The impact of the financial integration on the economic growth: the case of the GCC countries (1981-2011)

SENOUCI Bereksi Imane, BOURI Sarah, Mohamed BENBOUZIANE

Abstract— **Studies about the relationship between financial integration and economic growth have shown underwhelming results. In one hand, some of the studies have indicated that the liberalisation of the capital account have been positive for the economical growth; and in the other hand, other studies results were not conclusive. The main objective of this work is to examine, theoretically and empirically, the character of the link between financial integration and economic growth by using panel data from 1981-2011 periods. In the following studies, we will primairely focus on gulf countries (Bahrein, Kuwait, Qatar, Oman, Saudi Arabia and united arab emirates) which followed the economical liberalisation and financial integration. The results of the assessments show a positive and significant link between the financial integration and the economic growth in these countries under some financial, macroeconomic and institutional conditions.**

Index Terms— **Financial integration, Economic growth**
JEL codes: F36, F43

I. INTRODUCTION

This last two decades have undergone profound financial change. In fact, the industrialized countries followed by a set of emerging and developing countries have liberalized their capital accounts during those years. This phenomenon can be explained by the fact that financial openness has been considered by these countries as beneficial for recipient countries of foreign capital.

In economic sense, the integration refers to either a process or a result. As a process, the financial integration is a set of measures designed to eliminate in progressive manner discrimination between economic units in different countries. As a result, the financial integration should lead to a finding of disappearance of national capital markets and the formation of a worldwide financial market.

The economic theory suggests that financial integration can promote a more efficient allocation of resources, facilitate risk diversification, increasing specialization of production, contribute to the development of the financial system, improve the investment rate and stimulate growth.
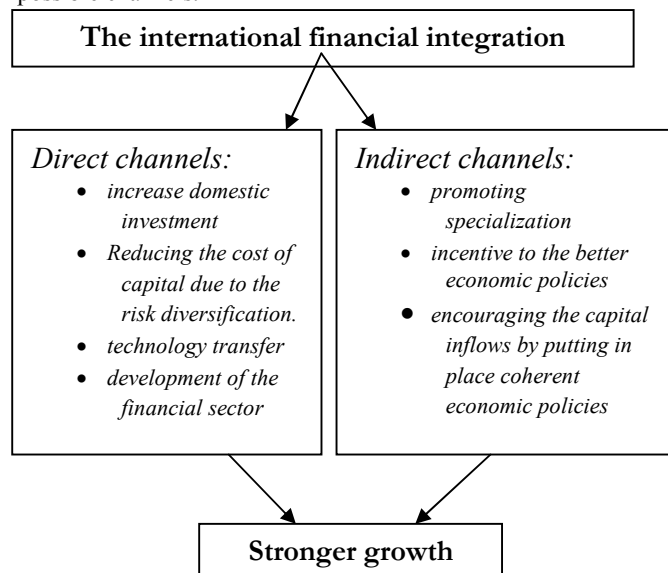
Authors like s. fisher(1998), M. Obsfeld and K. Rogoff (1998),L. Summers (2000),B. Eichengreen (2001) asserts that the financial integration can be beneficial and can positively

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SENOUCI Bereksi Imane, PhD candidate in financial economics, MIFMA Laboratory, Faculty of Economics, University of Tlemcen
BOURI Sarah, PhD candidate in financialeconomics, MIFMA Laboratory, Faculty of Economics, University of Tlemcen
Mohamed BENBOUZIANE, Professor of Finance, Director of MIFMA laboratory, Faculty of Economics, University of Tlemcen

affect (directly and indirectly) the economic performance in the countries receiver of foreign capital. However, other authors such as D.Rodrik (1998),J. Bhaghwati (1998). J.Stiglitz(2002), consider that financial openness in some cases can be very dangerous, in fact, these authors consider that liberalization and financial integration as one of the causes of crises.

Face these limits of the literature; it seemed to us interesting to analyze in depth this relationship, actually, the objective of this work is to put in evidence the nature of the link between the financial integration and the economic growth, more precisely, This work attempts to examine the effect of financial integration on the economic growth, and that, for the case of the gulf countries. To respond to this problematic our work will be divided as follows: The first section identifies the channels of transmission of the effects of financial integration on economic growth. The second section presents a review of the empirical literature related to the topic. The third section is devoted to the empirical analysis of the relationship between financial integration and growth in these countries.

1. Financial integration and economic growth: the channels of transmission

The Economic theory generally attributes an important role for financial integration in the growth of country. Indeed, theoretical models have identified a number of channels through which international financial integration can promote economic growth in developing countries and transition. The following diagram shows a schematic summary of these possible channels.

Source: E.Prasad and al (2003).

1.1 Direct channels

Theoretically, the financial integration can contribute to the economic growth via the following direct channels:

Increase domestic investment: theoretically, the financial integration should be accompanied by a disconnection between savings and domestic investment. In fact, with the commercial opening, the national savings can be invested abroad and should move towards regions of the world that offer the best value, and conversely, domestic investment can be financed by foreign savings. Indeed, the transfer of capital flows between developed and developing countries and / or countries in transition allows these countries to reach levels well be higher and stronger growth.

Reducing the cost of capital due to the risk diversification: the theoretical models assert that the increased possibilities of risk sharing between residents investors and foreign investors can promote risk diversification. This possibility of diversification in return encourages companies to increase their total investment, thereby enhancing growth in order that capital flows increase, the stock market becomes more liquid, which could further reduce the risk premium, thus reducing the cost of capital mobilization for investment.

Technology transfer: the Access to technology is another channel through which the opening of the capital account can have a positive impact on growth. Financially integrated countries seem to attract an "astronomical" share of FDI flows. This type of capital is likely to lead to technology transfer, transmission of know-how and of the best management practices.

Development of the financial sector: According to a large number of work, international financial flows serve as a catalyst to the development of the local financial market, in fact, investment international portfolio flows can render the domestic stock markets most liquid, and increased foreign participation in local banks can in turn provide significant advantages: it can facilitate access to international capital markets and, furthermore, can introduce a variety of new financial instruments and techniques, in addition, entry of foreign banks tends to increase competition.

2.2 Indirect channels:

Financial integration can have important indirect benefits on economic growth in the following three domains:

Promoting specialization: The argument according to which specialization in the production structure increases productivity and economic growth is intuitive. However, in the absence of any mechanism for risk management, a highly specialized production structure could cause high instability of production and therefore, high volatility of consumption. This risk of instability may deter countries undertake the beneficial specialization to growth. According to economic theory, helping countries to exercise the international risk sharing, financial integration could, therefore, reduce the volatility of consumption in the country. More specifically, the risk-sharing at the international level that directly encourage specialization, which, itself, increase the rate of growth.

Incentive to the better economic policies: A major advantage of financial integration resides in the fact that this last oblige in some sort the governments to engage in credible macroeconomic policies. Indeed, the discipline of financial integration could change the dynamics of the national investment in a country as it leads to a more efficient allocation of capital. In other words, a reallocation of capital to more productive sectors in reaction to changes in macroeconomic policies.

Encouraging the capital inflows: the abolition of restrictions on capital movements can cause an increase in capital inflows and thus increase the level of investment in the country. L. Bartolini and A. Drazen (1997) indicate that the abolition of restrictions on movement of capital may, by its signal effect, causing an increase in capital inflows and thus increase the level of investment in the country is necessary for the growth of DGP.

2. Financial integration and economic growth: empirical evidence

On the empirical plan, if the analysis of costs associated with the liberalization of capital movements is scarce, there are a large number of studies that examine its potential benefits and its influence on the growth and long-term development. In other words, some studies report a positive effect of financial integration on economic growth while there are other works that do not support this proposal. We will successively present a brief review of the empirical literature, starting with the studies that found a positive relationship between financial integration and economic growth, then we look at those who question this relationship.

Studies demonstrating a positive relationship between financial integration and economic growth:

The study of **Quinn (1997)** is one of the first to detect a favorable link between financial integration and economic growth. The author added in the regression of the growth equation a new measure of liberalization of the capital account, which varies between 0 and 4. Results of D. Quinn's estimates indicate that the variation of the liberalization of the capital account has a significant effect on the growth of real GDP per capita in a sample of 58 countries over the period between 1960 and 1989.

In their study **Klein and Olivei G. (1995/2006)** adopt a slightly different method compared to other work done in this domain. They interest first on the role of financial integration on financial development and then analyze the impact of this development on economic growth. For a sample of 80 developed and developing countries over the period 1986-1995, the liberalization indicator used is "Share," the authors observe that the liberalization of capital movements positively affect financial development, as regards the effect of financial integration on economic growth, they conclude a beneficial effect of the liberalization of capital movements on economic growth but only for industrialized countries.

The study of **M. Schularick and T. Steger (2007)** evaluates the impact of financial integration on economic growth using historical data (1880-1914) for 24 developed and developing countries , and then compares results to the results obtained for the period (1980 - 2002) for a sample of 54 developed and developing countries . for the period (1880 - 1914) the authors use capital inflows of UK (percentage of GDP) as an indicator of financial integration of individual countries and for the period (1980-2002) they used IDE / GDP and IPI / GDP ratios. The results suggest that international financial integration promotes economic growth significantly in the historical period but this is not the case for

the recent period. According to the authors , among possible explanations for these ambiguous results is the difference in the composition of capital flows , as well as differences in the institutional and legal framework of the overall financial market during these two times.

More recently, **J. Butkiewicz and H.Yarikkaya** (2008) show that the full opening of the capital account affect positively and significantly economic growth in developed countries. In contrast, in the case of developing countries, the results show that financial openness has no effect on growth. As S. Edwards (2001), the authors emphasize that the effects on growth depend on the economic development of countries and their ability to attract capital flows from long-term (including IED), and they highlight the importance of "quality" of human capital. In their study, the authors used data on one hundred to fourteen developed and developing countries (excluding their sample countries in transition by considering them as countries exporting oil) and the period from 1970 to 1997.

In his study **Honig (2008)** also shows a significant effect of capital account liberalization on economic growth, and this, by using a variety of indicators to measure financial integration as (indicator of FMI, Quinn, Chinn and Ito, the extent of capital flows and those of capital inflows) and for a sample of 122 countries over a period from 1970 to 2005.

The objective of the study of **Mougani(2012)** is to provide an empirical analysis of certain effects of financial integration on economic activity and macroeconomic volatility. In the case of African countries for the period 1976 to 2009, the author concludes that the effect of external capital flows on growth appears to depend primarily on the initial conditions and implemented policies to stabilize foreign investment, increase domestic investment, the development of the financial system and other measures aimed at stimulating growth and reducing poverty.

Studies putting in doubt the positive effect of financial integration on economic growth:

Among the first empirical studies have highlighted the lack of one relationship between financial integration and economic growth is that of **V.Grilli and G, M. Millessi Ferretti (1995).** These authors worked on a sample of 61 countries, and for the period from 1966 to 1989. They found negative results in the relationship between financial integration and economic growth.

In his study, **Kraay (1998)** uses several indicators of financial integration (especially Share, Quinn indicator and an indicator based on actual net capital flows). Kraay's study focuses on a variable sample of countries (64, 94 and 117) each indicator which is associated with a different sample size, and this during the period 1985-1997, the dependent variable is GDP growth. The author also finds no significant relationship between financial integration and economic growth.

The study of **H. Edison, R.Levine, L.Ricci and T.Slok 2002** "International Financial Integration and Economic Growth" examines the impact of financial integration on economic growth, and also assesses whether this relationship depends on the level of economic and financial development of the legal system, the level of corruption and macroeconomic policies. by Using a wide selection of measuring international financial integration of 57 developed

and developing countries during the period 1980 -. 2000 The results of this study do not support the idea that financial integration accelerates economic growth, even using control variables such as (variables of economic development, financial and policies of macroeconomic ...).

In his article **Xuan Vinh Vo (2005)** studies the relationship between financial integration and economic growth, using a sample of 79 developed and developing countries with data covering the period 1980 -2003. The main results of this study indicate a weak and fragile link between international financial integration and economic growth, the author states that this result shouldn't be interpreted so that financial integration is not associated with economic growth, but rather, that this relationship is not robust. He also noted that this link is not significantly different under different economic, political and institutional.

The interest in the study of **D. Abdullahi Ahmed (2011)** is to analyze a number of measures of financial integration on economic performance by choosing a sample of 25 countries in Sub-Saharan Africa over the period 1976 -2008. The results of the study showed a weak link between financial openness and economic growth in this region. This work also investigates the effect of international financial integration in the context of different national political and economic environments; the results show that good institutions, a high level of human capital and a stable macroeconomic environment contributes to the mitigation negative effects of liberalization of capital movements.

The Different empirical work shows a disparate character of results. In fact, the very heterogeneous character of results can probably be explained by differences between studies. Indeed, the sample of countries studied vary between studies, some authors focused their analysis on the industrialized countries, other on developing countries, and others on a composite group of countries. In addition, the observation periods are different, which may be particularly important for developing countries, since the liberalization of the capital account is a recent phenomenon for a number of them. the method Applied empirical (cutting transversal data , chronological series or panel data) and the estimation technique as OLS (Ordinary Least Square) , the VI (instrumental variables) or MMG (generalized moments methods) different from an analysis to another. Finally, the extent of financial integration (de facto or de jure) chosen by the authors, can also be the cause of these divergent conclusion

3. Financial integration and economic growth: empirical analysis test

The objective of this section is to estimate, from the base of panel data, the impact of financial integration on economic growth in the Gulf countries during the period 1981-2011. The advantage of estimations conducted on panel data from estimates or instant cuts or from the temporal series analysis is to take into account the temporal and individual dimensions of data.

1/ Data Description:

The data used in our econometric analysis comes mainly from: the basics data "UNCTAD" ,"UNCTADstat", "Statistical, Economic and Social Research and Training Centre for Islamic countries (SESRIC)", "World Development Indicators", "The African Development

Indicators, World Bank, "and" the World Economic Outlook Database (IMF), 2013, "", "Open Data for Africa Index of Economic freedom, 2011" and the database "Lane and Milesi-Ferretti (2011) ".

2/The methodology of the study:

In this part, we will deal econometrically the relationship between financial integration and economic growth. To do this, we will use the methods of estimating panel data. Indeed, there are several methods for estimating panel data, namely, an estimate by estimation by ordinary least squares, estimation with fixed effects; or estimation with random effects. Given that the technique (OLS) may be biased if the inherent heterogeneity of the country is neglected, the tests showed that generally models with fixed or random effects provide a better fit. It should so, what is the right model for our sample (fixed effect model or random effects). To do this, we will conduct an analysis of the Hausman test of specification

Test of Haussman: The Hausman test (1978) compares the estimators fixed effects model with those obtained using the random effects model. Divergence of estimators indicates the presence of a correlation between the explanatory variables and the individual effects. This correlation is tested by the following hypothesis:

$$H_0: E(\propto_i / X_i) = 0$$
$$H_1: E(\propto_i / X_i) \neq 0$$

H_0 Indicates that the model can be specified with random individual effects and we retain in this case the estimator MCG.

The alternative hypothesis H_1, indicates that the model must be specified with fixed individual effects and then we retains *Within* estimator.

3/ specification of the econometric model:

We build our empirical approach Based primarily on the work of HJ Edison et al (2002), Mr. Schularick and T. Steger (2007), and A. Honig (2008).

The basic equation that will estimate the effect of financial integration on economic growth takes the following form:

***Growthit* = □ + β ·*IFit* +δ X*it*+ uit**

The meanings of the variables used are the following:

Growthit : it is the dependent variable in our model; it is measured by the rate of growth of real per capita GDP.

IFit **(financial integration):** to analyze the effects of financial integration on economic growth in the Gulf countries, we have chosen to measure financial integration with the indicator of Lane and Milesi-Ferretti. This indicator is measured by the sum of foreign assets and liabilities compared with GDP. Theoretically, the level of financial integration should be positively correlated with economic growth rate. Therefore, the expected sign of this variable is positive.

X*it* : represents the matrix of the control variables. Indeed, the model is completed by a series of macro-economic control variables usually introduced in such estimates. These are:

Trade openness (open): the commercial exchange rate is used in relation to GDP to measure the degree of openness of the economy. This variable corresponds to the sum of exports and imports relative to GDP. The expected sign of the estimated coefficient is positive.

The inflation rate (inf) is approached by the rate of annual change in the index of consumer prices, this variable represents the macroeconomic policy of the country we expect that this variable has a negative impact on the economic growth.

Credit granted to the private sector (% GDP) (dcps): This variable reflects the level of financial development. Indeed, the financial system is more developed, more growth is high. The expected sign of this variable is positive.

Corruption (corr): This variable measures the degree of corruption within the political system. It reflects the level of institutional development of a country. According to Mauro (1995) corruption is harmful to growth. Indeed, corruption engenders distortions in the economic and financial environment, reduces the efficiency of government and business. The expected sign of this variable is negative.

uit : the error term.

4/ Estimation results and interpretations:

We present in this section the estimation results of our growth equation, At first we carried out the Hausman test by using EViews 6.0 software. The following table presents the main results of the Hausman test.

Table 01: Test Hausman specification

P-Value	(Chi-Square. Statistic) value of the test
0.0000(*)	9095.349

(*) denotes the level of significance at the threshold of 5%
Source: personal elaboration from the estimation results

According to the estimation results, the Hausman test statistics indicate that $X^2(6) = 9095.349$. the P-value is less than the 5% level of confidence, so the estimates retained for the model of our study will those of the individual fixed effects model.

Then we will spend to the estimation of the fixed effect model which is written as follows:

***Growthit* = □ + μi+ β ·*IFit* +δ X*it*+ uit**

Or :
Growth: represent the economic growth.
FI: represent the Financial Integration.
X: represents the matrix of the control variables.
α, δ and β : are the parameters to estimate
μi: individual effect of country.
UIT: the error term.
The following table presents the estimation results of the fixed effect model:

Table 2: Results of the panel estimation with effects specific fixed:
Dependent variable: growth in real GDP per capita (GDP).

Explanatory variables		Regression
Constant		2.49 (27.4129)
FI		5.23 (2.6762) ***
INF		-5.12 (-1.9230) **
DCPS		1.54 (2.4952) ***
CORR		-2.90 (-36.338) ***
OPEN		2.95 (6.085) ***
Number of observations		186
R- squared		0.9247
Adjusted R- squared		0.9240
Prob (F- statistic)		0.00000
Fixed effects	Bahrain	-1.12E+11
	Kuwait	-4.52E+10
	Oman	-5.96E+10
	Qatar	-1.66E+10
	Saudi Arabia	1.60E+11
	United Arab Emirates	7.32E+10

Notes: The statistics that are in parentheses:
*** Significant the threshold 1% at most, ** Significant the threshold 5% at most, and * significant the threshold 10% at most.
The correlation coefficient (R-squared) is very high (close to 1), which explains the relationship between the explanatory variables and the endogenous variable is very strong;
The value of the probability of the Fisher statistic is 0.0000; it means that the model is overall significant.

It resorts of results of the model that:
Financial integration appears with a positive and significant sign. This result supports the hypothesis that capital account liberalization stimulates economic growth, it is in the same line of works of Quinn (1997), honig (2008) and mougani (2012).
The significantly positive sign of this indicator shows that financial integration in the Gulf countries positively affects the economic growth of these countries, in fact, the 1% of the financial integration leads to an increase of 5.23% of the economic growth in these countries. This result can be explained by the success of the strategy of the different

reforms (economic, financial macroeconomic and institutional) applied in these countries in the Gulf Cooperation Council (GCC).

Trade openness appears with a positive and significant sign. This explains that trade openness positively affects economic growth in the countries of the Gulf, more exactely, a 1% increase in trade openness improves growth in these countries with 2.95%. This result can be explained by the creation of a customs union between the countries of the region, the elimination of non-tariff barriers and the establishment of common standards, as well as many free trade zones with countries outside. These trade agreements are the promising of the amelioration of the new opportunities of trade in the GCC region.
Inflation appears with a negative and significant sign. These results are in the same line with the theoretical work done in this area. In fact, the significantly negative sign of inflation means that it is negatively correlated to the economic growth. Specifically, a decrease of 1% inflation respectively improves the growth rate with 5.12%. Indeed, this result suggests the

relative presence of macroeconomic stability in the footsteps of the Gulf.

The coefficient associated to the credits granted to the private sector and positive and significant. This result is complies to the different econometric studies conducted to determine the link between financial development and economic growth (Hermes and Linsink 2003 Aghion et al 2005, Dornbusch 2001, Levine 2004). The results indicate that a 1% increase in the ratio of credit granted to the private sector relative to GDP leads to an increase of 1.54% economic growth in the Gulf countries. The positive and significant sign of this variable indicates that the banking sector in these countries has been able to channel funds collected in productive investment, which positively affects the growth of these countries.

Our results prove that corruption has a negative and significant sign. In other words, a 1% decrease corruption improves economic growth with 2.90%. These conclusions are consistent with theoretical predictions. Indeed, it is generally accepted that corruption hinders growth by discouraging private investment. The negative sign indicates the presence of a relatively healthy institutional framework and developed in the gulf countries.

CONCLUSION

Over the past two decades, the world economy has experienced major economic and financial transformations imposed by financial liberalization and integration into the international financial system. Its macroeconomic is crucial for the economic growth of the country that remains the ultimate goal of each country.

The objective of this paper is to study, using panel data, and the nature of the relationship between financial integration and economic growth, and that, in the case of Gulf countries over the period 1981-2011. The results reached by this work show overall an positive relationship between the two phenomena. In other words, financial integration may be advantageous under certain conditions for the Gulf countries, because of various reforms (economic, financial macroeconomic and institutional) applied in these countries.

The policy implications of our analysis suggest that financial integration should be accompanied by a set of conditions that seem necessary to access the macroeconomic financial system to support economic growth; in fact, the lack of basic conditions may discourage realization of the benefits of financial integration process, while making the country more vulnerable to economic and financial crises.

REFERENCES

[1] **Abdullahi D. Ahmed (2011),** « International Financial Integration, Investment and Economic Performance in Sub-Saharan African Countries", Global Economy Journal, article5, volume 11, issue 4.

[2] **Grilli. V et Milesi-Ferretti G.M. (1995),** « Economic Effects and Structural Deteminants of Capital Controls », IMF Staff Papers, Vol. 42, No.3 septembre, pp. 517-551.

[3] **Butkiewicz. J et Yanikkaya. H, (2008),**" Capital Account Openness, International Trade, and Economic Growth", Emerging Markets Finance & Trade, March/April 2008, Vol. 44, No.2.

[4] **Brezigar-masten. A, Corlcelli. F, Masten. I (2010),"** Financial integration and financial development in transition economies : What happens during financial crises ?", Document de travail du centre d'économie de la sorbonne, université paris 1.

[5] **Chen,J. Quang,T. (2012),** « International Financial Integration and Economic Growth: New Evidence on Threshold Effects*", paris school of economics,* WORKING PAPER N° 2012 – 30.

[6] **Christian Friedrich , Isabel Schnabel , Jeromin Zettelmeyer ,(2013)**, "Financial integration and growth — Why is Emerging Europe different?", Journal of International Economics.

[7] **Edison, H., Levine, R., Ricci, L., Sløk, T., 2002**, International Financial Integration and Economic Growth. Journal of International Monetary and Finance, No. 21.

[8] **Edwards, S. (2001),** « Capital Mobility and Economic Performance : Are Emerging Economics Different ? » NBER Working Paper No. 8076.

[9] **FELDSTEIN ET HORIOKA (1980), «** National saving and international capital flows», *Economic Journal*, 90, *pp. 314-29.*

[10] **Honig, A., (2008),** « Addressing Causality in the Effect of Capital Account Liberalization on Growth", *Amherst College, Amherst, MA 01002*

[11] **Kraay, A., 1998,** In Search of the Macroeconomic Effects of Capital Account Liberalizationunpublished; Washington: World Bank.

[12] **Klein, M., Olivei, G., 1999,** Capital Account Liberalization, Financial Depth and Economic Growth. NBER Working Paper no. 7384.

[13] **Kose, M.A., Prasad, E.S., Rogoff, K., Wei, S.-J. (2006),** "Financial Globalization: A Reappraisal", IMF Working Paper, WP/06/189, International Monetary Fund.

[14] **Mougani. G, (2012),"** An Analysis of the Impact of Financial Integration on Economic Activity and Macroeconomic Volatility in Africa within the Financial Globalization Context", AFRICAN DEVELOPMENT BANK GROUP, Working Paper No. 144.

[15] **Quinn, D., 1997**, The Correlates of Change in International Financial Regulation. American Political Science Review 1997;913; 531-51

[16] **Rodrik, D 1998,** Who Needs Capital-Account Convertibility? In: Stanley Fischer, et al., Should the IMF Pursue Capital Account Convertibility? Essays in International Finance, No. 207, International Finance Section, Department of Economics, Princeton University, Princeton, N.J.

[17] **Schularick, M., Steger, T. (2007),** " Does financial integration spur economic growth? New evidence from the first Era of financial globalization", CESifo Working Paper No. 1691, university of Munich.

[18] **Xuan Vinh Vo. (2005),** " International Financial Integration and Economic Growth – a panel analysis", The Business Review, Cambridge; Summer 2005; 3, 2; ABI/INFORM Global pg. 143

Appendix

Table 01: the main empirical work on the effect of financial integration on economic growth.

Authors	Sample	Period	Results
Feldestein and Horioka (1980)	16 countries of l'OCDE	1960-1794	Financial integration may cause a problem of external sustainability because of imbalances between savings and investment; it is therefore harmful to the economy.
Rodrik	100 countries	1975-1989	The author finds no solid evidence that financially integrated countries

(1998)			have high growth rates.
Klein and olivei (2000)	93 countries	1986-1995	Financial openness positively affects growth in industrialized countries, but this is not the case for developing countries
Edwards (2001)	61 to 65 economies	1980-1989	Financial integration positively affects growth by reaching a certain degree of economic development and financial
Schularick and Steger (2007)	78 countries (developed and developing)	1880-1914 1980-2002	Financial integration promotes economic growth in the historic period, but this is not the case for the recent period.
Honig (2008)	122 countries	1970-2005	A significant effect of financial integration on economic growth.
Brezigar-masten and al (2010)	31 European countries	1996-2004	No significant effect of financial integration on economic growth
Mougani (2012)	Africans countries	1976-2009	The effect of financial integration on growth seems to depend primarily on the conditions initial and policies implemented.
Christian Friedrich and al (2013)	24 developed Countries 12 emerging country 19 developing countries	1998-2005	Industries with high external financing needs of emerging Europe have benefited disproportionately from financial integration, while no effect was observed for other developed or developing countries. The authors also conclude that the political and financial integration is complementary.

Table 02: The Hausman test

Correlated Random Effects - Hausman Test
Pool: FIXED
Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	9095.349415	5	0.0000

** WARNING: estimated cross-section random effects variance is zero.

Cross-section random effects test comparisons:

Variable	Fixed	Random	Var(Diff.)	Prob.
IF?	523161187.8 87851	-2713880703. 365934	19318647418 329766	0.0000
CORR?	-2904932165 .869485	-2956145460. 039876	27306522838 56369.3	0.3271
OPEN?	2945682563 7.043929	-47530143955 .765873	17151503530 310398000	0.0000
DCPS?	154464065.5 67295	-441993695.9 53906	21588597666 95615.6	0.0000
INF?	-511926161. 397407	-254164442.1 37000	17038120839 806584	0.0483

| Prob(F-statistic) | 0.000000 | | | |

Table 03 : **The fixed effect model**

Dependent Variable: GDP?
Method: Pooled Least Squares
Date: 04/09/14   Time: 13:50
Sample: 1981 2011
Included observations: 31
Cross-sections included: 6
Total pool (balanced) observations: 186

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2.49E+11	9.07E+09	27.41293	0.0000
IFI?	5.23E+08	1.95E+08	2.676285	0.0076
CORR?	-2.90E+09	79941060	-36.33842	0.0000
OPEN?	2.95E+10	4.84E+09	6.085511	0.0000
DCPS?	1.54E+08	61903871	2.495225	0.0127
INF?	-5.12E+08	2.66E+08	-1.923098	0.0547
Fixed Effects (Cross)				
_BAH—C	-1.12E+11			
_KWT—C	-4.52E+10			
_OMN—C	-5.96E+10			
_QAT—C	-1.66E+10			
_SA--C	1.60E+11			
_UAE--C	7.32E+10			

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.924742	Mean dependent var	8.48E+10
Adjusted R-squared	0.924061	S.D. dependent var	9.61E+10
S.E. of regression	2.65E+10	Akaike info criterion	50.84655
Sum squared resid	7.74E+23	Schwarz criterion	50.89600
Log likelihood	-28361.37	Hannan-Quinn criter.	50.86524
F-statistic	1357.777	Durbin-Watson stat	0.536488
Prob(F-statistic)	0.000000		