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Full Length Research Paper

Financial development and economic growth in Cameroon, 1970-2005

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In this work we investigated the relationship between financial development and economic growth in Cameroon using time series data for the period 1970-2005. Using the Johansen method of cointegration analysis and various measures of financial development, we find that financial development has a positive effect on economic growth in the long run through efficient collection and allocation of financial resources. Also, we find a long term causality relationship running from financial development to economic growth. We therefore propose that the ongoing financial reforms in the country should be pushed forward so as to boost the development of this sector and by that increase its role in economic development.

Key words: Financial development, economic growth, Cameroon.

INTRODUCTION

The financial system can play an important role in economic development. Theory suggests that effective financial institutions and markets that help overcome market frictions introduced by information asymmetries and transaction costs can foster economic growth through several channels. Specifically, they help (i) ease the exchange of goods and services by providing payment services, (ii) mobilise and pool savings from a large number of investors, (iii) acquire and process information about enterprises and possible investment projects, thus allocating society's savings to its most productive use, (iv) monitor investments and exert corporate governance, and (v) diversify and reduce liquidity and inter-temporal risk. However, economists still do not agree on the role played by finance in economic development. This disagreement stems from the original classical dichotomy which considered the financial sector as a veil through which we can observe the real sector. As such some authors consider that where enterprises lead, finance follows (Robinson, 1952), the real sector develops thereby fostering financial sector development. Others show their scepticism about the role of the financial sector in economic growth by ignoring it (Stern, 1989; Lucas, 1988).

On the other hand there is a large literature that supports the point that the financial sector plays an important and significant role in economic development. Right back in 1873, Bagehot ascertained that finance played and important role in the industrialisation of England through facilitating the accumulation of capital for large works. Schumpeter (1911) argued that the services provided by financial intermediaries stimulate innovation and economic growth. Since then many empirical studies have been carried out to verify the role of finance in economic growth. A bulk of these studies find a positive and significant role of finance in determining growth, some find the relationship to be bidirectional and others find it to be country specific[1].

Another area that has been hotly debated in the finance –growth relationship recently is that of which financial policy is appropriate to permit the financial sector promote growth. Keynes and his followers the neo-Keynesians argue for the direct intervention of the state in the financial sector to correct market failures caused by information asymmetry problems that characterise financial markets. According them, the imperfection of financial markets is a potential source of instability especially if allowed to direct financial resources. The recent financial crisis seem to hold this view where more credits flowed into a system which is liberalised and

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[1] See Levine (1997), Tsuru (2000) for surveys.

infested with information asymmetry, a source of imperfection. For instance, the crisis first manifested itself in the U.S. because they went further on financial innovation, thus drawing more marginal-credit-quality buyers into the market, (e.g., a home mortgage loan is very hard for an international investor to hold directly because it requires servicing, is of uncertain credit quality, and has a higher propensity to default than an arm's-length conservative investor feels comfortable with). Mackinnon (1973) and Shaw (1973) on their part argue that state intervention in a regulated financial sector which they term "financial repression" was the cause of the poor growth performances of developing countries that adopted such policies. They then proposed financial liberalisation as the best policy that will allow the financial sector better work for development. Van Wijnbergen (1983) taking a structural approach of the economy stands on the point that any policy that allows resources to flow from the informal into the formal financial sector will be growth hampering, as according to him the informal financial sector is more efficient in financial intermediation than the formal sector due to the absence of reserve requirements in the informal sector. Reserve requirements in the formal sector reduce the amount of credit that can be extended and by that reduces economic growth.

Also, the problem of causality has been of concern in the finance growth debate. Although growth may be constrained by credit creation in less developed financial systems, in more complicated systems finance is viewed as endogenous responding to demand requirements (Arestis, 2005). This line of argument suggests that the more developed a financial system, the higher the likelihood of growth causing finance. According to Robinson (1952), financial development follows growth or perhaps the causation may be bidirectional.

Demetriades and Husseim (1996) found that the finance- growth relationship is country specific and that causality exhibited considerable variation across countries. Levine (1997) showed that countries differ in their financial structures and this implies different outcomes on their real sectors. All these highlight the importance of country studies if they should have any policy relevance. It is therefore necessary to carryout country specific studies in order to relate the findings to policy designs within specific cases.

This study proposed to determine the case of Cameroon. This is important as Cameroon has a rich history of financial reforms (witnessed both financial repression and financial liberalisation policies). Tabi (1999) took a leading initiative in the early stage of financial reforms in Cameroon and determined that financial system reform was not growth enhancing. With more available data, it is imperative to improve the empirics of financial development and growth in Cameroon so as to provide policy makers more empirical evidence on the necessary information about whether these financial sector reforms have permitted the financial sector work better for economic development. The main objective of this work is therefore to determine the relationship between financial development and economic growth in Cameroon. Specifically, we first determine the channels through which finance affects economic growth in Cameroon, then, secondly we investigate the causality link between finance and growth. Finally, we make relevant policy recommendations based on this study on paths to follow in the future by policy makers.

Overview of Cameroon's economic and financial development

At independence in 1960, the country was in great need of development and so the government put into place instruments to promote economic and social development. It is in this light that five year development plans were drawn up so as to meet and promote social and economic development. The whole economy was thus highly plannified with the government intervening in practically all sectors of the economy. Until 1985, the economy performed very well with agriculture supporting the economy from 1961 to 1977 and petroleum from 1978 to 1985. During this period (1961-1985), Cameroon enjoyed a stable macroeconomic environment and an average growth rate of about 7% and seemed not to have been affected by the external shocks of the 70s and early 80s (Amin, 2002).

The financial sector during this period (1960 to 1985) developed under the umbrella of monetary and regulatory policies aimed at supporting the state orchestrated development strategies. The financial sector became an instrument of planned industrialisation policies and operated under a framework characterised by controlled interest rates, directed credit programmes, high reserve requirements and other restrictions on financial intermediation as well as restricted entry into the market. This situation has been termed financial repression by the proponents of financial liberalisation. All banks were owned by the state and credits were directed to sectors deemed important.

By 1987, due to the downturn in the world economy, the demand and the prices of the main exports of Cameroon declined. At the same time, the real exchange rate of the Franc appreciated sharply, while the US dollar depreciated by 40% against the CFA and the terms of trade deteriorated by 47% including a declining in oil output. All these let to a drastic collapse of the economy after practically two decades of good performance. The decline in GDP was sudden and drastic from 8 to -5 % per year (Amin, 2002). This situation put together uncovered the fragile nature of an economy that was seemingly well managed and robust to external shocks. The Bretton Woods institutions attributed the problem to poor and mismanaged external and domestic economic

policies. They then proposed the structural adjustment programmes (SAPS) that Cameroon adopted in 1987. In these programmes, the role of the state was redefined and a set of policies were undertaken to liberalise the economy in all its sectors. As such public enterprises were privatised, and many monopolies dismantled.

The financial sector was not spared by the crisis in the real sector. The collapse of the real sector made companies not to meet their financial obligations. This, together with other factors such as the incompetence of managers, poor management techniques, competition from the informal financial sector, and state intervention led to serious crises in the financial sector (Wamba, 2001). Many banks went bankrupt and others became illiquid not being unable to meet the withdrawals of depositors. Under the structural adjustment programmes, the restructuring of the financial sector was undertaken in which some banks were liquidated and others recapitalised. There was also a change in monetary and financial policies with the liberalisation of financial markets in 1990. A new banking regulatory agency (COBAC) was also established. As such, there was the deregulation of interest rates, the removal of directed credit schemes, and the privatisation of banks, the creation of the money market, the liberalisation of the capital account (Tabi, 1999). Lastly, a stock exchange was created on December 1st 2001: the Douala Stock Exchange (DSX), which still remains in its embryonic stage[2]. The Douala Stock Exchange is a public limited company with a Board of Directors and capital of 1.8 billion francs CFA, of which 63.7% of the shares are held by private commercial banks, Credit Foncier of Cameroon and the Dutch bank FMO, 23% by public interests, and 13.3% by private insurance companies. It is believed that such an emerging financial system would better support an economy that was henceforth regulated by market forces. These reforms marked the end of a repressed financial system and the beginning of a classical market based system.

With all the above reforms, the economy regained the path of economic growth and the banking sector regained its liquidity and soundness.

LITERATURE REVIEW

Theoretical considerations

In order to establish the theoretical link between financial development and growth, let's assume that we have a closed economy represented by an aggregate production function where output Y(t) is produced during period t by capital factor only, K(t)

$$Y(t) = F(K(t)) \quad (1)$$

As in Rebelo (1991), *K*(*t*) is the aggregate capital stock, including physical and human capital. Total differentiation of Equation (1) gives:

$$dY(t) = \frac{\partial F}{\partial K(t)} dK(t) \quad (2)$$

Dividing both terms of (2) by Y(t) gives the growth rate of the economy g = dY(t)/Y(t) as follows

$$\frac{dY(t)}{Y(t)} = g = \frac{\partial F}{\partial K(t)} \times \frac{dK(t)}{Y(t)} \quad (3)$$

The growth rate g then appears as a product of the marginal productivity of capital $\partial F / \partial K(t)$ and the investment rate $dK(t)/Y(t)$. In this closed economy without government, the financial market equilibrium supposes the equality between savings and investment. However, we could envisage the hypotheses of a loss of resources during the intermediation process which could be explained by information asymmetry and or government intervention (World Bank Report, 1989), such that, in equilibrium, only a fraction of saved resources S(t) is channelled to investment I(t), as follows:

$$ØS(t) = I(t) \quad (4)$$

The amount of savings absorbed by the financial system is then (1-Ø)S(t): the higher the amount, the lesser the capital accumulation in the economy. Combining this latter equation with the growth rate of the economy, we have:

$$g = F'(K(t))\phi\left[\frac{S(t)}{Y(t)}\right] \quad (5)$$

Then, from this simple model, it appears that the development of a financial market may affect the growth process through:

i) The improvement of capital productivity with better resource allocation toward its most productive use. In equation (5), this corresponds to an increase in F'(K(t));
ii) The channelling of more savings to investment by avoiding the loss of funds during the intermediation process through a rise in the fraction Ø;
iii) An increase in the savings rate (S(t)/Y(t)) (or also the investment rate) by using economic policies that directly affect the determinants of private saving behaviour.

Empirical review

Since the works of Schumpeter (1911), which postulate a

[2] Boubakari and Ognaligui (2010) used Sims' causality to examine causality relationships between stock markets and economic growth in Cameroon based on the time series data from 2006 to 2010 and suggests that the Douala Stock Exchange still doesn't affect Cameroonian economic growth.

positive effect of finance on economic growth, a large empirical literature has evolved testing this hypothesis. Early empirical investigations used standard cross-country OLS regressions and found a positive relationship between finance and growth after including the lagged value of the financial development variable in the regressions to control for simultaneity bias (Goldsmith, 1969; King and Levine, 1993). Also, it has been argued that such method of estimations does not give any information on the direction of causality between finance and growth.

To take care of the issues of simultaneity and unobserved –country specific effects, the use of panel data techniques was popularised. The results from the early attempts in this direction cast doubts on the validity of the finance-led growth hypothesis. Demetriades and Hussein (1996) found using cointegration analysis that the relationship between finance and growth is bidirectional and that this relationship is country specific. Similar results were obtained by Arestis and Demetriades (1997), Luintel and Khan (1999) using VAR estimations. However, more recent studies have re-established finance as an important source of economic growth. Xu (2003) found evidence for the finance-led growth hypothesis using multivariate VAR. Calderon and Lee (2003) agree with Xu, after conducting Geweke decomposition tests on pooled data of 109 countries and conclude that finance generally leads growth despite some evidence of bidirectional granger causality. Christopoulos and Tsionas (2004) applied panel unit root and Cointegration tests, threshold Cointegration test, and Panel VECM to find support for unidirectional causality from finance to growth.

The generalisation of the results of these cross-country studies have become very difficult as it has been shown that the finance-growth relationship is country specific and that causality demonstrated variations across countries (Demetriades and Husseim, 1996). Also, institutional factors and policies influence the nature of this relationship in different countries. This has led to the growth of country specific studies using various time series techniques. A large number of such studies find a positive and significant relationship between finance and growth and a unidirectional causality running from finance to growth (Habibur, 2007; Chandana, 2001; Suleiman Aamer, 2005). Others however find a positive relationship and a causality running from growth to financial development (Ang and Mckibbin, 2005; Erdal et al., 2007).

For the case of Cameroon, the relationship between finance and growth has been investigated by (Tche, 1997; Tabi, 1999). They took side with the Post-Keynesian view and estimates a demand for money and real output model. From his estimation results, he finds no evidence in support of the relationship. Instead, the results indicate a negative relationship between real interest rate and the demand for money which is consistent with the post-Keynesian view of finance-growth nexus. Both studies however were carried out just a few years after the 1990 reforms and so the financial sector was still suffering from the crisis of the late 80s. 18 years after, studies are needed to evaluate the effects of the reforms and to determine how the new financial structure affects the real sector so as to correct loop holes in policy. This study therefore takes side with the financial liberalisation hypothesis and uses an endogenous growth model to determine the link between the financial sector development and growth in Cameroon

METHODOLOGY

To investigate the link between financial development and economic growth for the case of Cameroon, this paper will use a simple model developed by De Gregorio and Guidotti (1995) and Abduroluman (2003). In this model the financial development variable is included in an endogenous growth model. The model is expressed as follows:

$$\text{Log GDP}_t = ß_1 \text{Log FD}_t + ß_2 \text{Log X}_t + \mu_t \quad (6)$$

Where:
GDP_t : an indicator of economic development
FD_t : an indicator of financial development
X_t : a set of control variables
μ_t : the error term

The Johansen method of cointegration will be used for the estimation. This method consists of three steps: first the orders of integration of the series are determined using either the dickey – fuller test or Phillip- Perron test. The second step consists of testing the eventual existence of a cointegration relationship linking the variables. The third stage permits the test of the causality between the variables

Unit root test

A time series is considered to be stationary if its mean and variance are independent of time. If the time series is non-stationary, that is, having a mean and or variance changing over time, it is said to have a unit root.

If a time series is non-stationary, the regression analysis carried out in a conventional way will produce spurious results. A spurious regression occurs when after regressing a time series variables on others, the tests statistics show a positive relationship between these variables even though no such relationship exist.

A non-stationary time series can be converted into a stationary time series by differencing. If a time series becomes stationary after differencing one time, then the time series is said to be integrated of order one and denoted by I(1).

Similarly, if a time series has to be differenced *d* times to make it stationary, then it is called integrated of order *d* and written as I(d). As the stationary time series needs not to be differenced, it is denoted by I(0).

We test for the order of integration using the augmented dickey-fuller test (ADF). The test is based on the following three models;

$$\Delta Xt = \rho Xt - 1 + \sum_{j=2}^{p} \Phi \Delta Xt - j + \mu t \quad (7)$$

$$\Delta Xt = \rho Xt-1 + \sum_{j=2}^{p} \Phi \Delta Xt - j + bt + \mu t \quad (8)$$

$$\Delta Xt = \rho Xt-1 + \sum_{j=2}^{p} \Phi \Delta Xt - j + bt + c + \mu t \quad (9)$$

The principle of this test is, if the H_o hypothesis that ρ=1 is accepted in any of the three equations, then, the process is not stationary. The value p of lags is determined with the aid of the Akaike information criterion. The lag chosen correspond to the one that minimises this criterion.

Johansen cointegration test

This test is appropriate only when all the variables are integrated of same order. Cointegration signifies the existence of one or many equilibrium long run relationship(s) that can be combined with the short term dynamics of the other variables in an error correction model. The relationship is as follows;

$$\Delta Yt = \Pi Yt-1 + \sum_{i}^{k} \Gamma i \Delta Yt - i + \mu t \quad (10)$$

Yt: Vector of variables that we need to study their dynamics

Γi : a matrix number and

Π : A matrix whose rank determines the number of cointegration relationships.

The number of optimal lags is determined using the Akaike and Schwarz criteria.

Causality test

Granger (1969) defines causality between two variables Y and X as follows; Y causes X if the predictability of X increases when Y is taken into consideration. The procedure used for the test of causality is that of the P-order vector autoregressive representation.

$$Y_{1t} = c_1 + \Pi_{11} (L)\, Y1t_{-1} + \Pi_{12} (L)\, Y2t_{-1} + \mu_{1t} \quad (11)$$

$$Y_{2t} = c_2 + \Pi_{21} (L)\, Y1t_{-1} + \Pi_{22} (L)\, Y2t_{-1} + \mu_{2t} \quad (12)$$

Where c_1 and c_2 are constants and Π_{ij} represent polynomials of order p-1. L is the lag operator. As such, Y_{2t} does not granger cause Y_{1t} when the H_o hypothesis is accepted, that is, if the polynomial Π_{12} (L) = 0. Likewise, Y_{1t} does not granger cause Y_{2t} when the polynomial Π_{21} (L) = 0. This formulation supposes that the variables are stationary.

Granger (1988) also showed that when the series are integrated of order 1, the model is underspecified and the causality test can lead to false conclusions. However, the causality test of Granger limits itself to the direction of causality in the short run and in order to have the long run causality, we use the method of Johansen and Juselius (1994). This method consists of estimating the following error correction model (ECM) to put into evidence the existence of a long run cointegration relationship.

$$\text{(ECM): } \Delta Y_t = \sum_{i=1}^{n} b_i \Delta LogY_{t-1} + \sum_{i=1}^{n} a_j \Delta LogX_{t-j} - \beta_i \varepsilon_{1t-1} + \mu_{1t} \quad (13)$$

The test consists of testing the significance of the residual ε_{1t-1} to show the existence of a cointegration relationship using an error correction model. As such if estimated β_i is statistically significant, then we can confirm the existence of a long run causality link going from X to Y. Also, the sign of β_i must be negative for an error correction mechanism to exist. The ECM is important because it gives the long and short run dynamics of a given variable.

Data description and sources

Indicators of economic growth

The endogenous variable of our model is the GDP Per Capita that reflects the degree of development of the economy. This aggregate has also been used by Levine (1997) and Abduroluman (2003). We obtain the data from the IFS of the World Bank, online version.

Indicators of financial development

The two main functions of a financial system are to collect and allocate financial resources. In order to capture the development of the financial sector with respect to these two functions, we make use of the following two indicators that have also been used by other authors (King and Levine, 1993, Younes and Chtioui, 2006).

i) Size of the financial sector (LLI): this indicator captures the total size of the financial sector with respect to the whole economy. This is also known as the depth of the financial sector. This is equal to currency plus demand and interest bearing liabilities of banks and other financial intermediaries divided by GDP. Users of financial depth hypothesize that the size of financial intermediaries is positively related to the provision of financial services (king and Levine, 1993, Younes and Chtioui, 2006).
ii) Bank credit allocated to private enterprises by the financial sector (BPCRE): this indicator captures the allocative efficiency of the financial sector. Theory hypothesises a positive relationship between allocative efficiency and growth.

These variables are collected from the IMF database on financial development and structure found from the IMF website www.imf.org.

Control variables

Referring to the works of Younes and Chtioui (2006), control variables are made up of the main determinants of economic growth and they include the following;

i) The investment rate (INV): Aggregate investment rate in proxied by gross fixed capital formation on GDP and is expected to positively influence growth.
ii) The size of the government (GOVC): We use government consumption measured by recurrent expenditure less expenditure to proxy for the size of the government. This may have either a negative or positive impact depending on the magnitude of the negative effects caused by the financing effects of this consumption.
iii) Openness of the economy (OPEN): Trade openness is measured as the sum of exports and imports on GDP. We expect a positive sign from this variable.

All these variables are computed by the authors from the IMF International Financial Statistics 2008 (online version, www.imf.org).

Table 1. Results of dickey-fuller unit root test.

Variables	Level form		First difference	
	ADF	Statistics critical value	ADF	Statistics critical value
LGDPC	-1.9905	-2.9499	-3.0997*	-2.9527
LOPEN	-2.3395	-3.5468	-6.2092*	-3.5514
LLLI	-0.2965	-1.9510	-2.7053*	-1.9514
LINV	-1.5872	-2.9499	-3.9814*	-2.9527
LBPCRE	0.0614	-1.9510	-2.6506*	-1.9514
LGOVC	-2.5096	-2.9499	-4.1506*	-2.9527

*(*) signifies significance at 5% level.

Table 2. Long run relationship between financial development and economic growth.

Variables	Model 1 (model with LLLI) coefficients	Model 2 (Model with LBPCRE) coefficients
C	11.94	11.45
LOPEN	- 0.63	- 0.63
LLLI	0.34	_____
LINV	0.51	0.50
LBPCRE	_____	0.122
LGOVC	- 0.44	- 0.47

Dependent variable LGDP.

ECONOMETRIC RESULTS

Results of unit root test

Table 1 presents the dickey-fuller unit root test results. This consists of rejecting or accepting the H_o hypothesis of unit root or non stationarity of the series. The results show that all the variables are non stationary, but when differenced once, they become stationary.

Cointegration tests results

Johansen (1992) proposes maximum likelihood estimators for the test of the cointegration of series. He carries out a rank cointegration test. This test can be used only when the variables are integrated of same order. From the unit root test results in Table 1, we notice that all the variables are integrated of order 1 and therefore we can apply the test.

The cointegration test results for the two equations are shown in the Appendix.

The tests indicate that there exist a cointegration relationship between the two measures of financial development and the other variables. The relationships are shown in Table 2

From model 2, we conclude that there exist a long term positive relationship between bank credit to the private sector and GDP per capita.

This indicates that financial policies or reforms have thus to be put in place to increase the efficiency of the banking sector in allocating credit to the private sector and by that increase their contribution to economic development.

From model 1, there is a long term positive correlation between the overall size of the financial system and GDP per capital.

Policies have to be pushed forward to increase the size of this financial sector such as the effective putting in place of the stock exchange in the country.

Long and short run dynamics and direction of causality between the variables

We test for short term causality using the Engle and Granger causality test and the long term causality by the Johansen method. The result is as shown in Table 3.

Short term causality test

The test consists of rejecting the H_o hypothesis of no causality when the probability of the F-Statistics is less than 5%. The two results indicate that in the short run there exists no causality relationship between financial

Table 3. Results of short run causality test between indicators of financial development and economic growth.

Null hypothesis	F-Statistic	Probability
LLLI does not Granger Cause LGDPC	0.84105	0.44151
LGDPC does not Granger Cause LLLI	0.58133	0.56554
LBPCRE does not Granger Cause LGDPC	0.33891	0.71533
LGDPC does not Granger Cause LBPCRE	1.54341	0.23069

Source: Authors calculations.

Table 4. Error correction representations.

Variables	Model 1 (model with LLLI) coefficients	Model 2 (Model with LBPCRE) coefficients
C	0.0069 (0.951354)	0.0075 (1.051747)
D(LOPEN)	-0.146 (-1.55103)	- 0.16 (-1.806425)***
D(LLLI)	0.196 (2.680636)**	_____
D(LINV)	0.28 (4.249097)*	0.259 (3.790023)*
D(LBPCRE)	_____	0.109 (2.484161)***
D(LGOVC)	0.065 (0.599469)	- 0.006 (-5.548565)
RESID(-1)	-0.68 (-5.448511)*	- 0.69 (-5.548565)*
R^2	0.600	0.605
R^2 adjusted	0.522	0.537
D-W statistics	1.789	1.977
F-statistics	8.427*	8.899*

NB:(*), (**), (***) indicates significance at 1, 5 and 10% respectively. Values in parenthesis are the t-statistics.

development and economic growth in Cameroon.

Long run causality test

In order to test the long run causality, we need to study the error correction models (ECM) of the various equations. In effect, the use of these models is justified by the fact that in the cointegration relationships we cannot use the different tests to determine the significance of the variables as they are I(1) that is, not stationary. The ECM has two advantages; it allows for the detection of the short and long run dynamics of a variable about its equilibrium value and the use of usual classical test such as Fisher, student, etc.

Model 2, investigates the relationship that exists between bank credit to the private sector and GDP per capita. Model 1, shows the case with liquid liabilities. The relationships are shown in Table 4.

Resid (-1) is the error correction term. It is therefore the difference between the observed and expected value of the dependent variables.

From the equation, there exist, in the short run, a positive and significant relationship between bank credit to the private sector and per capita GDP. Hence in the short run the development of the financial sector brings about higher growth in GDP per capita. Therefore the current financial liberalisation policies undertaken are encouraged.

To test the long term causality consists of carrying out a test of weak exogeneity. This is done by testing the significance of the coefficient of the error correction term (β) in the error correction model. β in both models is negative and significant at 1% level. We concluded that in the long run there exist a correction mechanism that establishes 69% of the disequilibrium of GDP per capita and that both indicators of financial development causes GDP per capita in the long run in Cameroon.

CONCLUSION AND POLICY RECOMMENDATIONS

Throughout this study, we have investigated the relationship that exists between financial development and economic growth in Cameroon. Using a theoretical and empirical approach, we were able to show that financial development is a determinant of sustainable economic growth.

Controlling for variables such as government consumption, trade openness and investment rate which are fundamental factors in growth equations, we were able to establish a positive long run relationship between financial development and economic growth. In the short run, the relationship is positive and significant at 5% level.

No causal relationship was found in the short run but in the long run this causal relationship exist and runs from financial development to economic growth. These results are true for the two indicators that we used to capture the development of the financial sector, indicating that both the deepening of the financial sector and its efficiency in the allocation of resources were important in boosting economic growth in Cameroon. All these results are important as they support the ongoing reforms in the financial sector. In order to boost this positive effect of the financial sector, more reforms have to be directed towards the improvement of its deepening and efficiency in resource allocation. Based on these results we therefore formulate the following policy recommendations. In order to increase efficiency in resource collection, there should be the relaxation of chartering conditions of financial institutions so as to ease access of new institutions and by that increase competition and spatial coverage. Also, the functioning of the Douala Stock Exchange should be improved upon. Concerning efficiency in resource allocation, regulatory authorities should provide a good accounting, legal and institutional environment. This will allow the easy circulation of information and the enforcement of contracts, hence permitting financial institutions to better assess the risk they are taking and monitor their investments. As the debate on the importance of the financial sector in economic growth is still fierce among economists, this study contributes to the literature by providing additional evidence in favour of the strand of literature that attributes a positive and important role of the financial sector in the growth process.

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APPENDIX

Johansen cointegration test results

Series: LGDPC LOPEN LINV LLLI LGOVC.

Eigen value	Likelihood ratio	5% critical value	1% critical value	Hypothesized number of CE(s)
0.746499	109.9343	68.52	76.07	None **
0.600212	63.27314	47.21	54.46	At most 1 **
0.395679	32.10125	29.68	35.65	At most 2 *
0.277717	14.97716	15.41	20.04	At most 3
0.108782	3.915651	3.76	6.65	At most 4 *

*(**) denotes rejection of the hypothesis at 5%(1%) significance level. L.R. test indicates 3 cointegrating equation(s) at 5% significance level.

Series: LGDPC LOPEN LINV LBPCRE LGOVC.

Eigen value	Likelihood ratio	5% critical value	1% critical value	Hypothesized number of CE(s)
0.810039	105.6845	68.52	76.07	None **
0.548407	49.21262	47.21	54.46	At most 1 *
0.327435	22.18348	29.68	35.65	At most 2
0.168977	8.697145	15.41	20.04	At most 3
0.068259	2.403801	3.76	6.65	At most 4

*(**) denotes rejection of the hypothesis at [5%(1%)] significance level. L.R. test indicates 2 cointegrating equation(s) at 5% significance level.