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Does Liberalization of the Financial Sector Causes Economic Growth? Empirical Evidence from Ghana

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Abstract
In this paper, we examine the effect that financial sector liberalization has on macroeconomic performance in Ghana by using modern time series econometric analysis over the time period 1971-2010. This paper undertakes econometric models such as unit root testing, co-integration and Vector Error Correction (VECM) to empirically analyze the effect of financial sector liberalization on economic growth. Both the short-run and long-run effects of financial liberalization were studied. The results suggest negative and significant long-run relationship between financial liberalization and economic growth. The results are consistent with some of the other studies in other jurisdictions as described in the literature. Finally, it is concluded that the continual strengthening of the Central Bank's capacity for supervision and prudential regulations such as such as the recent increase in reserve requirement by Bank of Ghana for various categories of financial institutions may have a long term positive effect on the performance of the economy as a whole.
Keywords: Financial Liberalization; Macroeconomic Performance; Time Series Models, Co-integration, Vector Error Correction.

1. Introduction

Financial liberalization has become a topical issue in modern econometric literature since the last quarter of the 20th century. Financial liberalization can be described as a set of policy measures designed to deregulate and transform the financial system and its structure with the view to achieving a liberalized market-oriented system within an appropriate regulatory framework. The original theoretical analysis which provided a rationale for financial sector liberalization as a means to promote financial development and hence growth was that given by McKinnon and Shaw (1973). They claim that liberalization from restrictions such as interest rate ceilings, high reserve requirements, and selective credit programmes, facilitates economic development. They argue that higher interest rates resulting from financial liberalization induce households to increase savings and stimulate financial intermediation, thereby increasing the supply of credit to the private sector. This, in turn, will stimulate investment and economic growth.

The new growth models developed by researchers including (Lucas, 1988; Barro, King and Levine, 1993) trace the steady state growth rate in terms of the level of technology captured by social marginal productivity of capital, investment and the saving rate. Thus the endogenous growth literature implies that a well-functioning financial system may have positive effect on growth through investment.

Bhatia and Khatkhate (1975) also used correlation graphs to examine the relationship between economic growth and financial intermediation for eleven African countries. They measured financial intermediation by the ratio of currency, demand deposits, and time and savings deposits to GDP. The authors find no definite relationship between growth and financial intermediation for the countries either individually, or for the whole group. Splitting the financial intermediation measure into two -the ratio of money to GDP and the ratio of quasi-money to GDP – still do not reveal any definite relationship between growth and financial intermediation.

Ogun (1986) used cross-section analysis to estimate the correlation between financial deepening and economic growth by using data for 20 countries in Africa from 1969 - 1983. The degree of financial intermediation is measured using the ratios of monetary liabilities (M1, M2, and M3) to GDP. For the full sample, all the monetary liabilities are negative and only the ratio of M3 to GDP is statistically significant. When the countries are split into high and low income countries, some of the coefficients of the monetary liabilities are positive while some are negative. However, they are all insignificant and offer no support to the growth enhancing capabilities of financial intermediation.

Oshikoya (1992) uses time series econometrics to see how interest rate liberalization has affected economic growth in Kenya. Data from 1970 to 1989 were used and the results showed a negative and insignificant coefficient for the real interest rate. The theoretical predictions are ambiguous. Some works suggest that, by promoting cross-country risk-diversification, financial liberalization fosters specialization, efficiency in capital allocation and growth (Obstfeld, 1994; and Acemoglu and Zilibotti, 1997). On the other hand, Eichengreen

(2001) observes that financial liberalization may be harmful for growth in the presence of distortions. According to the researcher, financial liberalization may trigger financial instability, as well as misallocation of capital which are detrimental for macroeconomic performance. The empirical literature has not been able to resolve this theoretical controversy. Interestingly, some studies (Kraay, 2000, Rodrick, 1998 and Grilli and Milesi-Ferretti, 1995) found that financial liberalization does not affect growth. Others too find that the effect is positive (Bekaert et al., 2003 and Bonfiglioli and Mendicino, 2004), whiles yet others find that it is negative (Eichengreen and Leblang, 2003). Many authors also show the effects to be heterogeneous across countries at different stages of institutional and economic development (Edwards, 2001, etc) and countries with different macroeconomic frameworks (Arteta, Eichengreen and Wyplosz, 2001). Aziakpono (2004) used the ratio of liquid liabilities and the ratio of banks' private credit as measures of financial intermediation and found mixed results. They found that growth was negatively related to financial intermediation in Botswana and Swaziland while the relationship was positive in Lesotho and South Africa.

The above discussion highlights the fact that there is no consensus in existing empirical studies on the relationship between economic growth and financial liberalization. The results seem to be sensitive to the different time periods, countries, and the specifications of the models. This paper will therefore provide a more insightful analysis of the relationship between growth and financial liberalization policies in Ghana.

In Ghana, financial sector liberalization was initiated under the broader macroeconomic structural adjustment programs in the late 1980s and by 1989; Ghana has liberalized its financial system in five major areas. What impact has these liberalization had on the economic growth of Ghana?

2.0: MODEL SPECIFICATION AND EMPIRICAL ECONOMETRIC METHODOLOGY

2.1 Empirical Framework

The empirical framework draws from the recent literature on the impact of financial development on economic growth such as Beck et al. (2000) where the growth rate of per capita income is regressed on financial development and a conditioning information set. In line with this literature the general specification of the growth equation is given in equation (1) below:

$$Y_{it} = \phi_0 + \phi_1 FL_{it} + \phi_n X_{nit} + \varepsilon \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots (1)$$

Where:

Y = growth rate of per capita income

FL = measure of financial liberalization

X_n = a conditioning information set.

FL represents the primary variable of interest in this study. It comprises a measure of financial liberalization which will be included separately in growth equation to measure the impact of financial liberalization on growth. This is financial liberalization dummy for financial liberalization (FINDUMMY). From the financial liberalization theory it is expected that this variable will exert a positive impact on economic growth.

In line with the economic growth literature, the control variables are investment, the ratio of exports and imports to GDP to measure the degree of openness, and the debt service ratio to measure macroeconomic uncertainty.

Based on the above discussion we will estimate the equation as follows:

$$Y = \beta_1 + \beta_2 LNFINDUMMY + \beta_3 LNINVEST + \beta_4 LNOPENESS + \beta_5 LNDEBT + \xi \dots\dots (2)$$

Where:

Y = growth rate of real per capita GDP

FINDUMMY = dummy variable for financial liberalization and ε and ξ are the stochastic error terms.

INVEST = ratio of gross domestic investment to GDP

OPENESS = ratio of exports plus imports to GDP.

DEBT = ratio of debt service to exports of goods and services

LN = natural logarithm

2.2: Definition of Variables and Methodology

2.2.1: Definition of Variables:

Per capita growth rate (Y%): Is the annual percentage growth rate of GDP per capita based on constant local currency. GDP per capita is gross domestic product divided by mid-year population. This variable is the dependent variable in the model to represent economic growth and is the indicator mostly used by researchers to measure economic performance in most of the literature reviewed.

Investment (Invest): Gross capital formation (formerly gross domestic investment) consists of outlays on additions to the fixed assets of the economy plus net changes in the level of inventories.

Openness (open): is the sum of exports and imports of goods and services measured as a share of gross domestic product.

Total debt service (debt): is the sum of principal repayments and interest actually paid in foreign currency, goods, or services on long-term debt, interest paid on short-term debt and repayments (repurchases and charges) to the

IMF.

***Findummy*:** this represents a dummy variable for financial liberalization and it captures the starting date of major financial liberalization in Ghana. The dummy takes a value of 0 prior to liberalization and 1 after liberalization.

Our sources of data include; Bank of Ghana database, Ghana Statistical Service and World Bank economic indicators (country data for Ghana).

2.2.2 Methodology: Unit Root Testing, Co-integration and VECM

Unit Root Test Procedure

The stationarity properties of the time series variables are examined using theAugmented Dickey-fuller (ADF) approach.This is done to avoid spurious regressions if the variables in ordinary regressions are non-stationary.The ADF test follows the equation:

For intercept:

$$\delta_0 + \delta_1 \Delta X_{t-1} + \sum_{t1}^{n} = Y_t \Delta X_{t-i} + \varepsilon_{ti} \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots (3)$$

For Trend

$$\Delta X_t = \delta_0 + \delta_1 \Delta X_{t-1} + \delta_2 t + \sum_{t=1}^{n} Y_t \Delta X_{t-i} + \varepsilon_{t2} \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots (4)$$

For the purpose of this paper, we fall on the equation (4) for the ADF test.

The tau-statistic tests the null hypothesis of $\delta_1 = 0$ $(ie\ non\ stationary)$ against the alternative that, $\delta_1 < 0$ $(ie\ stationary)$. If the data series are non-stationary at levels i.e. I(0), it will be differenced d times to be stationary to determine its order of integration. We also performed the Philip-Perron unit root test to confirm the results of the ADF results.

Co-integration Test Procedure

Co-integration test involves two steps which include testing for unit root and the likelihood ratio test.Based on the unit root results in Table1, all variables with the exception of GDP per capita (Y) which is stationary at levels, are co-integrated of the same order, I(1). Since the time series variables are co-integrated of the same order, namely I(1), then the long run combination amongst the non-stationary variables can be established.We draw on Johansen and Juselius (1990) maximum likelihood (ML) procedure to test for the number of co-integratingvectors which also allows inferences on parameter restrictions.

Vector Error Correction Model (VECM).

After establishing the order of integration among the data series, the next step is to estimate the error correction model. We choose VECM, a full information maximum likelihood estimation model, since it yields more efficient estimators of the co-integrating vectors ahead of other models which could have been used. VECM permits testing for co-integration in a whole system of equation in one step without requiring a specific variable to be normalized. Another advantage of VECM is the non-requirement for a prior assumption of endogenity or exogenity of the variables. In addition, VECM allows us to examine the causality in Granger-sense. The error correction term is evaluated using t-test whilst the lagged first-differenced term of each variable uses the *F*-test.

3.0: PRESENTATION OF RESULTS AND DISCUSSIONS.

3.1: Augmented Dickey Fuller test

The results of the unit root tests presented in table 1 above indicate that all the variables included in the model were non-stationary at level. Only GDP per capita growth rate was stationary at levels. After first differencing, all the variables that were non stationary became stationary. That is, all the variables are integrated of the same order. The researchers used Eviews 7 econometric software package for the various tests. The robustness of the ADF estimates is confirmed using the Philip-Perron unit root test. The results obtained are consistent with the ADF tests results shown in table1 above

TABLE 1: Results of Augmented DickeyFuller test

Variable	ADF at Levels	ADF at (first difference)	Lags	Order of integration	Philip-Perron (level)	Philip-Perron (first diff.)
Y	**(-5.629822)** -4.211868* -3.529758** **[0.0002]**		3	I/(0)/I(1)	**(-6.964303)** -4.211868* -3.529758** **[0.0000]**	
Openness	**(-2.475191)** -4.219126* -3.533083** **[0.3378]**	**(-4.503025)** -4.226815* -3.536601** **[0.0050]**	3	I(1)	**(-1.932853)** -4.211868* -3.529758** **[0.6184]**	**(-3.830484)** -4.219126* -3.533083** **[0.0256]**
Investment	**(-2.491342)** -4.234972* -3.540328** **[0.3302]**	**(-7.206425)** -4.219126* -3.533083** **[0.0000]**	3		**(-2.767324)** -4.211868* -3.529758** **[0.2173]**	**(-7.189476)** -4.219126* -3.533083** **[0.0000]**
Debt	**(-0.884058)** -4.211868* --3.529758** **[0.9477]**	**(-6.617404)** -4.219126* -3.533083** **[0.0000]**	3	I(1)	**(-0.821882)** -4.211868* -3.529758** [0.9547]	**(-6.773657)** -4.219126* -3.533083** **[0.0000]**
Findummy	**(-1.625667)** -4.234972* -3.540328** **[0.7627]**	**(-5.887478)** -4.243644* -3.544284** **[0.0001]**	3	I(1)	**(-1.792235)** -4.211868* -3.529758** **[0.6893]**	(-6.105700) -4.219126* -3.533083** **[0.0001]**

Note:* ***denotes critical value at 1% confidence levels***
****denotes critical value at 5% confidence levels* ( ) *ADF test statistics* [ ] MacKinnon (1996) one-sided p-value**

3.2: CO –INTEGRATION TEST RESULTS

Sample (adjusted): 1973 2010
Included observations: 38 after adjustments
Trend assumption: Linear deterministic trend
Series: Y OPEN DEBT FINDUMMY INVEST
Lags interval (in first differences): 1 to 1

Table 2: Unrestricted Co-integration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.674189	78.29134	69.81889	0.0090
At most 1	0.369968	35.67666	47.85613	0.4128
At most 2	0.286306	18.12123	29.79707	0.5571
At most 3	0.095351	5.303817	15.49471	0.7758
At most 4	0.038601	1.495917	3.841466	0.2213

Trace test indicates 1 Co-integrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

Table 3: Unrestricted Co-integration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.674189	42.61469	33.87687	0.0035
At most 1	0.369968	17.55543	27.58434	0.5325
At most 2	0.286306	12.81741	21.13162	0.4692
At most 3	0.095351	3.807900	14.26460	0.8791
At most 4	0.038601	1.495917	3.841466	0.2213

Max-eigenvalue test indicates 1 Co-integrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values.

Tables 2 and 3 report the results of the co-integration test. Both tests results as shown above indicate the existence of co-integration among the data series. Both tests indicate at least one co-integration equations at 5% levels. Specifically, both the Trace test and the Rank test indicate the existence of 1 co-integrating equations at 5% level. Thus, the null hypothesis which indicates the non-existence of co-integration among the data series is rejected. The implications of these tests result is that the selected variables share a common stochastic trend and will grow proportionally. That is to say, there exist a long run relationship among the variables and they move along together in the long run and that short term deviations will be corrected towards equilibrium.

3.3: Vector Error Correction Model (VECM) Results.

We run the VECM for two main reasons, firstly, to either confirm or reject the existence of co-integrating relationship among the selected variables (i.e. long-run associationship). Secondly, the model also enables the short-run relationship among the selected variables to be studied.

Dependent Variable: D(Y)
Method: Least Squares
Sample (adjusted): 1974 2010
Included observations: 37 after adjustments

D(Y) = C(1)*(Y(-1) + 1.5981334277*DEBT(-1) - 5.86122022674
***FINDUMMY(-1) - 1.26284138514*INVEST(-1) + 0.937302069909**
***OPEN(-1) + 0.836815514661)** + C(2)*D(Y(-1)) + C(3)*D(Y(-2)) + C(4)
*D(DEBT(-1)) + C(5)*D(DEBT(-2)) + C(6)*D(FINDUMMY(-1)) + C(7)
*D(FINDUMMY(-2)) + C(8)*D(INVEST(-1)) + C(9)*D(INVEST(-2)) + C(10)
*D(OPEN(-1)) + C(11)*D(OPEN(-2)) + C(12)

Table 4: VECM Results (Short-run Estimates)

	Coefficient	Std. Error	t-Statistic	Prob.
C(1)	-1.468357	0.323959	-4.532543	0.0001
C(2)	0.463472	0.238539	1.942957	0.0634
C(3)	0.278748	0.186262	1.496541	0.1470
C(4)	1.099033	1.858212	0.591446	0.5595
C(5)	3.301857	1.686088	1.958295	0.0614
C(6)	-5.317869	4.118731	-1.291143	0.2085
C(7)	0.544422	3.879565	0.140331	0.8895
C(8)	-7.734207	3.978589	-1.943957	0.0632
C(9)	-8.034602	3.238985	-2.480592	0.0202
C(10)	9.799397	3.225049	3.038527	0.0055
C(11)	8.237648	4.635437	1.777103	0.0877
C(12)	0.234838	0.621518	0.377846	0.7087

R-squared	0.647033	Mean dependent var	0.112860
Adjusted R-squared	0.491728	S.D. dependent var	4.974414
S.E. of regression	3.546420	Akaike info criterion	5.626361
Sum squared resid	314.4273	Schwarz criterion	6.148821
Log likelihood	-92.08767	Hannan-Quinn criter.	5.810552
F-statistic	4.166199	Durbin-Watson stat	1.769125
Prob(F-statistic)	0.001503		

3.4: Long-Run Relationship: Analysis and Discussions

The results presented in table3 above shows that there exist a long-run associationship among the selected variables. This is evidenced by the value of (C1) which represents the error correction term in the VECM. For there to be a long-run relationship, the value of C1 must be negative and its P-value must also be significant at 5% levels. From table 3, the value of C1 is -1.468357 and its P-value is 0.0001, at 5% level of significance (**see C1)**. Thus, the variables in the model move together in the long-run, meaning also that in the long-run, the independent variables have impact on GDP per capita growth rate (Dependent variable). The primary variable of interest in this paper is the Findummy, which represents financial liberalization. This variable has a negative and significant relationship with GDP per capita growth in the long run. That is, in the presence of co-integration, a 10% increase in financial liberalization leads to decline of 58.67% in GDP per capita growth rate. This result is consistent with the postulate of Eichengreen (2001) who observes that financial liberalization may be harmful for growth in the presence of distortions. The researcher argues that financial liberalization may trigger financial instability, as well as misallocation of capital which are detrimental for macroeconomic performance. The financial system in Ghana has long been noted to be unstable and this coupled with instability in other macroeconomic variables like inflation and exchange rate might have resulted in this negative impact. Gibson and Tsakalatos (1994) also observe that for financial liberalization to positively impact on the economy of a country, there should be well-developed financial sector to stimulate economic growth through their effects on pooling and hedging risk, reducing transactions costs, creating liquidity, and channeling capital to the most productive sectors of the economy. The financial sector of Ghana has not yet developed to the extent as to ensure the benefits that accrue from liberalization. Investment also has a negative but insignificant long-run relationship with GDP per capita growth rate. The implication of this result is that the various investments that have been taken by successive government on a whole have not yield any positive results for Ghana as a country in terms of GDP per capita growth. This could be as a result of misplaced priority when it comes to investment decisions especially in the public sector.

Total government debt service has a long-run positive and significant long-run associationship with GDP per capita. Specifically, a 10% increase in government debt service will lead to a corresponding increase of approximately 16% GDP per capita growth. The implication of this result is that, the government's ability to settle its debt will in the long-run yield dividends to the country. Also, a 10% increase in openness improves GDP per capita by approximately 9% in the long-run but the estimated coefficient is insignificant.

The error correction term (C1) indicates the rate at which the disequilibrium between the long-run and the short-run estimates are corrected for. The results in table4 show that on annual basis, approximately all (100%) of the disequilibrium between the long-run and short-run estimates are corrected and brought back to equilibrium. That is, it takes less than one year to bring back the long-run and short-run deviations back to equilibrium.

The R square value of the VECM is 0.647033. This means that the model is able to explain 64.7% of the total variation in GDP per capita growth rate. The associated F-statistic is 4.166199 with a probability value of 0.001503 which is very significant **(i.e. P-value < 5%).** Again, the Durbin-Watson statistic is 1.7693 which is less than 2 and suggests the absence of serial correlation in the data series.

3.5: Short-Run Relationship: Analysis and Discussions.

The first differenced results presented in table 3 shows the short-term relationship among the selected variables and GDP per capita. Financial liberalization, which is our primary variable of interest again, has a negative but insignificant short run relationship with GDP per capita at one period lag. Our analysis is basically on one period lag variables of the annual series. At this period lag, a 10% increase or further removal of restrictions on the financial system of Ghana will lead to a decline in GDP per capita growth by approximately 53% (**see C6**) in the short-run. Furthermore, the one period lag variable of openness has a positive and significant short run relationship with GDP per capita growth rate. All the other variables in the model have a negative short-run relationship with the GDP per capita growth rate. That is in the short-run, a 10% increase in openness will lead to a corresponding increase of approximately 98% in GDP per capita growth rate. The debt service ratio is positive but insignificant (see C4) in the short run. That is increased debt service payments improves the corporate image of the country and also enhances our credit rating as a country. These factors may serve as a driver to attract FDI into the country especially efficiency seeking FDIs which has huge impact on a countries GDP per capita growth. However the economy of Ghana is such that it cannot fully benefit from debt services in the short run as servicing debt means shifting resources away from economically productive uses. The short run coefficient for investment (**see C8**) is still negative and insignificant.

4: CONCLUSION AND POLICY IMPLICATIONS

This paper has examined the relationship between economic growth and financial liberalisation policies in Ghana. A financial dummy, representing financial liberalization was developed which track the specific measures and institutional changes involved in financial liberalisation. We used modern time series econometric

models (VECM) to control the potential endogeneity and exogeneity of financial liberalisation and other regressors.

The results of the estimations show that financial liberalisation has had both long-run and short-run negative effect on economic growth. The short-run estimate was however insignificant. The results support the view shared by Eichengreen (2001) that liberalizing financial markets in the mist of distortion may trigger financial instability, and misallocation of capital which are very detrimental to economic growth. It also supports the view of Gibson and Tsakalatos (1994) that for financial liberalization to positively impact on the economy of a country, there should be well-developed financial sector to stimulate economic growth through their effects on pooling and hedging risk, reducing transactions costs, creating liquidity, and channeling capital to the most productive sectors of the economy. These indicators are as of now lacking in Ghana and hence the negative impact of liberalization on the economy. Further, the economy of Ghana can best be described as an Agrarian economy with over 60% of its GDP per capita growth contributed by the Agricultural sector. Thus, the financial sector has not been developed to the extent as to significantly impact on the economy of Ghana. Interestingly the Agricultural sector which serves as the backbone of the Ghanaian economy receives the least of capital investment. It is therefore not surprising that investment has not yielded any positive dividend for the country in term of economic growth.

The policy implication is that the recent move by the Central Bank of Ghana to increase the capital reserve requirement for both existing financial institutions and potential new entrance might be productive to the general economy of Ghana since most financial institutions who could not meet the requirement are forced to either amalgamate or end up being acquired by a competitor. This in a way will provide the platform for restructuring the financial sector to remove the distortion and ensure efficiency in the sector.

References

- Acemoglu, D. and Zilibotti, F. (1997). "Was Prometeus Unbound by Chance? Risk, Diversification and Growth", Journal of Political Economy, 105, Pp709-752.
- Arteta, C., Eichengreen B. and Wyplosz, C. (2001), "When Does Capital Account Liberalization Help More than Hurts? Mimeo.
- Aziakpono, M.J. (2004) "Financial Development and Economic Growth in Southern Africa", Paper presented at the CSAE Conference 2004.
- Bank of Ghana (2007), "Financial stability report", 7(2). Ghana.
- Beck, T., Levine, R. and Loayza, N. (2000) Finance and the Sources of Growth, Journal of Financial Economics, 58, Pp.261-300.
- Bekaert, G., Campbell R. H. and Lundblad, C. (2003). "Does Financial Liberalization Spur Growth?" Journal of Financial Economics, forthcoming.
- Bhatia, R.J. and Khatkhate, D.R. (1975), "Financial Intermediation, Savings Mobilization, and Entrepreneurial Development": The African Experience, IMF Staff Papers, vol.22, issue1, pp.132-158.
- Bonfiglioli, A. and Mendicino, C.(2004) "Financial Liberalization, Banking Crises and Growth: Assessing the Links", SSE/EFI Working Paper No 567
- Dickey D. and Fuller, W. (1979). Distribution of the estimators for Autoregressive time series with unit root. Journal of American Statistical Association, Economic Review 84(5), 1310-1329.
- Edwards, S. (2001). "Capital Mobility and Economic Performance: Are Emerging Economies Different?" NBER w. 8076.
- Eichengreen, B. and Leblang, D. (2003) "Capital Account Liberalization and Bank Policy Research Working Paper WPS 2467, Washington D.C.: World Bank.
- Gibson, H.D. and Tsakalatos, E. (1994) The Scope and Limits of Financial Liberalisation in Developing Countries: A Critical Survey, Journal of Development Studies, vol.30, no.3, April, pp.578-628.
- Grilli, V. and Milesi-Ferretti, G. M (1995) "Economic Effect and Structural Determinants of Capital Controls", IMF Sta. Papers, Vol. 42, No. 3.
- Growth: Was Mr. Mahathir Right?" International Journal of Finance and Economics,
- Johansen S, Juselius K. (1990). Maximum Likelihood Estimation and Inference on Co-integration with Applications to the Demand for Money. Oxford Bulletin of Economics and Statistics. 52: 169-210.
- King, R.G. and Levine, R. (1993) "Finance and Growth: Schumpeter Might be Right", Quarterly Journal of Economics, vol.108, no.3, Pp.717-737
- Kraay, A. (2000) "In Search of the Macroeconomic Effects of Capital Account Liberalization" World Bank, Mimeo.
- Levine, R. (2001) "International Financial Liberalization and Economic Growth." Review of International Economics 9, Pp. 688-702

- Lucas, R.E. (1988), "On the Mechanics of Economic Development", *Journal of Monetary Economics*, 22(1), Pp. 3-42.
- McKinnon, R.I. (1973), "Money and Capital in Economic Development". Washington D.C.: The Brookings Institution
- Obstfeld, Maurice, (1994), "Risk-Taking, Global Diversification, and Growth," American
- Ogun, O.D. (1986) A Note on Financial Deepening and Economic Growth: Evidence from Africa, Nigerian Journal of Economic and Social Studies, vol.28, no.2, Pp.275-283
- Oshikoya, T.W. (1992), "Interest Rate Liberalization, Savings, Investment and Growth": the Case of Kenya, Savings and Development, vol.16, no.3, Pp.305-320.
- Rodrik, D. (1998), "Who Needs Capital-Account Convertibility?" Harvard University, Mimeo.
- Shaw, E.S. (1973), "Financial Deepening in Economic Development". New York: Oxford University Press.
- World Bank (2010) World Development Indicators CD-ROM, Washington D.C.: World Bank.