

# **Financial Intermediation and Economic Growth: Evidence from East Africa**

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## **Abstract**

This paper investigates the relationship between financial development and economic growth in 12 East African countries (Burundi, Comoros, Djibouti, Eritrea, Ethiopia, Kenya, Madagascar, Rwanda, Seychelles, Sudan, Tanzania, and Uganda) for the period 1981-2007. The dynamic panel generalized method of moments (GMM) estimation is employed to test whether financial sector development has a positive impact in economic growth of East Africa. The results show that each of 2 financial development measures (domestic credit provided to the private sector and liquid liability) has a positive impact on economic growth and is statistically significant at the 5% level. These results provide additional evidence to the literature. The findings suggest that governments in East Africa can spur long run and sustainable economic growth by developing their financial sectors. Therefore, policies aimed at improving financial development and intermediation should be promoted.

## **I. Introduction**

The success of the financial sector of a country, to a large extent, relies on financial deepening, which refers to the widening range of financial services available to all levels of society. In principle, financial deepening can stimulate economic growth by mobilizing resources and channeling them to capital accumulation and technological innovation. Countries with well-functioning banking systems and capital markets are expected to grow their economies faster. On the other hand, economic growth can also spur innovations in financial services such as derivative products, microfinance, and so on. One question arises: what is the relationship between financial sector development and economic growth?

How financial sector development affects economic growth and how economic growth influences financial sector development have interested scholars and policy makers for many years. There are at least 3 lines of research. The first line of research focuses on different aspects of the relationship at both the theoretical and empirical levels. The second line of research attempts to examine whether financial development leads to economic growth. The third line of research tries to establish the channels of transmission from financial intermediation to economic growth. Empirical results support, at varying degrees, unilateral (either direction) and bi-directional relationships.

Although research on financial development and economic growth has been done using data from many developing countries, only a few papers focus on Sub-Saharan Africa (SSA). All these studies, however, exclude most East African countries. In developing economies, low income countries in particular, the financial sector has been seen as a means to reduce poverty and ensure sustainable economic development. Therefore, studying East African countries, whose per-capital GDP is relatively low, may shed some light on economic and financial

development. This paper intends to fill the gap in research by investigating the relationship between financial development and economic growth in East Africa.

Despite many factors that have hindered growth in East Africa (EA), countries in the region have shown satisfactory economic growth. These countries have been expanding their financial sectors, including traditional lending channels and informal ones such as microfinance and microcredit services. Also, structural reforms taken in most countries of the region have encouraged the entry of foreign banks, and increased their involvements in international trade. Moreover, different policy measures have been taken to improve their financial sectors, including privatization of banks and expansion of the financial services in scope and depth. The economic and financial progress of East Africa provides an opportunity to test various theories in economic development.

The purpose of this paper is to examine how financial development affects economic growth in 12 East African countries. The results show that each of 2 financial development measures (domestic credit provided to the private sector and liquid liability) has a positive impact on economic growth and is statistically significant at the 5% level. These results provide additional evidence on the relationship between financial development and economic growth, which is consistent with the results from some of prior studies in the literature. The findings suggest that governments in East Africa can spur long run and sustainable economic growth by developing their financial sectors. Therefore, policies aimed at improving financial development and intermediation should be promoted.

The remainder of this paper is as follows. Section II provides a literature review. In Section III, data sources and major variables are discussed. In Section IV, we detail empirical model specifications and estimation techniques. Section V discusses major results and implications. We conclude in Section VI.

## **II. Literature in financial development and economic growth**

A good financial system can allocate, channel, and mobilize resources in a nation to accumulate investment capital and advance technological innovations, therefore promoting economic growth. King and Levine (1993) argue that the development of the domestic financial sector may enhance the efficiency of capital accumulation, and that financial intermediation can contribute to raising the savings rate and, hence, the investment rate. They find a strong positive relationship between financial indicators and economic growth. Also, financial development is robustly correlated with subsequent rates of growth, capital accumulation, and economic efficiency. They suggest that government interventions in the financial system (through interest ceilings, directed credit programs, and high reserve requirements) may hinder financial development by affecting the quality and quantity of investments and thus negatively affecting economic growth.

In addition to facilitate the trading, hedging, diversifying, and pooling of risk, financial systems allocate resources, monitor managers and exert corporate control, mobilize savings, and facilitate the exchange of goods and services. As a result, economic growth is achieved through capital accumulation and technological innovation. Ang (2008) suggests two channels through

which financial development influence economic growth, capital accumulation, and total can factor productivity. In the quantitative channel, economic growth depends on capital accumulation through domestic credit and foreign capital investment. Therefore, an efficient financial system is needed to mobilize savings and channel them to productive ventures. The qualitative channel proposes that an efficient financial system boosts economic growth through provision of credit facilities to facilitate human capital accumulation and development of technology-intensive industries.

One determinant of financial development is openness of an economy. Rajan and Zingales (2003) argue that incumbents' (the forces opposing financial development) opposition will be weaker when an economy is open to both trade and capital flows. Hence, the opening of both the trade and capital accounts holds the key to successful financial development. This view is supported by Gries et al. (2009) who argue that openness may induce economic growth in several ways. For example, it increases a country's level of specialization and/or it positively affects innovation and technological diffusion. Openness promotes financial development because it not only expands opportunities, but also increases competition. However, Baltagi et al. (2008) find trade and financial openness to be statistically important determinants of the variation in financial development across countries. For developing countries that are already open to trade and capital flow, opening their trade and capital accounts don't have a significant effect on financial development due to the diminishing returns to openness.

La Porta et al. (2002) examine the effects of government ownership of banks in financial development and economic growth. They suggest that the financial systems of countries with higher initial government ownership of banks grow less fast and that government ownership of banks reduces future productivity growth, but not capital accumulation. However, Andrianova et al. (2008) argue that government ownership of banks may be an effective substitute for weak institutions. Furthermore, they underline that privatizing government owned banks without strengthening institutions, which protect depositors from bank failures, is likely to result in a decline in financial development. This view challenges the conclusion of La Porta et al. (2002).

However, some studies don't support the hypothesis that financial development affects economic growth or financial development is affected by economic growth. Lucas (1988) argues financial development and economic growth are not causally related. Singh (1997) claims that financial development may not be beneficial to economic growth for several reasons. First, it may be difficult to achieve efficient investment allocation in developing countries due to the inherent volatility and randomness of the stock market pricing process. Second, in the wake of unfavorable economic shocks, the interplay between the stock and currency markets may exacerbate macroeconomic instability and reduce long-term economic growth. Third, stock market development is likely to undermine the existing group-banking systems in developing countries, which, despite their many difficulties, have not been without merit in several countries.

In a time series analysis for Kenya over the period 1966-2005, Wolderufael (2009) finds bi-directional causality between financial development and economic growth when international trade openness is included in the model. Ghirmay (2004), employing a VAR time series methodology, provides empirical evidence on the existence of a long run relationship between

financial development and economic growth in 12 out of the 13 SSA (Sub-Sahara Africa) countries. He suggests that African countries can accelerate their economic growth by improving their financial systems. Allen and Ndikumana (2000) also find similar results in the data of the Southern African.

Ndebbio (2004) investigates financial deepening and economic growth for SSA countries. His study uses two financial deepening variables-- the degree of financial intermediation measured by M2 as a ratio to GDP and the growth rate of per capita real money balances. The study finds both financial deepening indicators are positively related to economic growth, rendering a conclusion that a developed financial sector spurs overall high and sustainable growth of an economy. Odiambho (2004) examines the role of financial development on economic growth in South Africa. Using the Johansen-Juselius co-integration approach and vector error correction model, he concludes that economic growth has a positive impact on financial development, not the other way round. Odedokun (1996), in a panel of 71 countries including 21 SSA countries, finds a positive and significant effect of financial sector on economic growth when using the ratio of liquid assets to GDP. However, Atindehou et al. (2005) use causality tests to examine the relationship between finance and economic growth in the context of the West African countries members of the Economic Community of West African States (ECOWAS) and find a weak causal relationship between finance and economic development.

### **III. Data Sources and measurement of variables**

Annual data on the measures of financial development and economic growth, and all the control variables are obtained from the World Development Indicators online database (WDI)<sup>14</sup>. Additional data are obtained from International Monetary Fund (IMF) and the International Financial Statistics (IFS) CD ROM (2009 version). This research uses the panel estimation for 12 EA (East Africa) countries, namely, Burundi, Comoros, Djibouti, Eritrea, Ethiopia, Kenya, Madagascar, Rwanda, Seychelles, Sudan, Tanzania, and Uganda.

Due to the underdevelopment of the capital markets in the region of EA, the financial systems in the region can be described as bank-based rather than market-based. That is, the banking systems play a dominant role in financing. Although some countries in EA have capital markets, these markets are underdeveloped and at their infant stage. Thus, we do not use any indicator for capital market development.

There is no consensus among researchers on the right measures of financial development. Each indicator has its own advantage and disadvantage. The ratio of broad measure of money stock, M2, to the level of nominal Gross Domestic Product (GDP) is the first indicator we use to measure financial intermediation. This indicator has been commonly used to proxy financial development. Ghirmay (2004) strongly advocates for the use of M2/GDP as a measure of financial deepening and thus financial development. According to him, the accumulation of

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<sup>1</sup> World Development Indicators (WDI) online provides direct access to more than 800 development indicators, with time series for 209 countries and 18 country groups from 1960 to now, where data are available, <http://data.worldbank.org/data-catalog/world-development-indicators>

lumpy real money balances is necessary before self-financed investment can take place and a high degree of monetization is positively related to growth performance. However, Abu-Bader and Abu-Qarn (2008) believe that M2/GDP is only designed to show the real size of the financial sector of a growing economy and that an increase in the M2/GDP ratio may reflect an extensive use of currency rather than the increase in bank deposits. Particularly in a developing economy, the large portion of M2 is currency held outside the banking system. Thus, excluding the currency in circulation from the broad measure of money stock can provide a more representative measure of financial intermediation (King and Levin, 1993; and Demetriades and Hussien, 1996). Therefore, the second proxy to measure financial development is the ratio of liquid liabilities in the banking system to GDP.

The third financial development indicator is total domestic credit to the private sector as a percentage of GDP. This proxy can better capture financial development as credit to the private sector is based on the financial viability of the borrowers. It represents a true situation of financial intermediaries in channeling funds to the private sector participants, and is closely related to the level and efficiency of investment and thus economic growth (De-Gregorio and Guidotti, 1995). Private Credit is probably the most important banking development indicator, not least because it proxies the extent to which new firms have opportunities to obtain bank finance. As Rajan and Zingales (2003) suggest, this indicator measures “the ease with which any entrepreneur or company with a sound project can obtain finance.” Total domestic credit to the whole economy (both private and public sector) can’t render the desired perspective considerations as credit to the public sector usually is based on political considerations rather than the financial viability of the investment projects (Law, 2008). He suggests that the supply of credit by the banks to the private sector is an important determinant of the quantity and quality of investment and hence economic growth.

However, Demetriades and Hussien (1996) argue that the ratio of bank claims on the domestic sector to nominal GDP provides more direct information on the extent of financial intermediation. They advocate for the use of this financial variable in measuring financial intermediation. We therefore use the ratio of domestic credit provided by the banking sector to GDP as the fourth financial indicator to measure financial development. Lastly, Real GDP per capita will be used as a measure for economic growth (King and Levin, 1993; Rajan & Zingales, 2003).

In the rest of this paper, “Broad money” and “Liquid liability” are used to denote broad money stock as a percentage of GDP and liquid liabilities as a percentage of GDP respectively. While domestic credit by the banking sector and domestic credit provided to the private sector both as percentages of GDP are both denoted by “Domestic credit” and “Private credit,” respectively.

#### **IV. Empirical model specifications and estimation techniques**

To examine the role of financial development in economic growth in East Africa (EA), a panel data analysis is used. Following Arellano and Bond (1991), used later by Christopoulos & Tsionas (2004) and Baltagi et al. (2008), a dynamic Generalized Method of Moments (GMM) is applied in this study. A dynamic panel estimator allows for the exploitation of time series

variations in the data, accounts for unobserved country specific effects, allows for the inclusion of lagged variables as regressors, and controls for endogeneity of all explanatory variables.

This study estimates the relationship between economic growth and financial development equation with unbalanced panel data from 12 EA countries<sup>15</sup> over the 27-year period 1981-2007.<sup>16</sup> These equations may contain country fixed effects, which are correlated with the regressors. A dynamic panel data estimator based on the GMM methodology can correct the correlated fixed effects as well as account for endogeneity of regressors (Baltagi, 2005).

The model in this study is thus estimated using the GMM estimator proposed by Arellano and Bond (1991). This estimation technique allows the economic growth indicator to partially adjust to its long run equilibrium values within a year. The consistency of the estimates is premised on the assumption of a lack of autocorrelation of the error terms. Specifically, there should be a rejection of the null hypothesis of first order serial correlations but no rejection of the second order (Baltagi, 2005). The study restricts the moment conditions to a maximum of two lags on the dependent variable to reduce the potential bias, resulting from too many moment conditions while increasing the efficiency of the estimates.

Hence, this basic dynamic panel model is estimated as follows.

$$y_{it} = \alpha_i + \beta_i FD_{it} + \gamma_i X_{it} + \varepsilon_{it} \quad (1)$$

$i = 1, \dots, N$        $t = 1, \dots, T_i$       Where:

$y_{it}$     - real GDP per capita in country  $i$  at year  $t$  - economic growth variable

$FD_{it}$     - measure of financial development

$X_{it}$     - includes conditioning set of control variables that affect economic growth

$\alpha_i$     - country specific intercept

$\varepsilon_{it}$     - error terms that capture country and time specific effects

$i$     - individual country

$t$     - time

$N$     - the number of countries;

$T_i$     - the number of observations over time for country  $i$  in the panel.

To allow for the possibility of partial adjustments, a dynamic log linear equation is specified below:

$$\ln y_{it} = \alpha_i + \beta_i \ln FD_{it} + \gamma_i \ln X_{it} + \varepsilon_{it} \quad (2)$$

Following the literature, one year lagged real GDP per capita (denoted by  $y_{it-1}$ ), trade openness (denoted by  $TO_{it}$ ), inflation (denoted by  $INF_{it}$ ), and government consumption as the percentage of GDP (denoted by  $GC_{it}$ ) are included as control variables. After including the control variables to the basic model, the new model is:

<sup>15</sup> East Africa is comprised of 14 countries. Only 12 countries are included in this study. Somalia and Democratic Republic of Congo are excluded from the sample due to lack of data.

<sup>16</sup> The panel data is unbalanced. For Eritrea it is from 1995-2007, Djibouti and Tanzania 1990-2007 each. The remaining nine countries have full data, 1981 through 2007.

$$\ln y_{it} = \alpha + \gamma \ln y_{it-1} + \beta_{1i} \ln FD_{it} + \beta_{2i} \ln TO_{it} + \beta_{3i} \ln GC_{it} + \beta_{4i} \ln INF_{it} + \varepsilon_{it} \dots \dots \dots (3)$$

## V. Empirical findings and Analysis

The summary statistics in Table 1 suggest that there is a reasonable degree of independent variation among the variables and countries in the dataset, which can justify the use of panel estimation technique. The correlation matrix is reported in Table 2. The correlations between all financial development indicators and economic growth are positive as expected, ranging from 0.1844 in Private credit to 0.4459 in Broad money. Trade openness and government consumption are positively correlated to GDP with correlation coefficients of 0.7909 and 0.2830, respectively. Inflation is negatively correlated to economic growth and trade openness. Inflation is also negatively correlated to private credit, broad money, and Liquid liability. However, the correlation between inflation and domestic credit is positive. Moreover, correlations among the four measures of financial development are positive and significant as expected from the literature.

**Table 1 Summary statistics of variables**

Annual data (1981-2007, Countries = 12, Observations = 292)

Variable	Source	Unit of measurement	Mean	Standard deviation	Minimum	Maximum
Real GDP per capita	WDI	US Dollars at constant price	878.80	1882.71	85.54	11439.79
Domestic credit	WDI	% of GDP	36.89	34.91	4.14	220.12
Private credit	WDI	% of GDP	15.63	10.50	1.62	48.38
Broad money	WDI	% of GDP	31.45	27.73	5.81	154.17
Liquid liability	WDI	% of GDP	34.57	29.37	7.29	164.97
TO	WDI	% of GDP	55.52	37.83	10.83	252.74
GC	WDI	% of GDP	17.38	10.19	4.61	69.54
INF	WDI	Annual inflation rate (% change in CPI)	15.58	27.49	-9.81	200.02

Source: authors' computation based on the data in World Bank – WDI

Note: TO, GC, and INF refer to Trade openness, Government consumption and Inflation, respectively.

In using GMM dynamic estimators, the integration and co-integration properties of the data are ignored and not important (Christopoulos and Tsionas, 2004). Thus there is no need to check for the stationarity of the series. For each indicator of financial sector development, a dynamic GMM is estimated. The estimation results are presented in Table 3.

**Table 2 Correlation matrix of variables**

	Real GDP per capita	Domestic credit	Private credit	Broad money	Liquid liability	TO	GC	INF
Real GDP per capita	1.0000							
Domestic credit	0.4192	1.0000						
Private credit	0.1844	0.4416	1.0000					
Broad money	0.4459	0.7022	0.6696	1.0000				
Liquid liability	0.4204	0.7196	0.6882	0.9919	1.0000			
TO	0.7909	0.4227	0.5102	0.6682	0.6467	1.0000		
GC	0.2830	0.4681	0.5876	0.7694	0.7600	0.6212	1.0000	
INF	-0.1413	0.1745	-0.2535	-0.1871	-0.1633	-0.2625	-0.2455	1.0000

Note: TO, GC, and INF refer to Trade openness, Government consumption and Inflation, respectively.

As it is reported in Regression 1 of Table 3, when using Domestic credit as a measure of financial development, the regression gives a coefficient of -0.0194 and is statistically significant at the 10% level. This could suggest that the large size or proportion of domestic credit goes to the government and that the economies in the sample countries are highly dominated by the public sector. It appears that higher dependence on banks with the larger portion of the loan given to the government tends to adversely affect economic growth. This result is similar to that of Xu (2000), which shows a negative coefficient of Domestic credit in 14 of the 15 SSA countries. He suggests that in some countries, it is the resource endowment that is driving their economies. When using Private credit to proxy financial development in Regression 2 of Table 3, all variables, including the conditioning variable, are statistically significant. Private credit has a positive coefficient of 0.037 and is statistically significant at the conventional level of 5%. This implies the importance of financial sector development in driving the economic growth in the region. The high demand of financial services, which follows increased private capital accumulation and investment by the private sector, gives a positive stimulus to economic growth. However, the coefficient of Private credit is relatively small. A 10% increase in Private credit results in a 0.3% increase in economic growth. As Baltagi et al. (2008) suggest that banking sector development may be particularly useful to low income countries, the result here supports that an increase in Private credit can foster economic growth in the region.

In Regression 3, Broad money is positive but statistically insignificant. It has a coefficient of 0.011 and standard error of 0.092. This suggests that Broad money has a positive, but little impact on economic growth in the region. However, the positive coefficient of broad money shows that Broad money has the potential to influence economic growth. In Regression 4, with Liquid liability as a financial development indicator, all variables are statistically significant. It appears with a positive coefficient of 0.297 and statistically significant at the conventional level of 5%. As can be seen in Regression 4, a 10% increase in Liquid liability results in a 2.97% economic growth. The result supports the hypothesis that financial sector development significantly and positively affects economic growth in developing countries, particularly in low and middle income countries.

As presented in Table 3, the lagged real GDP per capita is positive and statistically significant at the 1% level in all the regressions, but it is statistically different from unity in all cases. The high and positive coefficients in all the regressions show strong evidence of a considerable persistence in the variable and slower speed of adjustment to shocks. This implies that economic growth in a particular year is highly dependent on the size of the economic growth of the previous year. From the estimated coefficients for lagged real GDP per capita, we can see that comparatively the variable has the highest coefficient in Regression 1, implying that the dependent variable is highly persistent with the lowest speed of adjustment to shocks when Domestic credit is used to proxy financial development. In Regression 4, with Liquid liability as a proxy of financial development, the dependent variable shows relatively lower persistence and a higher rate of adjustment to shocks.

Trade openness has a robust and positive correlation with economic growth. It is positive and statistically significant at the 1% level in all regressions, except in Regression 3, which is statistically significant at the 5% level when Broad money is used as a proxy of financial sector development. The result is consistent with those of Rajan and Zingales (2003) and Baltagi et al. (2008), who suggest that developing countries, particularly the low income countries, can benefit from opening their trade and capital accounts. The result also strongly supports the hypothesis that trade openness promotes economic growth. Government consumption appears statistically significant but negative in all regressions with coefficients ranging from -0.245 to -0.057. As expected, inflation has a negative and significant impact on economic growth.

The consistency of the GMM estimator depends mainly on the assumptions that the error terms do not exhibit second order serial correlation and that the instruments are valid. To check whether or not these assumptions hold, we conducted the Sargan test for over-identification and serial correlation tests. Failure to reject the null hypothesis of these tests implies that the assumptions of the estimation hold. We also run the Wald (joint-significance) test. As presented in Table 3, from the diagnostic statistics, we see the tests do not reject the econometric specification of the model. In all of the GMM specifications, the test for first-order serial correlation rejects the null hypothesis of no first-order serial correlation but does not reject the null hypothesis of no second-order serial correlation. Thus, we conclude that the GMM estimators are valid and consistent because the Sargan test supports the validity of the instruments and from the second-order serial correlation test we cannot reject the hypothesis of the absence of second-order serial correlation. According to Baltagi et al. (2008), if the lagged dependent variable is included in the model, all estimated beta coefficients represent short run effects. The long run effect can be derived by dividing each of the betas by 1 minus the coefficient of the lagged dependent variable.

**Table 3 Financial sector development and economic growth in EA (GMM estimation)**

$$\ln y_{it} = \alpha + \gamma \ln y_{it-1} + \beta_{1i} \ln FD_{it} + \beta_{2i} \ln TO_{it} + \beta_{3i} \ln GC_{it} + \beta_{4i} \ln INF_{it} + \varepsilon_{it}$$

Dependent variable: Real GDP per capita Method: Panel Generalized Method of Moments (GMM)					
Variables		Dependent variable: Real GDP per capita			
		Regression N <sup>o</sup> .			
		(1)	(2)	(3)	(4)
Lagged Real GDP per capita		0.670*** (0.041)	0.657*** (0.046)	0.606*** (0.044)	0.569*** (0.045)
Financial development (FD) indicators	Domestic credit	-0.0194* (0.052)			
	Private credit		0.037** (0.071)		
	Broad money			0.011 (0.092)	
	Liquid liability				0.297** (0.080)
Control variables	TO	0.059*** (0.087)	0.129*** (0.092)	0.355** (0.106)	0.204*** (0.119)
	GC	-0.057 (0.089)	-0.118* (0.127)	-0.227** (0.090)	-0.245** (0.096)
	INF	-0.001*** (0.001)	-0.002*** (0.001)	-0.031*** (0.001)	-0.012*** (0.001)
Total (unbalanced) Observations		256	256	256	256
R <sup>2</sup>		0.730	0.725	0.715	0.755
Wald test of joint significance-probability		(0.00)	(0.00)	(0.00)	(0.00)
Sargan <sup>17</sup> Test (p-value)		16.78 (0.56)	19.01(0.77)	14.92(0.38)	21.51(0.62)
First order serial correlation (p-value)		-3.42(0.02)	-4.22(0.01)	-3.99(0.00)	-4.15(0.03)
Second order serial correlation (p-value)		0.49(0.32)	0.37(0.55)	0.84(0.17)	0.54(0.26)

**Notes:**

1. The regressions are estimated using dynamic panel GMM at first difference
2. The variables are defined as follows:  $y$  = Real GDP per capita,  $y_{t-1}$  = lagged Real GDP per capita, FD = financial development indicator, TO = trade openness, GC= Government consumption, INF = Inflation
3. Figures in parentheses are standard errors

<sup>17</sup> The Sargan test is a joint test of model specification and the appropriateness of the instruments

4. \*\*\*, \*\*and \* indicate statistical significance at the 1%, 5%, and 10% levels, respectively.
5. The null hypothesis of the Sargan test is that the instruments are valid. The null hypothesis of the serial correlation test is the absence of serial correlation.

As a robustness check, some changes are made to the model and estimation techniques. The dependent variable is changed from the Real GDP per capita to the Real GDP growth rate. The new model with the Real GDP growth rate is estimated with the dynamic panel GMM (but not reported here due to the lack of space). The results are not different from the estimations made with the Real GDP per capita as the dependent variable.

## **VI. Concluding Remarks**

The empirical evidence presented in this paper is generally supportive to the hypothesis that financial development positively influences future economic growth rates. The policy implication is straight forward in that policies aimed at enhancing the development of the financial sector can help spur economic growth. One of the reasons that have been slowing African growth is the small financial systems that allocate capital inefficiently.

The findings of this study show that the financial sector is crucial for the growth of the economy. These findings might indicate that there exists a pervasive inefficiency in the credit allocation mechanism. Therefore, policies that promote financial development and intermediation should be promoted. In general, governments in East Africa should seek to develop a larger financial sector through regional integration, by expanding access to credit and financial services, enhancing savings mobilization, expanding microfinance institutions, encouraging the entry of foreign banks, promoting a competitive and viable domestic banking system with an adequate regulatory and supervisory framework, and restricting government involvement in the financial sectors.

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