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The Nexus between Private Domestic Investment, Economic Instability and Economic Growth in Cameroon

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Abstract: One of the principal concerns of economic policy today in developing countries is the desire to put in place appropriate policies that will render a better business environment and increase economic performance. This paper has as primordial objective, to empirically analyse the nature of the link between domestic investment, economic growth and economic instability in Cameroon from 1977-2014. To realise this objective, data was collected from the World Bank. The principal component analyses technic was used to reduce the key variables and the analyses done using the Vector Autoregressive model following the Toda Yamamoto (1995) specifications. The result from the Toda Yamamoto granger non causality test used shows that there is a unidirectional relationship from private domestic investment to economic growth in Cameroon. Equally, there exist a bidirectional relationship between private domestic investment and economic instability, while a unidirectional link exists from economic growth to economic instability. Consequently, the state of Cameroon should continue to encourage domestic investment and promote small and medium size enterprises so as to acquire higher growth rates.

Key Words: Domestic private Investment, Economic Instability, Economic Growth, Principal Component Analyses, Toda Yamamoto Procedure.
JEL: C32, C50, E22, E31, L26, O49.

I. Introduction

The major worries of most policy makers in the world today is the desire to put in place appropriate policies that will render a better business environment and increase economic performance. In most cases, government and businesses working in Africa encounter daunting economic situations that reduce their ability to make long term investment decisions and implement development policies. Investors need an environment that allows them to allocate resources efficiently. De Ferranti and Ferreira (2000) asserted that there are significant geographical differences in output volatility, developing regions are more economically unstable than developed regions. Economic instability could mainly stem from the macroeconomic policies that have been carried out in each country, since the distortionary fiscal policy may translate into higher inflation rates, misaligned real exchange rates and unsustainable fiscal deficits. These economic policies are dynamically inconsistent because of their implication on financial crises and force adjustments which are reflected in lower average growth rates which are highly volatile. Several papers support this hypothesis, such as Blanchard and Simon (2001) and Martin and Rowthorn (2004).

Economic chocks which can either stem from any distortionary macroeconomic policies are very vital in determining the investment environmentin an economy, as well as economic performance. With most studies in the world today like Ali and Hafeez (2015) and Mustafa et al. (2005) looking at the diverse effects of these distortionary economic policies on either investment or economic growth, very few of these studies have sought to look at the link between these

distortionary policies and economic performance. The link that exists between private domestic investment, economic instability and economic growth in Cameroon is still unknown. After the independence of the country in the early 1960s, the government adopted 5 years development plans which were very successful up to 1985. Domestic investment was constantly increasing on an average scale with private investment/GDP ratio increasing from 11 per cent in 1963 to about 19 per cent in 1977. Real GDP was equally growing at a constant scale of 4.6 per cent per year during this sub period (Fambon et al. 2014). Meanwhile, indicators of macroeconomic instability (inflation, fiscal deficit and exchange rate) were all on a good scale.

The performance of these macroeconomic variables in Cameroon witnessed a drastic change from the mid-1980s and the early 1990s (Ghura 1997),with a drop in investment by more than 70 per cent between 1985/86 and 1992/93, an appreciation of the real exchange rate to about 40 per cent on a cumulative basis between 1985 and 1992, increased rate of inflation, increased fiscal deficits with an average of 7 per cent of GDP between 1987 and 1993 and consequently a drastic drop in real GDP of about 40 per cent. From the mid-1990s till date, with the implementation of different reforms like the stabilization and structural adjustment programs supported by the international monetary fund (IMF) and the World Bank from the late 1980swhich led to the devaluation of the country's currency (CFAF) in 1994 (Désir*éet al*., 2019; Forgha*et al*., 2015). Consequently, GDP per head increased by about 1.6 per cent annually while inflation remained moderate at a rate of about 2 per cent per year during the same period from 1996-2000, in the same light, there was rise in private investment from 11 per cent to 13 per cent of GDP during this period (Fambon et al., 2014). Generally, all this macroeconomic indicators have witnessed great improvement since 1995 but for the slight fall in 2008 and 2017 (IMF, 2018). From these aforementioned stylized facts, it's worth noting that, the trend of these macroeconomic variables has seemingly followed an identical path since independence. Does this similarity of their evolution explain interdependence between the variables? Reason why we seek to establish and understand the nature of the link that exist between these variables within the Cameroonian context.

The major objective of this study is to determine the nature of the link between private domestic investment, economic instability and economic growth. Specifically, the study aims at: firstly, investigating the causal link between private domestic investment and economic instability, secondly, examining the causal relation between private domestic investment and economic growth and finally, to investigate the causal relationship between economic instability and economic growth in Cameroon. Understanding the relationships that exist between these variables will help decision makers to make sound decisions that will better improve the economic environment and consequently lead to growth within the economy. The other sections of this paper will be arranged as follows: section 2 will look at the literature review, 3 will look at the methodology, 4 will present the results and finally 5 will be conclusion and recommendation.

II. Literature review

There exist a wide range of theoretical and empirical literatures as to what concerns the link between domestic investment, economic instability and economic growth. This section will first look at the theoretical literature in its sub 2.1 and the empirical literature in its sub 2.2.

2.1 Theoretical Underpinnings

Theoretically, there exist two opposing views for whether economic crises have positive or negative effects on long term growth. The first view emphasises that instabilities are negatively correlated to growth, both in the short and the long run, because short run destabilising effects of central macroeconomic variables has adverse effects on output volatility in the long run (Cavallo and Cavallo, 2010). The second view holds that crises are positive for long run growth, although they have negative immediate effects. The reasoning behind this argument is that crises allow important reforms and learning processes to take place, when these reforms occur, it will lead to long run improvements in macroeconomic performance. Drazen (2000) refers to this as the "crisis hypothesis".

Baumol and Peston (1955) explain that an expansive fiscal policy resulting in growing budget deficit and public debt increases aggregate demand through the budgetary multiplier mechanism and consequently leads to a greater growth rate within the country. Meanwhile, Diamond (1965) argues that increased public indebtedness is indeed detrimentalads to the economy, since a loose fiscal policy increases current consumption, leading to a fall in saving ratleads to because it leads to decreased saving rates and a fall in investment and consequently growth. Elmendorf and Mankiw(1999) explain

that public debt crowds out private investment and deteriorates economic performance in the long-run. Meanwhile, Woo (2009) argued that a higher stock of public debt will induce future distortionary taxation or higher inflation to pay back this debt, hence reducing future potential growth.

Mundell (1963) and Tobin (1965) explain that it is high inflation which increases the cost of holding capital. High inflation reduce investment, this goes a long way to reduce capital accumulation which further leads to low economic growth. Still within the framework of the Drazen crises hypotheses, good reforms after crises will lead to improvement of the business environment which will lead to an increase in investment. As such, the effects of instability on investment will depend on the different reforms put in place by policy makers to stabilise the economy. Within the framework of the endogenous growth literature, Boyd et al. (1996) explain that economic growth depends on the rate of return, but inflation reduce the rate of return which leads to a reduction in capital accumulation and hence decrease the growth.

Most economists agree that Investment is one of the fundamental factors that stimulate economic growth within a free economy. The Harrod-Domar models of 1939 and 1946 respectively stress on the importance of determining the rate of investment (saving in proportion to income S/Y) which is needed to achieve a certain rate of economic growth. Their models equally explain the possible way of increasing the rate of growth by increasing the rate of investment. Meanwhile Crafts and Toniolo (1996) explain that the Solow's model of economic growth assumes a negative relationship between per capita income and the rate of economic growth. This is because countries with low per capita income have a weak capital formation and hence, investment turns to achieve growing returns contrary to countries with high per capita incomes. Meanwhile endogenous growth models explain that growth depends on savings and investment in human capital (Lucas, 1988) and investment in research and development (Mattana, 2004).

2.2 Empirical literature

The objective of this work is to revisit the nature of the link between economic instability, economic growth and private domestic investment using time series data. Most of the existing literatures focus on the direct effect of both private domestic investment and economic instability on economic growth or the direct effect of economic instability on private domestic investment, without accounting for the causal link between these variables.

Ali and Hafeez (2015) using inflation, rate of unemployment, trade deficit and budget deficit to capture instability, study the impact of macroeconomic instability on gross domestic product in Pakistan, from 1980 to 2012. Their result shows that macroeconomic instability has a deep rooted and detrimental impact on gross domestic product in Pakistan within the study period. They equally found the existence of cointegration between instability and growth. Ferreira (2009) carried out a panel data granger causality analysis using data from 20 OECD countries to investigate the causal relationship between public debt and economic growth. The result reveals a bivariate relationship between public debt and economic growth.

Mustafa et al. (2005) empirically investigated the relationship between macroeconomic instability, public and private capital formation and growth in turkey over the period 1963 to 1999. Their result shows that the chronic and increasing macroeconomic instability has a negative effect on economic growth and on capital formation. Furthermore, that chronic macroeconomic instability seems to be a serious impediment to public investment, especially to its infrastructural component, and shatters, or even reverses, the complementarity between public and private investment in the long run. Ramey and Ramey (1994) using inflation as a proxy for macroeconomic instability on a sample of 92 countries, reveals that macroeconomic instability exerts a heavy burden on the poor class of the economy and has a negative relationship with economic growth. Their results equally show a negative relation between government spending volatility and economic growth.

Mobarak (2005) concludes that the welfare of the poor class is closely related to macroeconomic instability, as the consumption of the poor is very sensitive to their income. The result of the study shows that there is a negative relationship between macroeconomic volatility and economic development in case of non-democratic Muslim countries.

Yusoff and Aboubakary (2016) have shown that, gross domestic investment, exports and exchange rate positively influence economic growth in Cameroon. Ismihan (2009) explores the relationship of potential growth and macroeconomic instability in Turkey over the period 1960 to 2006. The result shows that during the episodes of macroeconomic instability, Turkey faces a significant loss of real output. On the other hand, during those episodes when macroeconomic instability shows downward trend, real output has shown upward trend. The study concludes that if Turkey wants to maintain high economic growth it should reduce macroeconomic instability.

Oyedokun and Ajose (2018) empirically demonstrated that there exist a long relationship between domestic investment and economic growth, and equally a unidirectional causal link from domestic investment to economic growth in Nigeria from 1980 to 2016. Bakari (2018) investigated the relationship between domestic investment and economic growth in Algeria from 1969-2015. The result of the study shows that domestic investment has a long run negative effect on economic growth, while there is short run causality from domestic investment to economic growth.

Subramanian and Satyanath (2004) investigate the determinants of macroeconomic stability within a cross country framework. They conclude that democracy and economic growth have positive and significant relationship with macroeconomic stability. The study finds that conflicts either internal or external have negative impact on macroeconomic stability.

CuneytetFeyza (2014) investigated the relationship between economic freedom, inflation rate and economic growth, in 23 upper middle-income countries from 1995 to 2010. The result of the study suggests that economic freedom has a significant positive effect, while inflation rate has a significant negative effect on economic growth. Cardoso (1993) investigated the impact of economic growth, terms of trade and real exchange rate on private investment in case of Latin American countries over the period of 1970 to 1985. The study finds that 74% private investment is explained by economic growth and there exists positive and significant relationship between them. The results show that the rate of depreciation of capital and exchange rate have no significant impact on private investment, whereas economic instability has negative and significant impact on private investment.

Nelson (2005) investigates the effect of inflation on the standard of living. The result suggests that there is negative relationship between inflation and living standard. That is in the environment of macroeconomic instability, the increase in prices of household goods decreases the supply of these goods, which further decreases the welfare or standard of living of the household. While examining the role of financial development on exchange rate volatility and productivity growth nexus using a panel of 83 countries over 1960-2000, Aghion et al. (2009) argue that higher levels of exchange rate volatility adversely affect growth especially in capital market economies.

Wolf (2005) confirms that macroeconomic instability has a negative relationship with future consumption through low output growth. The relationship between environment and economic performance is controversial. For achieving macroeconomic stability, developing countries cannot ignore the pollution problems and global warming which directly affect the living standards of the people. Most studies within the spheres of this domain have focused on either studying the effect of macroeconomic instability on growth and investment, or looking at the determinants of these macroeconomic variables. Few of these studies have tried to determine the causal relationship that exists between these variables. It is within this backdrop that this study seeks to look at the causal relationship between these macroeconomic variables, using modern econometrics techniques of causality (the Toda-Yamamoto procedure to causality).

III. Methodology

3.1. Data Description

a. Sources of Data

The data used in this study was obtained from the annual publication of the World Bank, specifically from the World Development Indicators and Africa Development Indicators data which is contained in CD- ROM from the World Bank Institute (WBI, 2016). The study makes use of time series information on variables within the period 1972-2014. The data is analysed using STATA 13.

b. Macroeconomic Instability Index

Peter et al. (2005) reported that a stable macroeconomic policy environment features a fiscal stance, safely consistent with fiscal solvency, a monetary policy stance consistent with a low and stable rate of inflation, and a robust exchange rate regime that avoids both systematic currency misalignment and excessive volatility in the real exchange rate. Different authors have constructed different indices to capture macroeconomic instability. Azam (2001) used inflation and nominal exchange rate to construct an index of macroeconomic instability. Meanwhile authors like Drugeon et al. (1996), Azam (1997), Caballero (2007) and Shahbaz (2013) used inflation as a proxy for macroeconomic instability.

Iqbal and Nawaz (2010) have used misery index as macroeconomic instability in Pakistan that consists of inflation rate and unemployment rate. Ali (2015) uses inflation rate, unemployment rate, budget deficit and trade deficit for measuring macroeconomic instability in Pakistan. Generally, De Ferranti et al. (2000) identify three main sources of macroeconomic instability which are inflation, public debt misalignment and exchange rate to which was added institutional factors by Acemoglou et al. (2003). Our index of macroeconomic instability in this study will comprise of

three principal factors that is inflation rate, exchange rate and public debt, due to data availability. We have adopted principal component analyses, in order to reduce the set of our exogenous variables. In line with the argument put in place by Herve et al. (2013), Principal component is one of the most appropriate techniques to reduce exogenous variables, since it imposes no specific structure on the data and operates to maximise the amount of variance described by a transformed orthogonal set of parameters. Each principal component is a linear combination of the observed variables.

Considering that we have P observations, with Y_j representing an observed variable, where j = 1, 2,…, p; the i^{th} principal component can be presented as:

$Pc_{(i)} = \sum_{j=1}^{p} W_{(i)j}X_j$ ……(1)

This equation is subject to two principal constraints which explain the choice of the different components

$\sum_{j=i}^{p} W_{(i)j}^2 = 1$ for i = 1, 2,…, p, …….. (2)

$\sum_{j=1}^{p} W_{(k)j}W(i)j = 0$ with all i>k …… (3)

Where the W*s are known as the weights. Equation 2 ensures that we choose the weights so that the sum of the variances of all the principal components equals the total variance of the original set of variables. Equation 3 ensures that each principal component is uncorrelated with all the previously extracted principal components. A reduced-form endogenous variable is identified by eliminating those eigenvectors that account for little of the data's variation. When the goal is data reduction, it is common to retain the minimum number of eigenvectors that account for the greatest percentage of the total variation. In many instances, what initially consisted of many variables can be summarized by as few as one variable. This is usually explained by the first predicted principal components, which captures and explain the variable studied.

3.2. The Estimation Framework

The model adopted in this work is that which permits the explanation of the causal relationship that exist between the different variables of interest. We adopt a Vector Autoregressive (VAR) model which is highly recommended for the simultaneity studies between macroeconomic variables. This model is known for its simplicity, ability to estimate a system of small sizes, simulation of structural shocks and it has a limited number of constraints and economic assumptions.

3.3. Model Specification

The econometric model used in this study is a Vector Autoregressive (VAR) model which is very much recommended for the study of simultaneity between macroeconomic variables. It is retained in most studies due to its numerous advantages which include among others, its simplicity, the possibility of estimating a system of small sizes, simulation of structural shocks and it has a limited number of constraints and economic assumptions. It is equally applicable in empirical tests and forecasting. The model is given as:

$GDPcpta_t = \alpha_0 + \beta_0 GDPcpta_{t-i} + \alpha_1 PINV_t + \alpha_2 EINST_t + \alpha_j X_t + \xi_{GDPcptAt}$ …….. (4)

$PINV_t = \varphi_0 + \vartheta_0 PINV_{t-i} + \varphi_1 GDPcpta_t + \varphi_2 EINST_t + \varphi_j X_t + \xi_{PINVt}$ …… (5)

$EINST = \delta_0 + \gamma_0 EINST_{t-i} + \delta_1 GDPcpta_t + \delta_2 PINV_t + \delta_j X_t + \xi_{EINSTt}$ ……(6)

Where $GDPcpta_t$ is Gross Domestic Product Per Capita in year t, $PINV_t$ is the private domestic investment at year t, $EINST_t$ is predicted coefficient of economic instability in year t from the principle component analyses (base on the three variables used that is public debt, inflation and exchange rate), X_t are sets of other explanatory variables, which include (Foreign Direct Investment (Fdiinflw), Consumption (Constn), Government Expenditure (Gxp), Export, Saving rate (Savx) and crude oil rent (Oilr)). α_0, φ_0, and δ_0 are the respective constants, t is the time period and t-i is the previous time period with i being the number of lags, which is determine using the information criteria. ε_{GDPt}, ε_{PINVt} and ε_{EINSTt} are the respective error terms of the growth, domestic private investment and macroeconomic instability equations.

3.4. Estimation Technique

Before estimating our VAR model, unit root test is conducted for each of the variables. Granger and Newbold (1974) highlighted that a spurious regression can exist with the presence of non-stationary variables. After ensuring stationary, another key issue using VAR model is to select the lag length of the different independent variables of the model. The lag length is selected using the different information criteria namely, the sequential modified Likelihood Ratio test

statistics (LR), the Final Prediction Error (FPE), the Akaike Information Criterion (AIC), the Schwarz Information Criterion (SIC) and the Hannan Quinn Information Criterion (HQ). The selection criteria that present the minimum lag length is chosen. In terms of specification, if the minimum lag is k, then the number of lags to be used according to the Toda -Yamamoto procedure will be equal to (k + 1), that is the minimum criterion lag length selected is increased by one.

3.5. Granger Causality Test using Toda-Yamamoto Procedure

Understanding the causal link between economic variables leads to a better comprehension of the phenomena, and it equally gives additional information on the dynamics of events between these variables. This study adopts the Toda and Yamamoto (1995) method, which is an ameliorated version of the traditional VAR model developed by Sims (1980) and Granger (1969). Furthermore, this approach is appropriate due its lack of complexity and its ability to improve the power of the Granger-causality test. This test technique will equally ignore the stationarity of the variables that is; there is no need to integrate variables that are not stationary at level during the estimation. To control for stationarity, the selected lag length is increased by one and the variables are estimated at levels. Equally, this technique ignores the cointegration test.

IV. Presentation and Discussion of Findings

Table 1 reports a summary of the Phillips-Perron test, under the null hypothesis of a unit root for the variables at level. The variables (gdpcpta, pinv, fdininflw, gxp, and export) are integrated of order zero, that is, I(0) and therefore stationary at level, while the variables (einst, constn, savx and oilr) are integrated of order one, that is I(1).

Table 1: The Philip Perron unit root test result.

Variables	Test	Probability	Decision
Gdpcpta	PP	0.0005[x]	stationary
Pinv	PP	0.0114[y]	stationary
Einst	PP	0.3717	Non stationary
Fdiinflw	PP	0.0000[x]	stationary
Constn	PP	0.1890	Non stationary
Gxp	PP	0.0005[x]	stationary
Export	PP	0.0228[y]	stationary
Savx	PP	0.2111	Non stationary
Oilr	Pp	0.1188	Non stationary

Source: Authors computation from STATA13, stationarity of variables: x=1% and y=5%, PP= philipperron

One advantage of the Toda and Yamamoto procedure is that it makes Granger-Causality test easier and researchers do not have to test for cointegration or transform VAR into error correction model. As such, it recommends a direct estimation of the model. After the unit root test, the number of lags is selected. From the results of table 2, the criteria that present the smallest lag order is selected, that is the SB criteria with lag order of two, p=2. Therefore, the required lag for the Toda-Yamamoto procedure is given as K=P+1 that is 3.

Table 2: lag Selection criteria

Lag	LL	LR	FPE	AIC	HQIC	SBIC
0	-177.863	-	24.5839	11.6978	12.0193	12.6406
1	-143.102	68.522	5.5987	10.1825	10.6418	11.5293
2	-119.286	47.631	2.50949	9.31095	9.90803	11.0618*
3	-106.776	25.015	2.2989	9.10484	9.83951	11.2595
4	-88.6572	36.243*	1.62942*	8.56807*	9.44073*	11.127

Source: Authors computation from STATA 13, * indicate the lag order of each criteria.

Table 3: Global statistic and diagnostic test of estimated VAR model

	Gdpcpta	Pinv	Einst
Global stat			
R-sq	0.8785	0.7592	0.8703

Chi2	252.9866	110.3189	234.9472
Diagnostic test			
Jaque-bera test	[0.4418]	[0.3722]	[0.1188]
LM test(lag2)	[0.44179]		
Stability condition	Min-modulus=0.395528		max-modulus=0.690556

Source: Authors computation from STATA13. []= p-values

From the global statistics of the estimated VAR equation, reported in table 3, the coefficient of determination of growth, private domestic investment and economic instability equations are respectively 0.88, 0.76 and 0.87. This generally shows that there is good fit in our model, with all chi-square statistics significant at 1%. From the diagnostic test results, the VAR model equally respect the stability condition since all the modulus of the VAR stability test are all less than one. This equally shows good fit in the specification of the model. Equally, from the p-value of the Jarque-Berra normality test result, the null hypothesis of multivariate normality of the residual is accepted for all the equations. Furthermore, the LM test result accepts the null hypothesis of no serial correlation. Hence, there is no problem of serial correlation and the residuals are normally distributed.

Table 4: VAR granger causality /block exogenuitywald test

Equation	Excluded	Chi2 statistics	Df	Probability
gdpcpta	Pinv	33.329	3	0.000[x]
gdpcpta	Einst	3.37511	3	0.290
gdpcpta	All	39.068	6	0.000[x]
pinv	Gdpcpta	5.8655	3	0.118
pinv	Einst	10.32	3	0.016[y]
pinv	All	13.91	6	0.031[y]
Einst	Gdpcpta	7.1264	3	0.068[z]
Einst	Pinv	7.1676	3	0.067[z]
Einst	All	17.403	6	0.008[x]

Source: Authors computation from STATA 13.x, y and z are respectively the significances levels at 1%, 5% and 10%.

After estimating our VAR model (appendix 2) and ensuring good fit, the granger causality Wald test was conducted, which permits us to clearly attain the objective of the study, which is to know the nature of the link between economic growth, private domestic investment and economic instability. Table 4 reports the chi-square statistic and its probability value based on the null hypothesis of no causality among each pair of variable. The null hypothesis that private domestic investment does not granger cause economic growth is rejected at 1% significance level. Meanwhile the null hypotheses that growth does not granger cause private domestic investment is accepted. This means that there is a unidirectional relation running from private investment to economic growth.

In the same light, the null hypothesis that private domestic investment does not granger cause economic instability is rejected at 10%, with a chi square statistic of 7.1676 and a p-value of 0.067. Also, the null hypotheses that instability does not granger cause private domestic investment is rejected at 5% significances level. This shows that there is a bidirectional relationship between economic instability and domestic investment. Finally, the null hypothesis that economic instability does not granger cause economic growth is accepted meanwhile, the null hypotheses that economic growth does not granger cause economic instability is rejected at 10%, with p-value 0.68. This result shows that there is a unidirectional relationship from economic growth to economic instability without any fit back.

The relationship from private domestic investment to economic growth is in line with the Harrod-Domar model of 1939 and 1946, which explains that increase investment lead to increase in the rate of economic growth. This relationship can be vividly explained in Cameroon base on the different policies put in place to encourage domestic enterprises and new start-up, like the public private partnership agreement in the mid-1990. This equally shows the success of the structural adjustment program within the country. This result is in line with that of Yusoff and Aboubakary (2016) and Bakari (2018). The link from instability to private investment is in line with the Drazen crises hypotheses which state that good reforms after crises usually stimulate investment and consequently lead to growth. This can be seen in the economy of Cameroon from the diverse policies like the public private partnership agreement implemented after the 1990 crisis.

Finally, the dual link from domestic investment to economic instability and equally from growth to economic instability is similar to the result of Subramanian and Satyanath (2004) which shows that economic booms can equally lead to economic instability. Even though the Drazen hypothesis of economic crises causing investment in Cameroon is verified, economic growth and the rate of domestic investment equally causes economic instability, similar to the result of Woo (2009). This can be due to growth which is supported by increase public debt, exorbitant taxes which increase cost of investment and consequently lead to high rate of inflation and a deteriorating exchange rate, as explained by Woo (2009). That is, the economic performance of Cameroon causes economic instability through increase public debts, weak exchange rate and increase inflation.

V. Conclusion and Policy Recommendations

This paper empirically investigates the nature of the link between private domestic investment, economic growth and economic instability in Cameroon from 1977 to 2014. This study uses the principal component analyses to reduce the variables (is inflation, public debt and exchange rate) that are used to capture economic instability. In order to meet up with the objectives of the study, the Toda-Yamamoto causality procedure is used to investigate the relationship that exist between the variables. The result of this study shows that there is a unidirectional relationship between economic growth and private domestic investment in Cameroon.

Equally, there is a bidirectional relationship between private domestic investment and economic instability and finally, there is a unidirectional link from economic growth to economic instability. From the result of this study, the state of Cameroon should continue encouraging domestic investment and promoting small and medium size enterprises so as to acquire higher growth rates, which will equally promote investment. Thus, after period of economic slums, good reforms like the creation of an enabling environment for entrepreneurship via reduction in tax rate, giving tax free holidays to potential investors and equally limiting administrative bottlenecks relative to business creation. Moreover, during periods of economic booms, acquired proceeds should be properly managed. That is these proceeds should be invested in productive domains like human capita and infrastructural development so as to minimize the risk of running into economic instability. Research to ascertain the diverse drivers of economic instabilitylike inflation, exchange rate, corruption and management of public debt should equally be encouraged, since it will help anticipate economic shocks.

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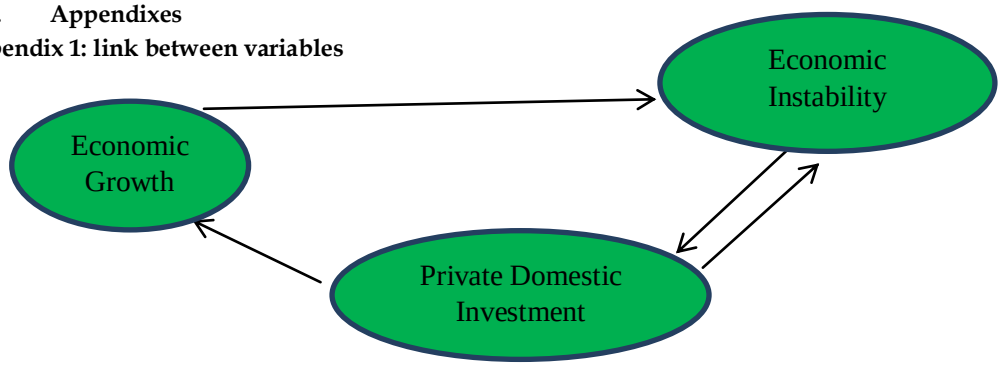
VI. Appendixes

Appendix 1: link between variables



Source: Authors computation

Appendix 2: Estimated VAR model

	Gdpcpta		Pinv		Einst	
	Coefficients	p-value	Coefficients	p-value	Coefficients	p-value
gdpcpta(-1)	-0.41171	(0.847)	-0.22042	(0.184)	-0.06287	(0.224)
gdpcpta(-2)	0.17827	(0.322)	0.31207	(0.026)	-0.01884	(0.667)
gdpcpta(-3)	0.15931	(0.088)	-0.03211	(0.660)	0.04659	(0.041)
pinv(-1)	-0.77324	(0.000)	0.00175	(0.988)	-0.20491	(0.578)
pinv(-2)	0.70846	(0.768)	0.33788	(0.071)	-0.06487	(0.266)
pinv(-3)	0.48814	(0.010)	0.51778	(0.000)	0.00070	(0.988)
einst(-1)	0.67092	(0.398)	1.25437	(0.043)	0.38650	(0.045)
einst(-2)	0.34467	(0.651)	-0.66985	(0.260)	0.32824	(0.077)
einst (-3)	0.23553	(0.691)	0.51296	(0.268)	-0.11833	(0.412)
C	-73.0875	(0.020)	65.9623	(0.008)	-29.9578	(0.000)
Fdiinflw	1.05039	(0.001)	0.55909	(0.020)	0.08273	(0.271)
Constn	0.84414	(0.025)	-0.56640	(0.053)	0.34101	(0.000)
Gxp	0.18462	(0.001)	0.10272	(0.016)	0.02666	(0.044)
Export	0.53443	(0.006)	-0.05279	(0.726)	0.06626	(0.159)
Savx	0.25162	(0.522)	-0.86020	(0.005)	0.31914	(0.001)
Oilr	-0.09204	(0.630)	0.12941	(0.386)	-0.11016	(0.018)
R-sq	0.8785		0.7592		0.8703	
Chi2	252.9866	(0.000)	110.3189	(0.000)	234.9472	(0.000)

Source: Authors computation from STATA13. []= p-value