MONETARY POLICY AND ITS IMPLICATION FOR BALANCE OF PAYMENT STABILITY IN NIGERIA BETWEEN 1986-2015

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ABSTRACT

Keywords
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This article intends to determine the effects of banking on private investment in Cameroon. Using data from the World Bank for the period 1980-2012, the ARDL (Auto Regressive Distributed Lag Model) method allowed us to determine the cointegration's relationships between the different variables and the optimal number of delays associated with each variable. After estimating the Vector Error Correction Model (VECM), it has produced the following results: private investments in Cameroon are positively and significantly influenced by the government spending, the growth rate, and the devaluation. However, the rate of banking, bank credits and inflation rate have a significant negative impact on investments. If there is a real reduction of uncertainty by government authorities, banks will be able to play their true role of financial intermediary and the financing aspect of investments will be more effective and productive.

Contribution/ Originality: This study is one of very few studies which have investigated the influence of banking services on private investment. Otherwise, this study uses new estimation methodology to implement Vector Error Correction Model.

1. INTRODUCTION

Every production is still based on a physical and human capital that can be held or not by the producer. When capital is not held by the producer or when the producer has an exchangeable capital, this requires a financing option or the intervention of a financial intermediary such as a bank. It's in the twelfth century that the banking field was born but it's only from the twentieth century that the banking theory was developed. The theory of banking that revolves around the

concept of barrier to entry has led to the implementation of several types of barriers. Honohan (2004) identifies three, namely the barrier of price, barrier of information and the barrier of product and service. Ketley *et al.* (2005) identify financial barriers and other non-monetary. Beck *et al.* (2006) highlight the barriers related to accessibility (physical and financial) and eligibility. These various distinctions help to point out the main explaining factors of the non-use of banking and financial services.

The non-use of banking and financial services are an impediment to investment. Authors who have studied the investments have developed several theories. Among those theories, there is the theory of the accelerator adopted by Aftalion *et al.* (1998) then by Clark and Ziemba (1987) to whom, they take into consideration the final demand to explain the investment and the amount of the price of capital. The theory of the profitability of the investment, according to Jorgenson (1963) an equilibrium level of capital is determined through variables such as activity level, production costs, the price of capital goods and the "opportunity cost" of capital (interest that can produce an investment devoted to a financial asset). The financial theory of investment for Modigliani (1944) is the following, if the investment is profitable, it remains to solve the financial constraint that goes along with it. In this case, the financial factors such as domestic liquidity, the level of debt (leverage highlighted by Modigliani and Miller (1963) the dividend policy and the increased cost of external financing are financial constraints that influence the level of investment.

African countries have several means of financing of their economies, the most common is the bank financing. We always wonder if the banking savings is favorable to the development of investments. The objective of this document is to measure the effects of the level of banking on private investment in Cameroon.

2. LITERATURE REVIEW

2.1. A Theoretical Review

The concept of banking has been approached in the literature in terms of barrier to access. Among the barriers some distinctions were made, the barrier to physical access by Beck *et al.* (2005); the financial barrier to access by (Beck *et al.*, 2005; Ketley *et al.*, 2005); the barrier to eligibility (Beck *et al.*, 2006); the barrier of regulations, the barrier of available services and their characteristics and the barrier of information (Honohan, 2004).

Actually, these approaches are one of the reasons given by the theory of intermediation and the endogenous growth theory to justify the emergence and the role of banks in an economy. Indeed, the banking services resolve the liquidity problem whose savers are subject to and the problem of access to funds whose investors are subject to. On a single market without regulation, the assurance of liquidity can't be given, since no insurance contract based on observable information can't be written, as the information is private (Diamond and Dybvig, 1983).

However, agents need liquid assets, in other words, means of payment available for settlement of their trade without incurring transaction costs. Thus, having a risk aversion, and the will to have their savings available at any time, they are tempted to place all or part of their savings in liquid assets, according to the information they possess, states of the nature and their preferences. However, an asset is considered liquid if it is negotiable immediately without

significant capital gain or loss (Renversez, 1995). It's the case for the currency that is considered a perfect liquid asset. Liquidity risk therefore arises from the uncertainty related to the conversion of certain assets into a means of payment.

Nevertheless, credit rationing is considered to be detrimental to growth. As part of a model of endogenous growth, (Bencivenga and Smith, 1993) take into account the anti-selection problem which causes credit rationing. They demonstrate that there is an inverse relationship between credit rationing and the real growth rate and estimate that policies can be conducted to reduce this rationing will cause the increase of the growth rate. Contrariwise, we must be careful about the used policy and its implementation. A governmental policy that can take the form of a guarantee of part of credits for instance, must be applied to all borrowers to have a favorable effect on growth and not only to low-risk borrowers.

Moreover, unlike the Bencivenga and Smith (1993) which takes into consideration the rationing generated by ex-ante asymmetric information, an analysis of rationing due to the asymmetry of ex-post information, like the Williamson (1986) and its impact on growth, is performed by Guillard and Rajhi (1993). The growth rate of equilibrium with rationing which results from their model is lower than the growth rate achieved in the absence of rationing. Nonetheless, it is all higher and closer to the growth rate in situation of perfect information as the costs' of acquiring information, as well as the rationing of credits are low. To reduce credit rationing, Guillard and Rajhi state that the existence of a guarantee fund has the perverse effect of increasing the individual bankruptcy's risk of the entrepreneurs and prefer a policy of subsidies in the form of subsidized rates that allows achieving a higher growth rate. The rationing and the financial fragility can be as much low and limited as the borrowers possess ways to finance themselves. The initial wealth available to the company can play a vital role in reducing inefficiencies due to asymmetric information and improve the performance of investment and growth (Bernanke and Gertler, 1990).

2.2. A Review of Empirical Evidence

Based on the Diamond and Dybvig (1983) several authors Bencivenga and Smith (1993) included, have developed this idea as part of an endogenous growth model. They compare two types of economic systems: with or without financial intermediaries. They lead to the conclusion that the growth rate of a system with financial intermediaries is higher than the one where financial intermediaries do not exist. In fact they help increase the productivity of investment, both by directing resources towards the realization of illiquid investments in high yield and reducing the number of investments liquidated prior to maturity. In other words, by increasing the share of productive savings and avoiding premature failure of investment, financial intermediaries exert a favorable effect on growth.

It should be noted that even though the insurance of liquidity for the investors has a favorable impact on growth, it's not the case for the depositors. Indeed, the fact that households are no longer subject to liquidity risk, may cause a decline in their savings rate which translates into a growth reduction. This point was raised by Jappelli and Pagano (1994) in relation to the activity of credit. These authors state that if households have easy access to credit, liquidity risk

becomes lower and leads to less saving, less investment and less growth. Therefore, they recommend that banks effectively extend credit to businesses, but apply rationing for households which will boost growth. Though, on another hand there is this issue of loans granted to households for education purpose, so for human capital development.

De Gregorio (1992) analyzed this problem, theoretically and empirically observed that the liquidity's constraint also has a negative effect on growth. This happens because the credit crunch has the effect of reducing the accumulation of human capital. The liquidity's constraint with the introduction of credit activity has an ambiguous effect on saving and growth since on one hand it increases the savings rate, but on the other hand it reduces the productivity of investments that depends on the development of human capital, a key driver of growth.

Girma and Shortland (2008) by examining the different Italian regions, showed that the local financial development increased the likelihood that an individual embarks on an entrepreneurial activity but as well the level of industrial competition; therefore, it accelerates the growth of firms. Bernard (2004) on the basis of microeconomic data, argue that the deregulation of 1985, putting an end to government interventions in bank lending, has encouraged competition on the credit market and increase the allocative efficiency.

3. METHODOLOGY

The data used in this article are all secondary source from the annual publication of the World Bank, in the book of *World Development Indicators* on the CD -ROM (WDI-2013) and the National Credit Council (NCC). The study covers the period from 1980 to 2012. The chosen area for the study is Cameroon.

3.1. Variables
3.1.1. Dependent Variable

- **Investments (INV):** Private investments finance gross expenditure of the private sector (including private nonprofit agencies) on additions to its fixed domestic assets. This definition is the one from data on national accounts of the World Bank & data files on the OECD National Accounts. Private investments are used here like Aryeetey (2004).

3.1.2. Exogenous Variables

- **Banking Services (BS):** banking services is defined as the proportion of the population holding a bank account or the level of penetration of banking services in a population. It is measured by the banking rate. It is expected a positive impact of banking on investments because a banking rate that increases, decreases the accessibility of bank users.
- **Growth (GTHRTE):** To inform us about growth, we use real GDP per head as Fischer (1993); Sarel (1996) and Mantsie (2003). It is expected a positive sign of growth on investment for future investments inevitably depend on past added values.
- **Inflation (INF):** inflation Rat. What justifies the introduction of the inflation rate as an explanatory variable of growth is the concept of financial repression. Indeed, a high

inflation rate characterizes the economies where financial repression is strong, so that the real interest rate is negative, reducing the weight of government debt. However, high inflation disadvantage long-term investments and has a detrimental effect on growth. Therefore, the expected sign for this variable is negative.

- **Opening rate (OPE):** like Berthelemy and Varoudakisa (1998) we use the coefficient of trade openness and compute the calculation by the ratio (Exports + Imports) / GDP. However, this indicator is not optimal since in addition to guidelines for the economic policy, it reflects the influence of natural differences such as the size and location of each country. The expected sign for this variable is positive because by opening there are an increase of opportunities or a ripple effect of private investments by foreign investments on national soil.

- **Population (POP)**: This variable, as in Mankiw *et al.* (1992) equals to the sum of population growth rate (n), the growth rate of technical progress (g) and the rate of capital depreciation (d) (with g + d = 0.05). The growing population necessarily increases the size of the market, so we expect a positive sign of the effect of population on private investment.

- **Devaluation (DEVAL)**: this variable interpret a change in the nominal exchange rate of the CFA franc. We are wondering whether or not it has influenced or significantly influences FDI in our country. We have also expressed it as a dummy variable equal to 0 from 1980 to 1993 and 1 from 1994, date of devaluation.

- **Bank credit (BCRED)**: This is a variable that measures the ability of banks to mobilize resources to finance the economic activity, its impact on growth should be positive. Recent studies have sought to describe the mechanism whereby the financial systems affect economic development, arguing that the financial sector's development will promote greater mobilization of savings and a better distribution of economic resources, stimulating productive investments and economic growth (Levine, 2004).

- **Human capital (HCA)**: the human capital that expresses the quality of labor is approximated by the gross enrollment rate at the secondary level. This variable appears in the literature as a determining factor for investment and growth (Barro, 1998; Hewitt, 1998). It is expected a positive sign.

- **Public spending (PS)**: The government investment expenditure is used as a proxy of public spending. The increase in public investment or consumption can lead to a contraction in private investment, particularly when financed by the issuance of government securities in the financial market. This can lead to a temporary contraction of liquidity, causing a rise in interest rates and a decline in private investments (crowding out effect). However, public investment spending, especially in infrastructure should have a positive effect on private investment to the extent that they create positive externalities for private agents (ripple effect).

3.2. The Model

The base model is the autoregressive at delay instalment model (ARDL) developed by Pesaran *et al.* (2001). Its main feature is to take into account all the interactions of variables without imposing theoretical constraints on them. In their general formulation, Pesaran & al postulate that the endogenous variable depends on the values taken by an exogenous variable in earlier times, such as:

$$Y_t = b_0 + a_0 X_t + a_1 X_{t-2} + \cdots + a_h X_{t-h} + å_t = \sum_{j=0}^{h} a_j X_{i-j} + b_0 + å_t \ (1)$$

In general, the explanatory variable effect fades with time:

$$a_0 > a_1 > a_2 > a_3 > \cdots > a_h$$

This model (1) can be simplified as a write operation by using a shift operator D defined by:

$$D_{X_1} = X_{t-1} \text{ and in general: } D_{X_t} = X_{t-j} \text{ either:}$$

$$\sum_{j=0}^{h} a_j X_{i-j} + b_0 + å_t = \left[\sum_{j=0}^{h} a_j D^j\right] X_t + b_0 + å_t$$

$$Y_t = A(D)X_t + b_0 + å_t \ \ (2) \text{ where } A(D) \text{ is a polynomial of degree h, such as:}$$

$$A(D) = a_0 + a_1 D^1 + a_2 D^2 + a_3 D^3 + \cdots + a_h D^h$$

The number of delays, h, can be finite or infinite. However, the sum of coefficients a_j tends to a finite limit, otherwise Y_t would be an explosive process.

The polynomial $A(l) = a_0 + a_1 + a_2 + a_3 + \cdots + a_h$ enables to measure the long term impact of the change in the explanatory variable X_t, of a ΔX quantity on the Y_t value. Indeed, the coefficients a_j represent the instantaneous multipliers and their cumulative sum multiplier.

Studies that have tried to use the ARDL method to analyze the effect of banking services variable on investment seem to be rare. The base model below that we seek to estimate to study the impact of banking and bank credits on investments is borrowed from Hay (2000) which was adapted to the context of Mali by Soumare (2009) and also adapted in the case of Ivory Coast by Dembele (2010).

Table-1. Summary of expected signs

Explanatory Variables	Measure of variables	Explained Variable
		INV
		Expected Signs
BR	Banking Service Rate	+
INF	Inflation Rate	–
OPE	Open Trade Rate	+
POPRTE	Population Growth Rate	+
HCA	Level of Secondary Education	+
BCRED	Bank Credits	+
PS	Public Investment Spending	+/–
GTHRTE	GDP Growth Rate	+
DEVAL	Devaluation (dummy variable)	+

From the general formulation of Pesaran *et al.* (2001) the specified model in this article is:

$$D(INV) = \alpha_0 + \alpha_1 D(HCA) + \alpha_2 D(BCRED) + \alpha_3 D(PS) + \alpha_4 D(INF) + \alpha_5 D(OPE) + \alpha_6 D(BS)$$
$$+ \alpha_7 D(POP) + \alpha_8 D(GTHRTE) + \alpha_9 INV(-1) + \alpha_{10} HCA(-1)$$
$$+ \alpha_{11} BCRED(-1) + \alpha_{12} DEVAL + \alpha_{13} PS(-1) + \alpha_{14} INF(-1) + \alpha_{15} OPE(-1)$$
$$+ \alpha_{16} BS(-1) + \alpha_{17} POP(-1) + \alpha_{18} GTHRTE(-1)$$
$$+ \; \varepsilon_t \qquad\qquad\qquad (3)$$

With the α_0 constant, α_1 to α_8 the coefficients of the short-term variables, α_9 the error correction term coefficient, α_{10} to α_{18} the coefficients of the long-term variables, ε_t the error term.

To come to the results, the tests to be mobilized are: the stationarity test, cointegration test, validation tests namely the autocorrelation test and the test of heteroscedasticity.

4. PRESENTATION OF RESULTS

4.1. Test of Stationarity

As it was previously emphasized by Granger and Newbol (1974) if in an econometric model, we use non-stationary series; the results of statistical tests are false. It gets what is commonly called a spurious regression. Thus, the Dicker-Fuller test increased (ADF) was administered to each variable. Once the test performed, we compare the different values of t-Dicker-Fuller statistic at the 5% significance level. Stationarity tests are confined in Table 2 below.

Table-2. Result of unit root test

Table-2.1. Results of the ADF unit root test with constant

| Variables | Augmented Dickey – Fuller with constant | | | | |
| | Level | | Difference in First | | |
	Calculated Statistic	Critical Statistic at 5%	Calculated Statistic	Critical Statistic at 5%	Integration Level
BS	-2.957110	-1.156875			I(0)
INV	-1.899268	-2.957110	-4.498611	-2.963972	I(1)
HCA	-2.326792	-2.963972	-5.847429	-2.960411	I(1)
PS	-3.447879	-2.957110			I(0)
INF	-2.960411	-1.643214			I(0)
OPE	-2.009359	-2.967767	-7.333251	-2.967767	I(1)
POP	-1.440087	-2.963972	-3.014075	-2.963972	I(1)
GTHRTE	-1.086767	-2.957110	-4.843562	-2.960411	I(1)
BCRED	4.329812	-2.991878			I(0)

Table-2.2. Results of the ADF unit root test with constant and trend

| Variables | Augmented Dickey – Fuller with constant and trend | | | | |
| | Level | | Difference in First | | |
	Calculated Statistic	Critical Statistic at 5%	Calculated Statistic	Critical Statistic at 5%	Integration Level
BS	-3.557759	-1.674767			I(0)
INV	-2.059444	-3.557759	-4.670285	-3.568379	I(1)
HCA	-3.568379	-3.611929	-5.751195	-3.562882	I(1)
PS	-1.943728	-3.587527	-3.595026	-1.769973	I(1)
INF	-3.439436	-3.557759	-5.007630	-3.562882	I(1)
OPE	-3.562882	-3.195140			I(0)
POP	-2.009359	-2.967767	-7.459713	-3.574244	I(1)
GTHRTE	-1.440087	-2.963972	-5.447919	-3.562882	I(1)
BCRED	-2.165790	-3.557759	-4.849939	-3.562882	I(1)

ADF = Augmented Dickey-Fuller

Looking at the chart above, we note that the investment is integrated of order 1. All other variables are either stationary or integrated of order 1. This offers the possibility to proceed to the cointegration test of Pesaran *et al.* (2001).

4.2. Cointegration Test

After checking the stationarity condition, the cointegration test of Pesaran *et al.* (2001) takes place in two stages: first, it is a question of determining the optimal delay and in the second stage, we test cointegration properly said.

4.2.1. Choosing the Optimal Delay

After checking that all variables comply with the ARDL conditions of application (that is to say, they are at I (1)), it is now up to estimate the optimal delay that must be introduced to the variables in the equation (3). However, to determine the optimal delay p *, Pesaran sets the maximum delay possible P_{max}, and determines it from the statistic:

$$P_{max} = \left[4 \left(\frac{N}{100} \right)^{\frac{2}{9}} \right]$$ Where N is the sample size.

After determining P_{max}, choosing the optimal delay is guided by the Akaike Information Criteria (AIC) and Schwarz (SIC) and will be equal to the delay which minimizes the functions of Akaike and Schwarz (Bourbonnais, 2002). Determining the optimal delay P * finally lead to estimate all ARDL models (a, b, c, d, e)[1] where series delays vary between 0 and P * and the optimal ARDL is the one that minimizes the criterias of information (AIC and SIC). In this case, the determination of the optimal number of delays led to ARDL models (1, 1, 1, 1, 1, 1, 1, 1, 1).

4.2.2. Cointegration Test by Itself

The choice of the optimal ARDL led to test the existence of a long-term relationship between the variables of this following. Pesaran *et al.* (2001) propose to test the following hypothesis:

$$H_0 : F_1 = F_2 = F_3 = \cdots = F_n$$
$$H_1 : F_1 \neq F_2 \neq F_3 \neq \cdots \neq F_n$$

The test statistic is the statistic of Fisher or the Wald statistic. This statistic does not follow a standard normal distribution type law, the Student law or Fisher's (Lele, 2010). To overcome this problem, (Pesaran *et al.*, 2001) provide two sets of critical values to which is compared the F-statistic: the first set corresponds to the case where variables are I (0) and represent the lower limit and the second is where all variables are I (1) and represent the upper limit.

After comparison, meet one of the following decision rules:

- If F-statistic is below the lower limit, then there is no cointegration relationship;
- If F-statistic is between the lower and the upper limit, the test is not conclusive and we can't draw any conclusion;
- If The F-statistic is greater than the upper limit, then the hypothesis of cointegration is accepted.

To the extent that the hypothesis of cointegration is validated, the next step is to estimate the long-term equation and Error Correction Model (ECM) to take into account any imbalances that may exist on the short run.

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[1] That is an example of lags taking by four variables. The always have equal variables and lags.

The correction coefficient of the error term or restoring force INV (-1)) must be negative and significant to confirm the existence of a cointegration relationship between the variables.

Table-3. Result of the Cointegration Test from Pesaran *et al.* (2001)

Country	Dependent Variable	Delay	Table	F-stat	Critical Values	Conclusion
Cameroon	ΔTINV	1	C(I)	6,14	3,15	cointegration

Notes: The critical values are produced by Pesaran *et al.* (2001)

From Table 3 above, it is observed that the value of Fisher exceeds the critical value of Pesaran & al, it indicates the existence of a cointegration relationship**.**

4.2. Autocorrelation detection Test of Breusch Goldfrey
This test is based on the alternative hypothesis of no autocorrelation.

Table-4. Breusch Goldfrey Test for the first regression equation

Breusch–Godfrey Serial Correlation LM Test:			
F-statistic	2.045239	Prob. F(2,11)	0.1757
Obs*R-squared	8.674033	Prob. Chi-Square(2)	0.0131

This table allows us to confirm the absence of autocorrelation of residuals since Statistic of F-statistic has a probability of (0.1757) higher than the 5% significance level.

In addition, the product n x R^2 (8.674033) is less than $\chi^2(2)$ read at 5% level (18.59). There is therefore no heteroscedasticity.

4.3. Heteroscedasticity Detection Test

Table-5. Heteroscedasticity Detection Test

Heteroskedasticity Test: Breusch–Pagan–Godfrey			
F-statistic	0.693090	Prob. F(18,13)	0.7684
Obs*R-squared	15.67066	Prob. Chi-Square(18)	0.6155
Scaled explained SS	2.385543	Prob. Chi-Square(18)	1.0000

This test is based on the alternative hypothesis of no heteroscedasticity.

The probability attached to the Fisher statistic (0.7684) is greater than 5%, so we reject the hypothesis of heteroscedasticity mistakes.

In addition, the product n x R^2 (15.67066) is less than $\chi^2(2)$ read at 5% level (18.59). There is therefore no heteroscedasticity.

4.4. Estimations
The table below gives the results of our estimates.

Overall, Table 6 below shows that our model is well specified. This is justified by the fact that the coefficient of determination R^2 (0.85) and the adjusted R^2 (0.65) are high. Proof that the model

is good for forecasts. Thus the change in private investment to 65% is explained by the regression model. Not far from this, the probability of the F-statistic is significant at 1%. One more reason to validate our claim. Besides the coefficient of the adjustment variable (INV (-1) = -0.76) is negative and significant at the 1% level, indicating that there is 76% of adjustment between short and long term balance. The value of the Durbin-Watson statistic is equal to 2.2 which indicates the absence of autocorrelation because it is within the conventional range of evidence of no autocorrelation. However, the autocorrelation test of Breusch- Godfrey was made to ensure the accuracy of this information due to the limit that knows the Durbin-Watson statistic as mentioned above.

Of all our variables, human capital (HCA), the opening rate (OPE) and the population growth rate are significant either in the short term or long term.

Government spending (PS) are positive (expected sign) and significant at the 1% on the short and long run. It appears that in Cameroon, the establishment of infrastructure or public investment and government consumption have a leverage effect on private investment.

Banking penetration rate (BS) has a negative effect (opposite sign to the expected sign) and significant to the respective thresholds of 5% in the short term and 10% long term. So an increase in the proportion of people who have access to banking services rather than a negative effect on private investment. This is understandable for several reasons: firstly, the banking crisis that prevailed in the second half of the 80 remained in the bankers memory who have a very acute risk aversion. Secondly, Cameroon's industrial and economic fabric with a strong dominance in the informal sector is almost inaccessible and the banking services are very expensive (high interest rates). Thirdly, since 1963 we have considerably noticed the establishment and progressive development of Micro Finance Institutions, with the aim of finding a financing system more suitable to the Cameroonian context. The large share of economic activity (Small and Medium Enterprise, informal sector) is financed by micro finances.

The growth rate has a positive sign, similar to the expected one and significant at 5% (short-term) which means that an increase in growth results in a variation of investments in the same direction. This result is the one obtained by Aryeetey (2004) whom investment is the main channel through which the macroeconomic indicators affect growth.

Long-term Credits (BCRED), have a negative effect (the expected sign is positive) and significant investment on a significance level of 10%. The evolution of credits negatively impact investments. This negative factor is explained by the high interest rates attached to loans offered or granted to investors, it hinders investment and push down growth. Therefore, the credit conditionalities appears to have a negative effect on investment.

The inflation rate in the long run has a negative and significant effect to a 10% threshold on investment. In the long term, and in the case of a high variation in inflation levels, there is instability and the latter causes a slowdown in economic activity that can result in a negative effect of inflation rate on investments.

Devaluation is positively and significantly related to the 5% investment. Although the devaluation did not allow the countries of the CEMAC zone and particularly Cameroon to be more competitive and to develop their economic activity, it has at least helped to limit the negative effects of a very high exchange rate.

Table-6. Estimates of the vector error correction model

Dependent Variable: D(INV)

Method: Least Squares

Date: 11/28/14   Time: 05:15

Sample (adjusted): 1981 2012

Included observations: 32 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	38.26386	41.51240	0.921745	0.3735
D(HCA)	0.026505	0.139706	0.189719	0.8525
D(BCRED)	0.037845	0.105963	0.357154	0.7267
D(PS)	***1.879291	0.512666	3.665719	0.0029
D(INF)	-0.164141	0.136417	-1.203230	0.2503
D(OPE)	-0.179194	0.105377	-1.700509	0.1128
D(BS)	*-3.998042	1.948300	-2.052067	0.0609
D(POP)	17.30305	13.01562	1.329406	0.2066
D(GTHRTE)	**0.294896	0.120803	2.441132	0.0297
INV(-1)	***-0.761466	0.232784	-3.271123	0.0061
HCA(-1)	0.059444	0.197331	0.301238	0.7680
BCRED(-1)	*-0.246898	0.119933	-2.058642	0.0602
DEVAL	**7.912671	3.446588	2.295798	0.0390
PS(-1)	***2.179949	0.627136	3.476037	0.0041
INF(-1)	*-0.359797	0.200245	-1.796785	0.0956
OPE(-1)	-0.210631	0.174956	-1.203907	0.2501
BS(-1)	*-4.626389	2.326709	-1.988383	0.0682
POP(-1)	-4.620632	11.11972	-0.415535	0.6845
GTHTE(-1)	0.181703	0.152149	1.194246	0.2537
R-squared	0.853519	Mean dependent var		-0.030892
Adjusted R-squared	0.650699	S.D. dependent var		2.273214
S.E. of regression	1.343507	Akaike info criterion		3.715157
Sum squared resid	23.46514	Schwarz criterion		4.585438
Log likelihood	-40.44251	Hannan-Quinn criter.		4.003630
F-statistic	4.208266	Durbin-Watson stat		2.196740
Prob(F-statistic)	***0.005727			

*, ** and *** have the significances to 10%, 5% and 1%.

5. CONCLUSION

The purpose of this article was to verify the effects of the banking services on investments in Cameroon. The literature shows that the effects of the banking services on investments may depend on the accessibility of banking services and financing conditions. In terms of methodology, we made a private investment equation.

The cointegration test by the method of Auto Regressive model in delays Instalment (ARDL) has identified the cointegrating relationships between the variables and the number of optimal delays for each variable.

The actual presence of a cointegration relationship between the variables opened a breach on an error correction model.

Thus, the estimated error correction model has been made. The different results allow us to say that there is a balance adjustment combining the short and long term as the adjustment variable (INV (-1) = -0.76) is negative and significant at 1%, demonstrating that there is 76% adjustment between the short-term and long-term balance.

In addition, private investment in Cameroon was positively and significantly influenced by government spending, growth rate and devaluation.

However, the banking services rate, bank credits and inflation rate have a significant negative impact on investment.

As banks play an important role in the financing system, they provide a public service, but above all the banks are businesses that must also make profits, they merge in the economic environment and redirect their main service, granting credits towards services to individuals or to the financing of low-risk investments that are actually lower.

It is important for the government that beyond its commitment to offer favorable infrastructure to develop every sectors of activity, to put a highlight in promoting an environment with a minimum of certainty that will allow newly created enterprises to grow and banks to have greater clarity on economic topics.

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