The Frontiers of Society, Science and Technology
ISSN 2616-7433 Vol. 1, Issue 8: 78-89, DOI: 10.25236/FSST.2019.010814

Analysis of the Monetary and Financial System of the Dr Congo Place of Financial Intermediation on Economic Development

Valèry BAHATI KAMBALE

Lanzhou Jiaotong University, China

ABSTRACT. *The purpose of this work is to evaluate the effect of financial on economic development in the DR Congo. This work is based on two economic approach, the first using ordinary least squares(OLS), and the second is the causality test Granger and the instrumental variable method (2SLS, GMM, LIML). The results of four econometric approach reinforce and suggest that financial through intermediation has a positive and significant effect on economic development. Directly or through an indirect channel through inflation, exchange rate and money supply before impacting on the level of overall economic activity. The results also show the vulnerability of the financial intermediation function by Congolaise banking system in financing growth sectors with high demand of Congolaise work (agriculture, industry….), indeed, the share of companies as well as individuals is low and short term finance. Based on these results we can note that the DR Congo gourvment in monetary authorities have an interest in implementing reforms to promote the emergence and efficiency of the financial system to grown the sector such as agriculture, industry.*

KEYWORDS: *Financial system; Causality; Economic development*

1. Introduction

Emphasize that the role of the financial system in economic activity is not new, it has taken an increasingly important dimension, that economies are globalizing and financial flows are liberalizing. The financial system is increasingly taking over the economic cycle, the development of the credit market and financial assets have an influence on economic activity, it is more marked than a few years ago, this development is lead to a financialization of the economies. The financial liberation of the 1970s played a decisive role in economic development. But this role is still contrasted according to the economies and it should be noted that there have been successes and resounding failures. The favorable contribution of financial development to economic growth in certain

ISSN 2616-7433 Vol. 1, Issue 8: 78-89, DOI: 10.25236/FSST.2019.010814

countries is undoubted. However, several authors consider this excessive development to contribute also to the fragility of the financial system itself and to the recurrence of financial crises. This area of economic research is quite topical, in view of the difficulties that several countries have faced in recent times because of the crisis of the financial system.

In the current context of globalization, where each state aspires to economic growth and development, it is imperative for everyone to have the optimal manipulation of the instruments of economic policy. Financial development, through the mobilization of savings, the efficient allocation of resources, managerial control, risk management and the provision of services facilitating trade and remains a stimulus for economic growth. If we admit today that the financial system in the broad sense (banks and financial markets) have a role in the economy, and that contributes to stimulate the economy, then it is no longer possible to envisage the macroeconomic balance without integrating financial parameters (eg financial intermediation or capitalization).

Financial intermediation is defined according to ((Capelle-Blancard G., Couppey-Soubeyran J. et de Boissieu Ch., 2006) as the process of adjustment of the needs and financing capacities by the intervention of a specific agent. While bank intermediary is recognized as a financial institution whose main activity is to collect deposits and grant credit to non-financial agents. The distinction between a bank intermediary and a financier lies in the first case, only the credit institution that grants credit to resident non-financial agents are taken into account, in the second the stock exchange and insurance companies are also taken into account. In accordance with (Gurley J. & Shaw E., 1955)'s model, the financial intermediary plays a role in the transformation of securities and maturities. The institution purchases primary securities from non-financial deficit agents (ultimate borrowers), modifies characteristics of these securities (transformation) and proposes them to surplus agents (ultimate lenders) in the form of secondary securities. These are negotiable (as they are obligatory for example), or non-negotiable (such as bank loans for example) (Gorton, G. & Winton, A., 2002).

With regard to economic growth, it refers to the increase in the volume of production of goods and services from one year to the next. according to Perroux, F, it is a sustained increase during one or more longer or shorter periods of a dimension indicator, the overall net product in real terms, the growth of writing thus a more restrained phenomenon than the development process which generally includes, over and above the per capita income, the life expectancy and the level of education.

The question of the analysis of financial intermediation is an old one, as it goes back to the works of (Bagehot, 1873)and (Schumpeter, 1911), who emphasized that the fact that an efficient financial system is a factor of economic growth. in other words, banks play a decisive role in economic growth insofar as they promote innovation through the financial services they provide.

ISSN 2616-7433 Vol. 1, Issue 8: 78-89, DOI: 10.25236/FSST.2019.010814

Gurley, JG and Shaw, E.S1960 and (McKinnon R, 1973) , (Shaw, 1973)examine the effects of government intervention on the development of the financial system. They argue that government restrictions on the banking system hinder financial development and, consequently, reduce economic growth. And so it is back to the taste of the day and remains, both theoretically and empirically source of contradictions and discussions.

Financial intermediaries can improve the efficiency of resource allocation through their ability to collect and analyze information on entrepreneurs' innovative activities (King R , Levine R, 1993), Galetovie 1996, and thus fund If financial intermediaries allow effective risk pooling, portfolio diversification can encourage specialization and, consequently, productivity growth (Paul, 1992).

It should be noted that in the case of OECD countries, this issue is still a major concern where banks play a dominant role in the financing of the economy in relation to markets. These differences raise questions related to the causes, the logic and the effects of the different financial systems. But the contribution of the latter in improving economic growth is of great importance.

In Africa, the question remains fundamentally worrying. It is even complex. The majority of Africa's more sub-Saharan African (SSA) countries are still underdeveloped, financial systems feel a certain negligence in their stagnant financial structures, and this encourages the implementation of specific measures aimed at better direct the resources of banking institutions towards the financing of economies.

In the Democratic Republic of Congo (DRC), bank credit has increased rapidly but remains scarce, expensive and short-term, not very diversified, inefficient, fragmented and highly concentrated. Access to conventional financial services is difficult for most of the population. in 2011, only 2% of adults had obtained a bank loan (with an average of 5% in SSA, world bank's 2011 find survey) and only 4% of adults have an account in a formal financial institution (with an average of 24 % in SSA, world bank's 2011 findex survey).

The rural areas which are bursting with the bulk of the population have almost no conventional bank window, very few banks and other financial institutions are specialized in the financing of the agricultural sector and SME sector. Yet these sectors contribute significantly to GDP, and offer a huge potential for the reliance of economic growth and development (Bomda, 2010). Yet agriculture, industry, services, and trade allow the diversification of the economy and positively impact on growth, but the desired level for more diversified economic growth in the DRC is not yet achieved (Kabwe, 2015).

2. Literature Review

Given the development of the literature on the relationship between financial

ISSN 2616-7433 Vol. 1, Issue 8: 78-89, DOI: 10.25236/FSST.2019.010814

intermediation and economic growth and the complexity of this relationship, the controversies over the effects of financial intermediation on growth; it is legitimate to ask this question about the nature of this relationship. All the studies, most cited, start from the idea that the relationship between financial development (using different indicators of the financial system) and economic growth (various indicators) is linear.

An important question in studies of the effects of financial development on economic growth is the possibility of a non-linear relationship between the two domains. Several studies show that the effects of finance on economic growth are not uniform but linear. D. Guidotti (1995) report that financial development leads to improved growth performance. This effect varies between countries and over time, and may even become negative.

(Goldsmith, 1969) drawing inspiration from the work of Schumpeter [1911], argues that financial development is essential for economic growth, and that if countries are underdeveloped, have low growth, it would be because of their low level of financial development (Eggoh, 2009). Indeed, financial development positively affects economic growth through the efficiency of capital accumulation (or the increase of the marginal productivity of capital). MacKinnon, R. (1973) and Shaw, E.S (1973) extend the argument of Goldsmith, R.W. (1969). They argue that financial development does not only imply an increase in capital productivity, but also an increase in the savings rate and, consequently, a larger investment volume. (Robinson, 1952)claims that financial development follows economic growth, financial development is, in this context, only a result of growth “where growth leads, finance follows”.

Rioja and Valev (2003,2004) examining whether the relationship between financial development and economic growth is non-linear. They study the effects of financial development on the sources of growth in three different groups of countries: low-income countries, middle-income countries, and high-income countries. They use panel data from 74countries with the dynamic GMM technique (the same data as Levine et al). Their results indicate that the effects of finance on growth vary between different groups of countries. they find that there is a strong positive influence of finance on productivity in the most developed countries.

Using the same technique (rioja and valev propose that the relationship between financial development and economic growth is not uniform, but varies according to the level of financial development of the country concerned, in particular they propose that there are three In financial development regions, the latter has a strong positive influence on economic growth only when it reaches a certain threshold, that is the middle region, below the threshold, the second region, the effect is uncertain. indicates a nil or positive effect Beyond the threshold, the third region, the effect declines once financial development reaches a very high level, financial improvements may have a positive but lower effect compared to the middle region.

ISSN 2616-7433 Vol. 1, Issue 8: 78-89, DOI: 10.25236/FSST.2019.010814

Thus (Berthélémy J-C. ,Varoudakis A., 1996) also study the reciprocal causality between the real and financial sectors. They develop a model in which long-term endogenous growth is generated in the real sector through learning-by-doing externalities related to capital formation. A number of authors, however, bring contrary evidence to the relationship between financial intermediation and economic growth. Solhi, (2006, p.7-19), proposes an empirical evaluation, based on Moroccan data, of the impact of financial liberalization on economic growth. Using the error-correction model, testing the sense of causality (short-term and long-term) between the financial sphere and the real sphere. The results show a mixed effect on causality between financial variables and economic growth. The results of Granger cointegration and causality support the paradigm of growth driven by financial development either directly by improving the efficiency of investment or by growing investment resources.

However, there is a weak literature devoted to this problematic with regard to the economy of the DRC. Some annual reports of the Central Bank of Congo informs that because of the economic crisis as well as other exogenous and endogenous factors suffered by the Congolese financial system, this one did not inspire confidence. From where it was necessary to clean up, restructure and liquidate to restore the efficient conditions for the good functioning of this system.

3. Methodology, data and empirical analysis

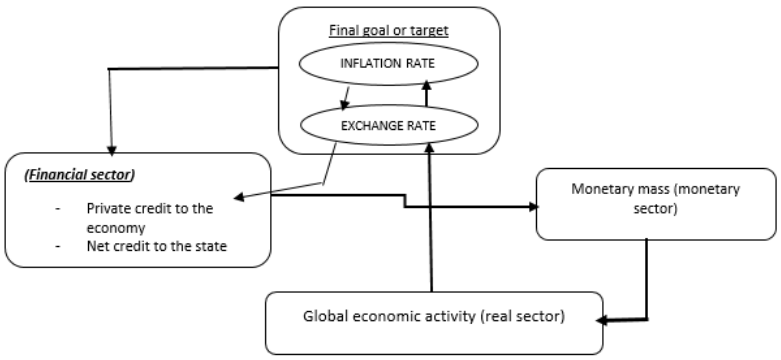
3.1 Data and analysis variables

This work is done through empirical analysis of the DRC, a developing country; with the following measures of financial intermediation: Domestic credit to the private sector, in % of GDP (CRENECON), the interest rate spread (the interest rate for loans minus the interest rate) for deposits captured by the policy rate), (TDBCC), The growth indicator used and the Monthly Economic Activity Index (PROD). To illustrate the economic phenomena involved, we use the following variables: the net state credit, (CRENETAT), the inflation rate, (INF), the real exchange rate (TCH).

In order to identify the shock transmission mechanism of monetary policy via the credit channel, we will represent the significant relationship with the Granger causality test as follows:

(1)Mechanism for transmitting financial intermediation in the DRC

ISSN 2616-7433 Vol. 1, Issue 8: 78-89, DOI: 10.25236/FSST.2019.010814



(2)Source: Granger causality test

The figure provides information on the causality of fluctuations between financial intermediation and economic growth in the Democratic Republic of the Congo.

With regard to the objective of price stability, there is a two-way causality between the inflation rate and the exchange rate, inflationary pressures affect private domestic credit, which in turn affects its effects on net credit to State. Private domestic credit has an effect on the money supply that affects the level of economic activity, and economic growth interacts with the monetary policy objective through the exchange rate. This confirms, on the one hand, as stated by the monetarists that inflation is of monetary origin and on the other hand, Keynesians who advocate that inflation can be imported, therefore, the result confirms the nature of the inflation in the DRC.

Regarding the growth objective, the results show that the rate of interest does not cause the real activity. Thus, the transmission channel of the interest rate answering the traditional scheme: ***Instrument- intermediate objective***- target. The causality test is currently revealing an articulation of the national economy. for example, there is no causality between credit to the economy and real activity. The market mechanism is very significant. Thus, efforts to clean up the financial system in the DRC are beginning to produce effects on economic activity, but the latter deserves to be maintained in the sense of expanding its influence in the informal sector and combating bad practices. (**corruption, diversion, inefficiency in the allocation of scarce and near-non-renewable resources**) with respect to net credit to the state that does not interact with other parameters, governance efforts with intensity and rigor must be prosecuted.

It is argued that financial intermediation in the DRC affects economic growth through an indirect channel. In fact, any increase in credit granted to the economy leads first to an increase in the general level of prices and vice versa, this inflation is reflected in the exchange rate, which in turn affects credit to the economy and leads to an increase in the money supply which has a positive and virtuous effect on the level of economic

ISSN 2616-7433 Vol. 1, Issue 8: 78-89, DOI: 10.25236/FSST.2019.010814

activity and thus economic growth.

Instrumental variable modeling has the advantage of exploring the mechanism of indirect transmission derived from the granger causality test between financial intermediation and economic growth.

3.2 Estimation, validation and interpretation of the results of the model

	(GMM)(1)	(2SLS)(2)	(OLS)(3)	(LIML)(4)
lcreneco	0.090 (29.88)***	0.090 (36.58)***	0.029 (2.25)**	0.090 (37.39)***
lbtch	-0.001 (0.25)	-0.001 (0.30)	-0.0016 (2.09)**	-0.001 (0.31)
ltinf	0.003 (1.31)	0.003 (1.60)*	0.0004 (0.84)	0.003 (1.64)*
ltdbcc	-0.012 (2.80)***	-0.012 (2.59)**	-0.0042 (0.88)	-0.012 (2.64)***
lcrenetat	8.54e-08 (3.15)***	8.54e-08 (2.91)***	-6.62e-09 (0.22)	8.54e-08 (2.97)***
lm2	--	--	0.0271 (2.55)**	--
Constant	3.75 (104.24)***	3.75 (109.56)***	4.8 (26.08)***	3.75 (111.98)***
Observations	140	140	140	140
R-squared	0.93	0.93	0.94	0.93
Wald(5)	3991.77	--	--	1959.93
Prob>chi2	(0.0000)			
Fisher	--	375.19	352.75	--
Degr.of fr.		(5,134)	(6,133)	
Prob > F		(0.0000)	(0.0000)	

Robust z-statistics (for GMM, LIML, 2SLS) or t-statistics (for OLS) in parentheses significant at 10% level; ** significant at 5% level; *** significant at 1% level

The private domestic credit variable is used as an instrumental variable in the three estimation methods (GMM, LIML, 2SLS), except in the OLS method.

The results of four economic approaches (OLS, GMM, LIML, 2LS) reinforce and suggest that financial intermediation (LCRENECON) has a significant and positive effect on economic growth in the DRC either directly or through an indirect channel through inflation, the exchange rate and the money supply before impacting on the level of overall economic activity, these results confer the analysis of (Levine, 1997), (Loayza N. , R. Rancière, 2002) unlike Andersen and Tarp2003 which show that the positive

ISSN 2616-7433 Vol. 1, Issue 8: 78-89, DOI: 10.25236/FSST.2019.010814

relationship between financial development and the per capita growth rate of output will no longer be seen when their sample is confined to sub-Saharan African and Latin American countries. They also point out that country-specific time data studies do not clearly highlight causality from financial development to growth. However, taking the sample expressed in a single country like the DRC, we highlight the endogenous realities of the relationship between financial intermediation and economic growth.

Indeed, a unit change in credit to the economy leads to a 9% increase in overall output. This confirms the results of the International Monetary Fund report based on the work of the Financial Sector Assessment Program in the DRC (FSAP), which effectively shows that the Congolese banking sector is weak, despite the appearance of high capital ratios (IMF2014 p11- 12). Similarly, the Congolese Bank Association estimates this coefficient at 7.3% as a clear performance compared to the level of the year 2000 (0.3%).

The credit allocated to the public sector (LCRENETAT) has a positive effect but is also mitigated by the ordinary least squares method (OLS). this being the case, credit positively influences economic growth to the extent that its destination concerns productive investment expenditures, but it evolves negatively only when the state makes advances to the central bank of the Congo (BCC) to finance operating expenditures.

The study results also show that the central bank policy rate (LTDBCC) is counter-cyclical with economic growth in the DRC. a 1% increase in the policy rate leads to a 1% decrease in economic growth; its influence remains negative regardless of the method applied. It also shows that the policy rate is an instrument of monetary policy to impact economic growth, it passes through the bank credit channel (Mishkin, 2007) . the empirical results show that its influence remains marginal and that the BCC acts independently of any influence of the government and the setting of the key rate acts on the effectiveness of the monetary policy and consequently on the level of activity. Similarly, the upward manipulation of the policy interest rate has a significant negative impact on economic growth.

The exchange rate acts weakly but negatively on economic growth. Indeed, it is one of the most important prices of open economies (the DRC for example) and has a strong influence on the current account and other macroeconomic variables (consumption, investment, etc.) import and export demand as the demand for goods and services is a function of the relative price (exchange rate), any appreciation of the currency increases the relative price (exchange rate). thus, any appreciation of the currency increases the relative price of exports and decreases the relative price of imports. We realize that the depreciation of the national currency discourages economic activity in the DRC. Currently, the DRC is pursuing a restrictive policy aimed at containing the rate of inflation, efforts are being made, but this has not yet reached a satisfactory level in order to sustain economic growth.

The quality of the estimation of this model in the three methods seems good

ISSN 2616-7433 Vol. 1, Issue 8: 78-89, DOI: 10.25236/FSST.2019.010814

considering the coefficient of determination, i.e. 93% of the endogenous variable. The economic growth captured by the global activity index (BPROD) is negatively explained by the independent variables following the growth of the money supply (LM2), the monthly exchange rate and the interest rate of the central bank, and positively by the banking intermediation captured by the volume of credit granted to the economy.

The Fisher and Wald statistics show the overall goodness of the coefficients with a probability of 0.000 below the 5% significance level. the Durbin Watson statistic for the OLS model, that is 2.36 being close to two, confirms the hypothesis of the absence of self-correlation of errors. The CUSUM test, confirm the cyclical stability of the monetary policy led by the central bank of Congo.

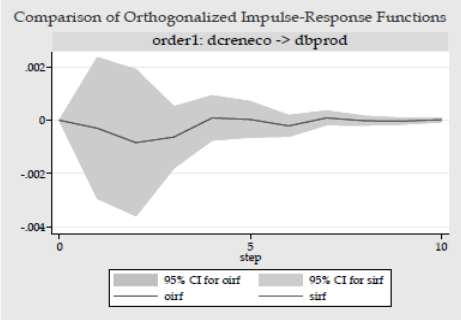
4. Mechanisms for transmitting the impulses of economic variables

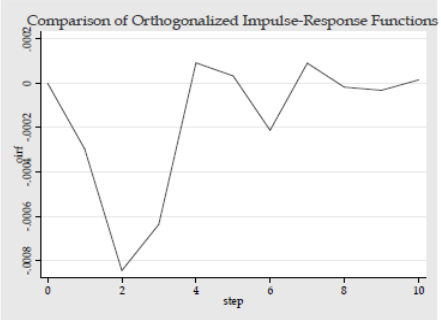
The impulse response function represents the effect of a shock of an innovation on the current and future values of the variables of the system. A shock on a variable can directly affect this variable, at the same time as it spreads to all the other variables through the dynamic structure of the VAR. Thus, let us consider two different realizations of processes **VAR Xt in $t + n$ (ie $X\ t+n$)**. Suppose the first realization is that between t and $t + n$, the system knows a single shock (this shock occurring in t). The second realization assumes that the system does not experience a shock between t and $t + n$. The impulse response function is then defined as the difference between these two realizations. In fact, the general idea of shock analysis is to summarize the information about the evolution of a component following a momentum of a component, at period $t= 0$, assuming that all other variables are constant (no other shock occurs).

However, one of the objectives of this study is to identify the extent of monetary policy shocks to output. The graph below represents the responses to impacts on structural residues. It is considered that the amplitude of the shock is equal to once the standard deviation and one is interested in the effects of the shock on 10months. All the shocks are standardized to 1%, the values in this table represent the percentages of the approximate variation of the variable in response to 1% of shock on the three variables of the transmission of monetary policy retained. An examination of the magnitude of the financial intermediation shifting channel on economic growth shows the effects of credit to the economy on economic growth in the DRC. Cumulative responses (represented by continuous lines) are presented over a 12-month horizon.

ISSN 2616-7433 Vol. 1, Issue 8: 78-89, DOI: 10.25236/FSST.2019.010814

5. Response to the overall level of activity following a shock on credit to the economy.





The figure above tells us that any credit shock to the economy (the banking intermediation channel) causes a slow reaction on the overall level of activity or economic growth. This shock is felt in the economic sector from the first month and decreases already the following month to find the equilibrium path at the end of the first quarter. hence, that an upward trend in credit to the economy produces a positive effect and an increase in the index of overall production activity in the Democratic Republic of the Congo.

The effects of financial intermediation on economic growth in the DRC are generally transient and diminish before the medium term. Maximal effects are seen after two to three months. The largest decrease is observed after two monthly payments (0.8%).

6. Conclusion and Recommendations

At the end of this study evaluating the effect of the financial system via financial intermediation on economic growth in the DRC, results from economic approaches show that financial intermediation exerts a positive and significant effect on economic growth in the DRC, and this directly or through an indirect channel through inflation, the exchange rate and the money supply before impacting on the level of global economic activity. The financial intermediation is a very good support for the economic growth recorded by the Congolese economy.

It is important to note the vulnerability of the financial intermediation function in the DRC and the lack of risk-based supervision, lax regulation and weak enforcement, low profitability and excessive reliance on overnight deposits. Similarly, the dynamics of banking intermediation remain fragile because the bulk of the credit allocated to the Congolese economy is short-term. In fact, Congolese commercial banks do not finance

ISSN 2616-7433 Vol. 1, Issue 8: 78-89, DOI: 10.25236/FSST.2019.010814

growth-promoting projects, the share of credit granted to companies and individuals is low and short-term, and mainly concerns the Credoc for imports (a flight of capital), so it is not addressed to the internal structure of the Congolese economy, but is increasingly aimed at the sector with low capacity for job creation and natal wealth, ie the importation of goods and services that finance the growth of countries exporting goods and services. Thus any increase in credit granted to the economy leads to a 9% increase in the level of overall economic activity or simply economic growth. ACB assesses this coefficient at 7.3% (ACB 2014 p 12) the depreciation of the national currency discourages economic activity in the DRC, and the upward manipulation of the key interest rate significantly affects economic growth.

Impulse analysis of the decomposition of variance indicates that any credit shock to the economy (the banking intermediation channel) leads to a slow reaction on the overall level of activity or economic growth, an upward shift in credit to the economy produces a positive effect and an increase in the overall production activity index. Thus the development of the financial system remains an imperative in the economic adjustment. but some prerequisites remain essential such as the solidification and stability of the macroeconomic and financial structure, the improvement of monetary management, the reform of legal, regulatory and prudential structures, the strengthening of the control and supervision of financial institutions. and lastly, increased financial competition. The central bank, monetary authority, has a very important role to play in this change. Everything must start from the development of the commercial bank savings policy. While the DRC needs investors to revive its economy, the choice of the latter must be de rigueur, especially in an area as sensitive as that of banks. the credibility of investors contributes enormously to the confidence that the population will place in the financial system.

It is also up to the central bank to closely monitor the activities of commercial banks in order to safeguard the credibility of the system and to avoid money laundering such as the creation of excessive money with an impact on inflation. promote the creation of real estate investment banks, agricultural credit banks established in all provinces of the country as well as the capitalization of banks, better supervise poorly structured micro and small businesses. Thus promote the activity of financial intermediation in the DRC.

References

[1] Bagehot W (1873). Lombard Street: A Description of the Money Market. New york: E.P. Dutton and Comany.

[2] Berthélémy J-C, Varoudakis A. (1996). Economic Growth, Convergence Clubs, and the Role of Financial Development . Oxford Economic Papers, vol 48 pp300-328.

[3] Bomda J (2010). Intermediaton finammciere pour la croissance et la creation de

ISSN 2616-7433 Vol. 1, Issue 8: 78-89, DOI: 10.25236/FSST.2019.010814

richess en Afrique. Atelier Africa. Kinshasa RDCongo,pp.35
[4] Capelle-Blancard G, Couppey-Soubeyran J et de Boissieu Ch (2006). Le systeme bancaire et financier. Economica. 2ème édition. Chapitre 2, pp.4.
[5] Eggoh C (2009). Croissance Economique et Développement Financier: éléments d'analyse théorique et empirique. Université d'Orléans.
[6] Goldsmith, R (1969). Financial Structure and Development. New Haven: Yale University Press.
[7] Gorton G, Winton A (2002). Financial intermediation. NBER Working Paper, p140.
[8] Gurley J. & Shaw E. (1955). Financial Aspects of Economic Development. American Economic review, pp.45,415,538.
[9] Kabwe F (2015). Contribution des ressources minières sur la croissance économique en RDCongo. les Cahiers du CEDIMES WIP,pp.28.
[10] King R, Levine R (1993). Finance and Growth: Schumpeter Might be Right. Quarterly journal of Economics, vol.108, pp.717.
[11] Levine R (1997). Financial Development and economic Growth: Views and Agenda. Journal of Economic Literature, vol.35, pp.688-726.
[12] Loayza N, R Rancière (2002). Finamcial Development, Financial Fragility and Growth. Central Bank of Chile Working paper, pp.145.
[13] McKinnon R (1973). Money and Capital in Economic Development. Brooking Institution.
[14] Mishkin F (2007). Monnaie, banque et marchés financiers. Paris: Pearson Education.
[15] Paul G. (1992). Technological choice, financial markets and economic development. European Economic Review, vol.36, pp.763-781.
[16] Robinson J (1952). The Generalization of the General theory, the Rate of Interest and Other Essays. London: Macmillan pp 69-142.
[17] Schumpeter J (1911). A Theory of Economic Development. Cambridge: Harvard University Press.
[18] Shaw S (1973). Financial Deepening in economic Development. New York: Oxford University Press.