe (2005). This finding seems to suggest that banking reforms may have eased credit constraints in these economies which may have translated to the growth of private sector investment.

In Columns 2 and 6 of Table 3 we use interest rate on deposit (DPR) to capture interest rate liberalisation and also test the McKinnon (1973) and Shaw (1973) propositions. From the results, it appears that the relationship between the interest rate on deposits and private investment is negative, which is contrary to the McKinnon (1973) and Shaw (1973) assertions. This is a manifestation of the fact that, even if most African economies experienced positive real interest rates after interest rate liberalisation, they have not experienced rapid growth of their private investments. This is because the interest rate spreads that were expected to be narrower after deregulation have not been realised. The lending rates of interest are still increasing, often times at an excessively higher rate than deposit rates. Thus, even when the deposit rates are increasing, the effect on investment is minimal since private investors borrow based on the lending rates.⁴ Moreover, even when the interest rates on deposits increase, the impact on the savings is minimal considering that the poverty levels, unemployment rates and the dependency ratios in most African economies are very high, compared to developed countries where the McKinnon and Shaw hypothesis may be applicable. This implies that resources that would be available for saving in response to high deposit rates are diverted to meet the demands of dependants and address household poverty issues. Furthermore, most of the savings in African economies are not reflected in formal circles since the informal sector, where most of the savings are accumulated in African economies is large and expanding. Thus, most private investors in the African economies respond to informal interest rates or incentives rather than the formal resource mobilisation incentives.

In Columns 4 and 8 of Table 3, the models confirm that the informal sector is still significant and has a positive influence on private investment as exhibited by the significance of the coefficient of informal markets at 1% level. Since informal market activities are a direct result of some kind of government intervention in the market place, this result would be interpreted to imply that market forces are not fully operational in these economies. It would also be interpreted to imply that the informal sector has a role to play in development contrary to standard thinking that the informal sector drags development (Misati, 2010).

Institutional factors included in the model reported in Table 3 show varied results. The corruption perception index appears to have the expected positive sign in nearly all the estimations but is not significant. The positive sign suggests that on average, countries with lower levels of corruption tend to register higher levels of private investment. This is particularly true as high levels of corruption tend to increase the cost of establishing and doing business for both domestic and foreign investors. In addition, the estimated coefficients of the checks and balances⁵ and economic freedom of the world are negative in all the estimations. In the fixed effects models, the estimated coefficients are insignificant at the conventional levels while in the random effects models they are significant in most of the estimations. This finding suggests that, on average, countries that exhibit high level of economic freedom tend to post higher levels of private investment. The unexpected negative coefficient of checks and balances may be explained by arguing that, sometimes political inclusion does not necessarily imply efficient decision outcomes since it is also possible that either certain inefficient compromises have to be made to accommodate all political interests or that costly investment delays may be created in an effort to reach a consensus in a multiple decision making framework.

5 Conclusions and policy recommendations

This study explores the relationship between financial sector development and private investment. It uses panel data covering the period 1991-2004 from 18 countries in Africa. The study establishes a negative relationship between interest rate on deposits and private investment, signaling the presence of huge interest rate spreads in African economies. In addition, a positive relationship between both the credit to the private sector and the turnover ratio and private investment is found. However, the effect of turnover ratio on investment is insignificant. The insignificance of the stock market indicator is important to us as it reflects the low stage of stock market development in most of the African economies. The results also point out that despite two decades of reforms, the informal sector is still large and

has positive effects on private investment. It is also found that those institutional factors represented by the corruption perception index, checks and balances and the index of the economic freedom have a role to play in driving private investment in Africa.

On the basis of these findings it is recommended that, first, African countries explore the possibility of fast tracking efforts of integrating stock market in these economies rather than encouraging individual development of stock exchanges. This effort would improve liquidity, efficiency, and competitiveness and thus enhance the capacity to mobilise capital for investment in these economies. Second, in order to realise the full benefits of financial liberalisation, measures to strengthen the quality of institutions in these economies are crucial. Third, there is need for emphasis of integration and support strategies of the informal sector into mainstream policy making in the African economies. Policies are therefore needed to provide a better link between the formal and the informal sectors to exploit their comparative advantages and specialisation.

1

Khartoum and Maputo exchanges are not operational.

2

The country specific effects which are captured by the country specific coefficients are not report on Table 2. However, they are available from the authors on request.

3

The budget deficit was separately included to capture policy variables as opposed to including an index as in the burnside and dollar index. Experiments with other policy variables mainly, trade openness as measured by the ratio of the sum of exports and imports to GDP proved fruitless, they are thus not reported here.

4

A separate model was specified with the lending rate as an explanatory variable. Although the coefficient of the lending rate had the expected negative sign, it was statistically insignificant and of very small magnitude. The results are not reported here.

5

Checks capture political aspects of African economies. Experiments with other political variables such as democracy and autocracy either renders the model invalid in terms of the diagnostic tests or their coefficients are too small in terms of magnitude and insignificant in statistical terms. The experiments are not reported here for brevity purposes.

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GRAPHIC: Fig. 1, Trends of credit to private sector and interest rate margins (the trends are based on selected countries listed in Table 1).

Table 1, Trends in private investment and financial market development in selected countries.

Table 2, Baseline model: dependent variable: private investment.

Table 3, Dependent variable: private investment.

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