International Journal of Business Marketing and Management (IJBMM)
Volume 7 Issue 4 July-Aug 2022, P.P. 57-65
ISSN: 2456-4559
www.ijbmm.com

Threshold Effects of Financial Markets on Economic Growth in Africa: An Application to a Panel of African Countries

Simplice Gael TONMO, Serges Delon YOPA DJENGA, Faustin Wulli DJOUFOUET, Isaac Bernard NDOUMBE BEROCK

Assitant - Lecturer
University of Dschang-Cameroon
Assitant - Lecturer
University of Douala-Cameroon
Assitant - Lecturer
University of Bamenda, Cameroun
Senior Lecturer
University of Douala-Cameroon

Abstract: *The aim of this study is to assess the impact of stock market characteristics on African economic growth. We perform a panel smooth threshold regression (PSTR) analysis developed by Gonzalez et al. (2005) using two panels of African countries from 1990 to 2020 for the first panel and 2006 to 2020 for the second panel. The findings indicate that there is a specific threshold above which the stock market has an impact on economic growth, namely market size and asset turnover, both of which positively affect growth. Market liquidity, on the other hand, has a negative impact on growth. Our main recommendations are to share market liquidity between private investors and the government on the one hand, and to increase market liquidity on the other.*

Keywords*: Stock market, nonlinearity, threshold effect panel, economic growth,*

Résumé

L'objectif de la présente étude est d'évaluer l'influence des spécificités du marché boursier sur la croissance économique en Afrique. A l'aide de 02 Panels de pays africains sur la période 1990 à 2020 pour le premier panel et 2006 à 2020 pour le deuxième panel, nous effectuons une analyse de régression de panel avec seuil progressif (Panel Smooth Threshold Régression : PSTR) développé par Gonzalez et al. (2005). Les résultats indiquent qu'il existe un seuil spécifique à partir duquel le marché boursier aurait un impact sur la croissance économique, notamment les variables taille du marché et rotation des actifs influe positivement sur la croissance. Par contre, la liquidité du marché influe négativement sur la croissance. Nos principales recommandations sont favorables à la répartition de la liquidité des marchés entre les investisseurs privés et l'état d'une part et d'autre part, à une augmentation de la taille des marchés boursiers africains ainsi que du niveau des transactions indépendamment de leur valeur.

Mots clés : Marché boursier, non-linéarité, panel à effet de seuil, croissance économique, **JEL Classification**: H50, C23, O40.

I. Introduction

The debate on the relationship between financial markets and economic growth is not new in the economic literature. Financial markets are an instrument for financing both growth and redistribution objectives. However, the debate on the effectiveness of financial markets as an instrument of cyclical or structural regulation has been extensive, both in terms of the large number of theoretical analyses and empirical studies to which it has given rise and the importance of the implications in terms of economic policies. However, there is no consensus either at the theoretical or at the empirical level.

Levine & Zervos (1998); Rousseau & Wachtel (2000); Beck & Levine (2004), argue that financial markets are structurally the vehicles of growth. According to N'zué (1997), stock markets have an enormous potential to create decent jobs (insofar as a functioning and efficient stock market requires good organization of the market,

a viable economic environment for economic operators, and a good telecommunication system to facilitate and guarantee the fluidity of information on the market and, by extension, growth.

In addition, a second category shows that, structurally, stock markets encourage the search for short-term gain and do not allow company managers to think or have a long-term vision. Moreover, while it is true that stock markets can attract foreign investors and thus capital flows, these flows are speculative in nature and often not linked to economic fundamentals. Risk-sharing through integrated stock markets can then reduce the savings rate and slow economic growth. Schumpeter (1912), Shleifer & Vishny (1986), Gregorio & Guidotti (1995), Moss et al. (2007), As a result, several reflections have been conducted on the role of financial markets in economic growth. Its inclusion in recent models of endogenous growth proves its effectiveness.

The fact that it has been taken into account in recent models of endogenous growth proves that its effectiveness is not unanimously accepted by researchers and policy makers alike public decision-makers. Our study focuses on African countries where the relationship between financial markets and growth does not seem to be confirmed.

This is shown by the trend in data from the African Stock Exchange Association (ASEA (2020)) which shows a relatively low growth rate of 3.2% in 2000, 3.1% in 2020 in countries with a financial market. While the number of financial markets is growing faster from 8 financial centers in 1976 to 30 in 2020. Financial markets are an instrument for influencing both structural and cyclical growth and capital allocation objectives available to African governments. If the theoretical importance of the stock market is no longer to be demonstrated, nevertheless, its impact on the economy remains a subject of debate and more specifically in Africa because of the youth and the narrowness of the latter.

In this regard, it seems appropriate to ask the following question: what is the impact of the composition of financial markets on economic growth in Sub-Saharan African economies? To our knowledge, there is no study on this issue. Empirical analyses of the impact of financial markets on economic growth in most African countries to date have generally used simple linear growth models, or error correction models (Moss et al. 2007). Other works use panel data (Adjasi and Biepke (2006)). All these studies seem to ignore a priori the issues of non-linearity and the existence of threshold effects exerted by financial markets in their relationship with economic growth.

In this respect, our methodological approach is based on threshold effect panel modeling using a smooth transition model, the Panel Smooth Threshold Regression (PSTR) method. Threshold models are a tool for analyzing non-linear economic phenomena. They allow economic series to have different dynamics depending on the regimes in which they evolve. The transition mechanism for the passage from one regime to another is carried out using an observable transition variable, a threshold and a transition function. The rest of this paper will be organized as follows: The second section is devoted to the literature review; the third section discusses methodological issues; the fourth section presents the main results and their interpretations and the last section concludes the study.

1. Financial markets and economic growth: a state of the art

From the pioneering work of Bagehot (1873), Schumpeter (1912), Gurley and Shaw (1955), Goldsmith (1969) and McKinnon (1973) on the link between the financial market (the mobilization of savings) and economic growth. Subsequent studies have developed by further clarifying this role, the acquisition of information for Grossman & Stiglitz (1987); Tirole (1994), a means of control for companies by Verrechia & Diamond (1982); provision of liquidity for the economy and companies by Levine (1991) and diversification in investment choices for Devereux & Smith (1994); Acemoglu & Zilibotti (1997). While the role of financial markets is undeniable, their impact on growth continues to be debated.

Indeed, the debate on the link between financial markets and economic growth goes back to the time of Shumpeter (1911). According to Schumpeter, financial markets are a source of problems for young economies. The debate became more difficult with the work of King and Levine (1993) in their article "Is Schumpeter right?" Indeed, three currents have developed in the literature. One current favors a positive influence, another a negative influence and the last one a neutral influence.

1.1. The financial market: one of the pillars of economic growth

Some prominent proponents of this movement include Levine and Zervos (1998), Rousseau and Wachtel (2000), and Beck and Levine (2004), all of whom worked in developed countries. Indeed, in order to assess the relationship between financial intermediation and economic growth on the one hand, and the link between capital accumulation and total factor productivity growth on the other hand. Levine & Zervos (1998a) have constructed several indicators of asset market development (the stock market). Over the period 1976–1993,

in a sample of 42 countries, they integrated other factors that could influence the growth variables. They include the development of the banking sector. Rousseau & Wachtel (2000) in France; Beck & Levine (2004) have shown that the development of the stock market is strongly correlated with the real growth rate of gross domestic product (GDP) per capita. Levine & Zervos (1998) show that, developed stock markets not only mobilize savings, not only diversify the risk among the agents of a market, but they are also able to offer several types of financial services compared to banks. Thus, they can stimulate economic growth. In a study of 21 emerging countries including four North African and three sub-Saharan African countries, Mohtadi & Agarwal (2002) showed that there is a positive relationship between market capitalization, turnover ratio and economic growth. Subsequently, studies by Osei (2005); Zivengwa & al. (2011) reached the conclusion of a positive influence of financial markets using time series. Nowbutsing (2009) uses an error correction model and shows that liquidity in the stock market is positively correlated with economic growth. Kolapo & Adaramola (2012) examine the impact of the Nigerian financial market on its economic growth over the period 1990–2016. Applying Johannsen's co-integration tests, the authors conclude that the Nigerian financial market and economic growth are cointegrated. This indicates the existence of a long-run relationship between the financial market and economic growth in Nigeria. Quaidoo (2011) examines the relationship between Ghanaian stock market capitalization and economic growth. The result of his study indicates that economic growth is the dominant factor explaining the development of the stock market in Ghana. In a sample of WAEMU countries, Aboudou (2016) finds that there is a positive long-run correlation between the stock market and economic growth.

1.2. Financial market growth: an obstacle to economic growth

The second stream of this study is in line with the work of Schumpeter (1912) who shows that, high market liquidity leads to high price volatility, which leads to disastrous shocks for the national and international economy. He is followed by Shleifer & Vishny (1986) who show that the development of stock markets would encourage a more diffuse ownership structure. However, a more diffuse ownership structure would be likely to hinder more active supervision of managers and, consequently, of corporate governance and, in turn, economic performance. A sharp increase in uncertainty in a financial market, caused in particular by the failure of a major financial or banking institution, leads to a recession or a stock market crash. Gregorio and Guidotti (1995) show that increased liquidity reduces uncertainty and the savings rate, because less uncertainty reduces precautionary savings. They find a negative and significant relationship between financial development and economic growth. Rajan (2005) finds that financial markets can become victims of their own success. The more reliable they appear to be in the long run, the more demand they generate.

1.3. Financial market development and economic growth: two independent economic objectives

The last approach argues for a neutrality between financial markets and economic growth. Indeed, Robert Lucas (1988) and Mayer (1988) argue that a developed stock market is not important for the financing of the firm. Stiglitz (1993) goes in the same direction, stating that the liquidity of financial markets has no impact on the behavior of company managers and therefore does not exercise a certain corporate control. Naceur & Ghazouani (2006) further reinforce the idea that there is no significant relationship between stock market indicators and the rate of economic growth. They attribute this result to the low level of financial development in MENA countries that penalizes economic growth. Enisan & Olufisayo (2009) conclude that the positive effects of financial markets on economic growth are cancelled out during times of crisis, thereby "nullifying" the long-term effect of financial markets on economic growth.

To shed more light on this, authors such as King & Levine (1992, 1993), Levine (1998), Demetriades and Hussein (1996) and Arestis & Demetriades (1997) have emphasized panel data econometrics and causality tests in the relationship between the financial market and economic growth. The emergence of causality tests and cointegration tests has led some authors to conduct studies aimed at validating the demand following or supply-lending hypotheses. Most of the time, the estimates have been carried out on data from several countries, and as a result, often divergent results have emerged. Moreover, for the same country, the nature of the causality between finance and growth can be different depending on the variables used.

II. Methodology

2.1. Method of estimation

The lack of consensus in the results of the above-mentioned work leads us to consider that a linear approach is probably not suitable for the analysis of the relationship between public spending and economic growth; hence the need to use an adequate econometric model. In this case, the PSTRs proposed by Gonzales et al. (2005) constitute an adequate econometric framework to take into account this non-linearity.

Our methodological approach is based on a threshold effect panel model. Threshold effect models are an instrument for analyzing non-linear economic phenomena. They allow economic series to have different

dynamics according to the regimes in which they evolve. The transition mechanism for moving from one regime to another is carried out using an observable transition variable, a threshold and a transition function. There are two main types of threshold panel modeling: the modeling proposed by Hansen (1999) and that of Gonzalez et al. (2005).

The Hansen (1999) model assumes that the transition between the two regimes is brutal. In fact, one is in the dynamics of one process or the other. However, it However, it could very well be that, instead of being abrupt, this transition is rather smooth. The PSTR model proposed by Gonzales et al. (2005) makes it possible to model situations where the transition from one regime to another is gradual. Thus, the transition function will not be an indicator, but rather a continuous function. The PSTRs can also be seen as models in which there are two extreme regimes between which there is a continuum of which there would be a continuum of regimes.

In the context of this study, PSTRs are more appropriate for describing the change in economic behavior induced by quantitative regime variables for two reasons: PSTRs allow for heterogeneity in the relationship between growth and government spending on the one hand and PSTR is a generalization of Panel Threshold Regression (PTR) on the other. We estimate a non-linear equation between stock market composition and economic growth. The PSTR model has the following form:

$$Y_{it} = \mu_i + \alpha_1 k_{i,t-1} + \alpha_2 k_{i,t-1} G\left(q_{i,t-1}; \gamma, c\right) + \alpha_3 X_{it} + \varepsilon_{it}$$

With : μ_i represents the individual fixed effects, ε_{it} it the error term that is independent and identically distributed Y_{it} is the economic growth rate, $q_{i,t-1}$ is the transition variable, we considered the components of government spending in our study and X_{it} a vector of control variables.

2.2. Presentation and specification of the analysis model

The data collected for this study come from secondary sources. They were extracted from the World Bank database in the WDI 2015 "World Development Indicators (2020)", from the ASEA annual reports 2012-2020. They are all quantitative in nature. This study covers a sample of 17 countries with common or different characteristics. It covers a period from 1990 to 2020 for the first panel and from 2006 to 2020 for the second panel.

2.3. Specification tests

The results of the linearity tests of the estimated models are presented in the table below. The null hypothesis of non-linearity of the model (H_0: r = 0 vs H_1: r = 1) is rejected for the five specified models. The results of the tests are presented in Table 1 below.

Table 1: Results of the residual non-linearity tests

	Model (1)	Model (2)	Model (3)
Dependent variable	TXPIB	TXPIB	TXPIB
Variable on which the transition is made	DMB	DMB	DMB
Variable of Transition	MKT	RTO	LIQ
Number of thresholds	m=1 m=2	m=1 m=2	m=1 m=2
H_o : r =0 vs r=1 H_o : r=1 vs r=2	1,05** 2,64** (0,015) (0,023)	4,26*** 2,18** (0,002) (0,022)	9,05*** 6,23*** (0,002) (0,004)

*Notes: ***significance at 1%;**significance at 5% and *significance at 10%. The p-value are reported in parentheses.*

The tests of the hypothesis (H_0: r = 1 vs H_1: r = 2) are not conclusive, which leads us to retain the hypothesis of a single transition regime for all the models tested. Indeed, for all the cases (m =1 and m =2), the null hypothesis of a PSTR model with a single transition function (r = 1) is more likely than the alternative hypothesis of a PSTR model with a minimum of two transition functions (r = 2). The choice of the number of thresholds in the transition variables used for these specifications is obtained by comparing the RSS, AIC and BIC statistics. Table 2 below shows that the best choice in terms of the minimum of the statistics used is to choose a number of thresholds corresponding to m=1.

Table 2: Determination of the number of thresholds

	Model (1)	Model (2)	Model (3)
Variable dependent	TXPIB	TXPIB	TXPIB
Variable on which the transition takes place	MB	MB	MB
Transition variable	MKT	RTO	LIQ
RSS m=1	0,0305	0,0320	0,0211
RSS m=2	0,0313	0,0322	0,0303
AIC m=1	-8,1466	-8,1166	-8,1822
AIC m=2	-8,1122	-8,0911	-8,0055
BIC m=1	-7,63	-7,6	-7,6666
BIC m=2	-7,56	-7,5333	-7,4833
Number of estimated parameters			
m=1	15	15	15
m=2	16	16	16

III. Estimates And Interpretations Of The Main Results

The results of the parameter estimation are presented in Table 4 below

Table 3: Results of the estimation of the parameters

	Model 1	Model 2	Model 3
	MKT	RTO	LIQ
Parameter α1	0,036*** (0,001)	-0,003 (0,685)	0,185** (0,021)
Paramètre α2	-0,061** (0,041)	0,012*** (0,008)	-0,392** (0.032)
Paramètre c	26,90	9,53	39,00
Paramètre ϒ	2,281	3,542	2,654

Coefficient of the control variables			
PIB initial	-1,343*** (0,000)	-1,442*** (0,000)	-1,821*** (0,002)
TI	- 0,003 (0,235)	- 0,021** (0,029)	-0,098 (0,112)
SAV	0,014** (0,042)	0,032* (0,092)	0,024*** (0,009)
FDI	0,0574*** (0,002)	0,05054** (0,023)	0,0448** (0,042)
MKT	-	0,030 (0,257)	0,019** (0,026)
RTO	0,042*** (0,004)		0,026** (0,045)
LIQ	0,084** (0,048)	0,017 (0,261)	-
Number of Observations	145	145	145

*Notes: ***significance at 1%;**significance at 5% and *significance at 10%.*

Standard deviations are reported in parentheses and p-values in square brackets. The results of the estimation of equation (2) are reported in Table 4. The threshold values are different for each of the different components of stock market development. The impact of the stock market on growth only appears when market capitalization and turnover ratio have reached their respective thresholds, which is not the case for liquidity. Table 3 shows that stock market growth has a positive effect on economic growth in SSA countries. This is reflected in the positive and significant coefficient α1. This result converges with those of Grossman (1988); Devarajan et al (1996); and diverges with those of Landau (1986); Diamond (1989); Barro (1991) and Nubupko (2007). On the

other hand, the coefficient α2 is negative and significant, therefore, the relationship between the stock market and growth is initially positive but may turn around beyond a certain threshold of stock market liquidity. The results in Table 4 show that the coefficient α1 is negative and insignificant while the coefficient α2 is positive and significant. Thus, there is a positive relationship between the stock market and growth rate above a certain threshold of market capitalization and RTO. In other words, before a certain threshold, which would be around 8.7%, there is no relationship between the stock market and growth. After the threshold, there is a positive relationship between the stock market and economic growth. The increase in market capitalization positively affects the sensitivity of growth to the financial market. The growth dynamic is driven by the state, whose budgetary resource allocation choices control the pace of human capital accumulation. This result supports the positions of Benhabib and Speigel (1994), Musila and Belassi (2004), Hanushek and Kimko (2000) and Baldacci et al. (2008) that strategic investment in a stock market improves the rate of economic growth.

The RTO and economic growth relationship In Table 4, the coefficient α_1 is positive and significant while the coefficient α_2 is negative and significant. Thus, the relationship between the stock market and the RTO threshold is initially positive but may turn around beyond a certain RTO threshold. Therefore, an increase in RTO negatively affects the sensitivity of growth to the stock market. This RTO threshold effect has been demonstrated by Nubukpo (2007) and Afonso and Furceri (2010). Beyond a certain threshold, investing in the financial market becomes counterproductive if it is done at the expense of market capitalization.

The relationship between the stock market and economic growth is also initially positive, but may turn around beyond a certain threshold with respect to market liquidity. Thus, an increase in market transactions negatively affects the sensitivity of growth to the financial market.

All else being equal, countries with a high initial GDP tend to grow less than low-income countries. The difference between initial income and stationary growth is thus an important determinant of the current growth of an economy.

The population growth variable also appears with a negative sign. The latter refers to the burden of overpopulation on long-term growth. Although it is not significant in the first specification, it becomes significant in the rest of the models. The high population growth rate decreases the capital-labor ratio in the economy and leads to low growth. For example, in the Solow growth model, the coefficient on population growth is negative. The same is true of other neo-classical growth literature where the effect of a high population is a drag on growth. Mankiw et al. (1992) find that an increase in population growth of 10% (i.e., from 3% to 3.3%) will reduce the growth of stationary income by 5%. Nevertheless, this does not obviate the fact that an opposing view strongly supports the existence of a positive impact of population growth on the level of aggregate income. Aghion and Howitt (1992) argue that a high population creates the demand for technological change and therefore stimulates economic growth. High population density is also considered desirable for technological innovation and integration with the rest of the world, which can boost economic growth. Romer (1990) argues that the cost of technological innovation does not depend on the number of people using it.

In general, we can see that the slopes of the transition functions are relatively low reflecting a smooth transition between the stock market and economic growth with respect to the composition of the stock market development. These low values of the slopes of the transition functions legitimize the choice of the PSTR structure by modeling the nonlinearity when the transition is ensured by the variables of the components of the stock market development on the graphs, it is possible to identify two extreme regimes between which the transition is smooth. Smoothness in the evolution of the elasticity as a function of the stock market variables. For low LIQ ratios, growth elasticities are strong. From a threshold of 26.90% for the consumer stock market, 39% for RTO and, the PSTR model highlights a change in slope in the relationship between the financial market and economic growth. From these thresholds, the sensitivities of economic growth start to decline, before dropping significantly. Above this value, the sign of the relationship becomes indeterminate. Growth sensitivities decrease and could become negative for high values of MKT, RTO. For each of the PSTR models considered, the effect of the financial market on growth depends on the value of the ratios of the different components of the financial market on growth. Thus, this effect is initially positive, but becomes negative when the ratios of MKT, RTO and LIQ exceed thresholds of around 33.90%, 48% and 7.20% respectively.

An analysis of the statistics by country in Table 5 below shows that the capitalization ratio largely exceeds the 33.90% threshold at which the effect of the financial market on growth becomes negative in the countries in panel 1.

Table 4: Ratios of financial market components

	PANEL 1	PANEL 1	PANEL 1	PANEL 1
MKT	83,36	64,03	52,28	31,44
RTO	20,96	28,91	29,46	58,81
LIQ	6,78	12,38	5,12	9,11

Based on the data in Table 4, the following measures can be considered. Capitalization and LIQ should be reduced in all countries in our sample to less than 26.9% and 5.75% of the overall market size respectively. The RTO should be increased significantly in all countries.

IV. Conclusion

The objective of this paper was to assess the influence of the financial market on economic growth in African countries by evaluating the influence of financial market composition in the relationship between the financial market and economic growth. Using a smooth transition model, the PSTR (Panel Smooth Threshold Regression) method, we tested the non-linearity of the relationship between the financial market and growth through the components of stock market development. Our tests show that market capitalization, asset turnover and market liquidity are non-linear. The results of our estimations indicate that the positive effect of the financial market on growth only appears when the LIQ ratio reaches the 10.50% threshold. On the other hand, the effect of the financial market on growth is positive when the capitalization and asset turnover ratios do not exceed the thresholds of 33.9% and 48% respectively. All these results contribute to elucidating the controversial debate on the role of the financial market in economic growth. This work gives a clear indication of the optimal choice of the composition of the financial market in African countries in order to achieve strong and sustainable growth to significantly reduce poverty.

References

[1]. **Adjasi, Charles K.D. & Nicholas B. Biekpe (2005),** « Stock Market Development and Economic Growth: The Case of Selected African Countries » Working Paper, African Development Bank. Vol.18 (1) pp. 144-161

[2]. **Andrianaivo, M., & Yartey, C.A., (2009),** « Understanding the Growth of African Financial Markets », Fonds monétaire international, document de travail 09-182.

[3]. **Arestis, P. & P. Demetriades (1997),** « Financial Development and Economic Growth: Assessing the evidence », The Economic Journal, 107, Vol. (33), No (1) pp. 783-799.

[4]. **Arestis, P., Demetriades, P. & Luintel, K. (2001),** « Financial Development and Economic Growth: The Role of Stock Markets », Journal of Money, Credit and Banking, vol No (2)33, pp. 16-41

[5]. **Ary Tanimoune N., Combes J-L et Plane P. (2008**), « Les effets non linéaires de la politique budgétaire en Union Économique et Monétaire Ouest Africaine » , Economie et Prévision, 2008/5, 186, 145-162.

[6]. **Atiopou, A., (2005),** « Marché financier Africain, Marché Emergent? », presentation at the annual World Bank Conference on Development Economics, Dakar, Senegal.

[7]. **Atje, R, & B, Jovanovic. (1993),** « Stocks Markets and Development », European Economic Review. Vol.37, No (2/3), pp 632-640.

[8]. Baltagi, B.H. (1995), Econometric Analysis of Panel Data**, John Wiley & Sons, New York, NY. unbalanced one-way error component regression model'',** Journal of Econometrics**, Vol. 62, pp. 67-89.**

[9]. **Beck, T., & R. Levine, (2004),** « Stock Markets, Banks, and Growth: Panel Evidence », Journal of Banking and Finance Vol. 28, N. 3, pp. 423-442

[10]. **Bekaert, G., C. R. Harvey & C. Lundblad (2004),** « Does Financial Liberalization Spur Growth? » Journal of Financial Economics, Vol. 77, No. 1, pp. 3–55.

[11]. **Bencivenga, V. R, , B. Smith, & R. M Starr. (1996)** « Equity Markets Transaction Costs, and Capital Accumulation: An Illustration » The World Bank Economic review, vol.10 No (3), pp 241- 265.

[12]. **Bencivenga, V. R. & B. D. Smith (1993),** « Financial Intermediation and Endogenous Growth », Review of Economic Studies, Vol. 58, No. 2, pp. 195–209.

[13]. **Demirgüc-kunt, A. & R. Levine, (1996),** « Stocks Markets Development and Financial Intermediaries: Stylized facts. » World Bank, Policy Research Working Paper 1462

[14]. **Demirgüç-Kunt, A. & Levine, R. (1996b),** « Stock markets, corporate finance and economic growth: an overview », The World Bank Economic Review, vol.10, No (4) pp.223-39.

[15]. **Demirguc-Kunt, A. and Maksimovic, V. (1996),** « Stock Market Development and Firm Financing Choices. », World Bank Economic Review, Vol. 22., No (3)

[16]. **Diarrassouba, V. (2007)** « Marché Boursier et Croissance Economique en Côte d'Ivoire » Programme

[17]. **Engle, R.F. & C.W.J. Granger. (1987)**, « Cointegration and error correction: representation, estimation and testing ». Econometrica, vol 55, No (1), pp. 251-276.
de Formation en Gestion de la Politique Economique (ABIDJAN). Dossier De Politique Economique.

[18]. **Gonzalez A, Terrasvirta T, Dick Van Dijk (2005),** Panel Smooth Transition Regression Model,

[19]. **Granger, C.W.(1988),** « Some Recents Developments in a Concept Causality », Journal of Econometrics, vol 39, No (3) pp 19-21.
University of Technology Sydney.

[20]. **Granger, C.W.J. and Teräsvirta T. (1993),** Modelling Nonlinear Economic Relationships, Oxford

[21]. **Greenwood, J. & Smith, B. D. (1997),** « Financial markets in development, and the development of financial markets », Journal of Economic Dynamics and Control, Vol. 21, 145-18.

[22]. **Grossman S.J. & Stiglitz J.E. (1980),** « On the Impossibility of Informationnally Efficient Market », American Economic Review, Vol.70 No (2)
University Press.

[23]. **Hansen B., (1999),** «Threshold Effects in Non-Dynamic Panels: Estimation, Testing and Inference »,

[24]. **Holmstrom, B., & Tirole, J. (1993),** « Market Liquidity and Performance Monitoring », Journal of Political Economy, August, Vol. (112), No (3), pp. 678-709.
Journal of Econometrics, 93, 2, 345-368.

[25]. **King, R. & Levine, R. (1993a),** « Finance, Entrepreneurship, and growth: Theory and evidence », Journal of Monetary Economics, Vol. 32, No (1) pp. 513-42.

[26]. **King, R. & Levine, R. (1993b),** « Finance and Growth: Schumpeter Might Be Right », Quarterly Journal of Economics, August, Vol. 108, No (3) pp.7 1 7-738.

[27]. **King, R. & R. Levine, (1993c),** « Financial Intermediation and Economic Development », Financial Intermediation in the Construction of Europe, édition. Colin Mayer and Xavier. London: Centre for Economic Policy Research, pp 156-89.

[28]. **Levine, R & Sara Zervos**. (1996), «Stocks Markets Development and Long Run Growth » The World Bank Economic review vol.2, No (1) pp.321-339.

[29]. **Levine, R & Sara Zervos. (1998),** «stocks Markets, Banks and Economic Growth », American Economic Review vol.88, No (1) pp.537-558.

[30]. Levine, R. (1997), **"Financial development and economic growth: views and agenda** » **,** Journal of Economic Literature**, Vol. 35, pp. 688-726.**

[31]. Levine, R., Loayza, N. & Beck, T. (2000), « **Financial intermediation and growth: causality and causes** »**,** Journal of Monetary Economics**, Vol. 46,** No (1) **pp. 31-77**

[32]. **Moss, T., Ramachandran, V., & Standley, S., (2007)**, « Why doesn't Africa get more equity investment? Frontier Stock Market, firms size and asset allocation of global emerging markets », Working paper No.112, Center for Global Development, Washington.

[33]. **Mothadi, H. & Argawal, S. (2008),** « Stock Market Development and Economic Growth: Evidence from Developing Countries », Working paper – University of Wisconsin-Milwaukee

[34]. **Nowbutsing, B. M. (2010)** « Stock Market Development and Economic Growth: The Case of Mauritius » International Business & Economics Research Journal vol. 8 pp 77-88

[35]. **Nyakerario, R. (2007),** « Liberalization, Stock Market Development And Investment Efficiency In Africa », International Review of Business Research Papers Vol. 3 No.4 pp.183-191.

[36]. **Nzué, F. (2003)** « Stocks Markets Development and Economic Growth: evidence from Côte d´Ivoire » Lettre de Politique Economique vol.22 No (1) pp.,

[37]. **Osei , V. (2005),** « Does the Stock Market Matter in Ghana? A Granger-Causality Analysis », Bank of Ghana, vol. 13, No (1)

[38]. **Pesaran, M. H. & Smith, R. (1995)**, « Estimating Long Run Relationship From Dynamic Heterogeneous Panels » , Journal of Econometrics, vol. (68), N.1 pp 79-113 Vol.

[39]. **Rajan, R.G., & Zingales L. (1998),** « Financial Dependence and Growth, American » Economic Review, vol 88 No (2)

[40]. **Ramachandran, V., Shah, M. K., (2007),** « Why are There so Few black-owned Firms in Africa? Preliminary Results from Entreprise Survey Data », Working paper No.104, Center for Global Development, Washington,

[41]. **Sharpe W. (1990),** « Asset Allocation Managing Investment Portfolio: a Dynamic Process » Institute of Chartered Financial Analysts pp. 7-71

[42]. **Shaw, E. S. (1973).** Financial deepening in economic development. New York, NY: Oxford University Press.

[43]. **Shleifer, A. & R. W. Vishny (1986)**, « Large Shareholders and Corporate Control », Journal of Political Economy, Vol. 94, No. (1), pp. 461–88.

[44]. **Stiglitz, J. E. (1985)**, « Credit Markets and the Control of Capital », Journal of Money, Credit and Banking, Vol. 17, No. 2, pp. 133–52.

[45]. **Stiglitz, J. E. (1994)**, « The Role of the State in Financial Markets », in Proceedings of the World Bank Annual Conference on Development Economics 1993, World Bank, Washington DC.

[46]. **Stiglitz, J.E. (2000),** « Capital Market Liberalization, Economic Growth, and Instability », World Development, 28, 1075-1086.

[47]. **Tachiwou, A. M. (2010)**, « Stock Market Development and Economic Growth: The Case of West African Monetary Union », International Journal of Economics and Finance, Vol. 2, No (1), pp. 97-103

[48]. **Ujunwa, A., & Salami, O. P. (2010),** « Stock market development and economic growth: Evidence from Nigeria. » European Journal of Economics, Finance and Administrative Sciences, No (??) pp. (??),

[49]. Wachtel, P. (2003), « **How much do we really know about growth and finance?** »**,** Economic Review**,** Vol (??), No (2) pp. (??),

[50]. **Yartey, C. A., (2006),** «The Stock Market and the Financing of Corporate Growth in Africa : the Case of Ghana », IMF Working paper No. 06/201, International Moneraty Fund, Washington.

[51]. **Yartey, C.A. & C.K. Adjasi (2007),** « Stock Market Development in Sub-Sahara Africa: Critical Issues and Challenges » , IMF Working Paper WP/07/209.