International Journal of Research in Social Sciences
Vol. 7 Issue 9, September 2017,
ISSN: 2249-2496 Impact Factor: 7.081
Journal Homepage: http://www.ijmra.us, Email: editorijmie@gmail.com
Double-Blind Peer Reviewed Refereed Open Access International Journal - Included in the International Serial Directories Indexed & Listed at: Ulrich's Periodicals Directory ©, U.S.A., Open J-Gage as well as in Cabell's Directories of Publishing Opportunities, U.S.A

FOREIGN DIRECT INVESTMENT AND ECONOMIC GROWTH: A CROSS-COUNTRY EXPLORATION IN ASIA

Rev.Dr.Dominic Savio*

Dr. Samrat Roy**

Abstract

The existing macro literature on Foreign Direct Investment-Growth nexus has identified the potential gains of FDI to recipient countries only if they attain threshold level of absorptive capacities. The present study has made an effort in this direction to investigate whether FDI affects economic growth based on a panel data for 27 Asian economies over the period 1975-2010.This paper applies panel cointegration technique and the findings strongly suggest that though FDI is growth enhancing in Asia, yet the extent of its impact depends on the threshold levels of absorptive capacities measured by the levels of human capital and infrastructure..

Keywords:

Foreign Direct Investment, Economic Growth,
Panel Cointegration,
Panel Estimation.

* **Rector, Deputy Principal and Vice Principal, St. Xavier's College (Autonomous) Kolkata**

** **Assistant Professor, St. Xavier's College, Kolkata**

1. Introduction

The structural transformation in the global economy in terms of changes in market orientation opened up a new paradigm in the treatment of private capital and capital accumulation in theoretical and empirical discussions. The issue of capital flows is considered to be the most accessible route for economic growth whereby investment is regarded as the engine of growth. The worldwide changes in the mindset and pro-business orientation have recognized the importance of Foreign Direct Investment as one of the possible options to stimulate growth momentum.

The FDI-growth nexus can be analyzed within the framework of economic development. The investigations regarding the impact of FDI should not deal only with the direct causality on economic growth but also on the pre-conditions necessary for growth. Within the framework of neo-classical models, the impact of FDI on the growth of output is constrained by the existence of diminishing returns in physical capital without any long run effect. With the advent of endogenous growth theories, FDI could be regarded as the recourse of new technology and high skilled labour. Consequently, FDI has been integrated into theories of economic growth as the "gains-from-FDI" approach (Krugman, 1998).

In the past two decades, there has been a major shift in the size and composition of the cross-border financial flows to developing countries, especially the Asian countries. The Asian countries have experienced upsurge in private capital flows due to liberalization in their capital accounts. One of the fundamental motivations for attracting private capital was the much needed funds that the foreign investors require for recapitalizing their economic systems.

Among the Asian economies, Indonesia, South Korea, Thailand, Philippines and Singapore are the enthusiastic liberalizers (RajanR, 2004). The major drivers of foreign capital have been the favorable policies towards encouraging cross border mergers and acquisitions in the financial sector. However in case of India and China, the move towards liberalization is cautious (Rajan, 2004). Though China has been a late entrant to open up for foreign participation as compared to other Asian countries, it recorded a high pace in attracting foreign capital. India's economic reforms have made Indian business versatile and enhanced the robustness of the industry. Hence

the search for higher returns in Asian economies motivated the study to investigate the theoretical and empirical relationship between FDI and economic growth.

Against this backdrop, this paper looks into the long run dynamics between foreign direct investment and economic growth for 27 Asian economies* within the time frame, 1975-2010.The empirical specification underlines the concept of endogenous growth theory. This study looks for cointegration within a panel framework. The cointegrating relation is further estimated using panel econometric techniques to determine the threshold level of absorptive capacity for the host country. Unlike previous studies, this paper contributes to the existing literature by identifying the selected Asian economies under study individually in terms of their attainment of the threshold level of absorptive capacities captured by the levels of human capital and infrastructural development respectively.

This paper is divided into six sections. Section II provides an overview regarding the existing literature. Section III discusses on the empirical specification followed by data and methodology issues in Section IV.SectionV reports the empirical results followed by conclusion in Section VI.

II. Recent Literature

Economic growth can be explained by a variety of social, political, economic and institutional factors. The FDI-Growth nexus has gained importance in the growth literature in its varied dimensions. The overview of the studies confirm various dimensions such as fundamental theories of FDI, various macro economic variables that influence FDI, the impact of economic integration on the movements of FDI followed by advantages and disadvantages of FDI (Yusop 1992; Jackson and Murkowski 1995; Cheng and Yum 2000; Lim and Maisom 2000).

The theoretical models refer to the propositions of FDI led Growth; Growth led FDI and their interdependency through feedback mechanism.

* List of Countries : Bahrain, Bangladesh, Brunei, China, Cyprus, India, Indonesia, Iran, Israel, Japan, Jordan, Korea, Kuwait, Lebanon, Mongolia, Nepal, Oman, Pakistan, Papua Guinea, Philippines,Saudi Arabia,Singapore, SriLanka,Syria,Thailand and Turkey.

The hypothesis of FDI-led Growth emerged with the development of endogenous growth theory. FDI-led-Growth has been propounded by Goldsmith(1969) who stated that financial intermediaries can be stimulative to economic growth either by capital accumulation or by raising the levels of saving and investment rate(Shaw,1973).This view originates from Schumpeter(1911) growth theory. Subsequently, the empirical studies of Sala-i-Martin(2002) provides strong evidence to this proposition.FDI accompanied by human capital, exports and technology transfer will play a proactive role in generating growth momentum.

Another strand of literature emerges from the GDP driven FDI hypothesis which is strongly based on MNC theory. According to the Eclectic Paradigm, Dunning (1977) argues that MNCs with certain ownership advantages will invest in another country having locational advantages and benefits can be captured effectively by "internalizing" production through FDI.Various locational factors influence FDI such as market size, infrastructural parameters, political stability and governance. The expansion in market size proxied by GDP of the host country is expected to result in higher profitability. An upsurge in the investment potentials will create better opportunities for FDI inflows (Corden, 1999).

However the FDI-Growth nexus is better viewed in terms of endogeneity problem or feedback mechanism. The issues related to causality plague all studies that attempt to capture the impact of a factor or a group of factors on economic growth. The complex phenomenon of economic growth reinforces the feedback mechanism. The findings of Chowdhury and Mavrotas (2003) conclude mixed results in the direction of causality between FDI and economic growth. They considered Toda and Yamamoto (1995) specification of causality apart from traditional Granger-causality approach.

Hence, the above existing literature points out various dimensions to justify the propositions under the preview of FDI-Growth nexus. Keeping in mind the shortcomings of cross-sectional and time series studies, this paper examines the impact of FDI on the economic growth in Asia within panel framework.. This paper contributes to the existing literature in terms of its search for cointegrating relation and thereby estimating for policy conclusions. Unlike the previous

studies, this paper attempts to determine the threshold levels of human capital and infrastructure necessary for economic growth.

2. Research Method

This section examines the importance of FDI on economic growth taking care of absorptive capacity of the host country on the basis of a neo classical production function.

According to Zhang (2001), FDI can influence growth in two ways. Firstly this paper considers the direct impact of FDI on economic growth with the help of the following production function, where output is a function of labour, domestic capital and foreign capital respectively. Thus the production function can be stated as :

Specification-I

$$\mathbf{Y_{it} = f(L_{it}, K_{dit}, K_{fit})} \quad \text{.....(1)}$$

Where Y_{it} denotes output

K_{dit} and K_{fit} denote domestic and foreign capital stock respectively

L_{it} denotes the labour force

Here the subscript **'it'** refers to the panel set up consisting of i=1.....N number of sample countries having t=1.....T number of time-periods.

Secondly the impact of FDI can be endogenized by the measure of absorptive capacity. Actually Sala-i-Martin (2002) pointed out the difficulties for selecting the potential determinants of economic growth in the context of empirical discussions. In his study he considered 67 variables but among which only 18 variables are srongly correlated with economic growth. The strongest indication is found for enrollment in secondary education and level of infrastructure. Taking these findings into account, this paper considers the inclusion of gross enrollment in secondary education as a proxy of human capital and levels of infrastructure development as the measures of absorptive capacity which affect growth. Thus the Equation **1** can be modified as:

Specification-II

$$Y_{it} = f(L_{it}, K_{dit}, K_{fit}, Secedcn_{it}, Infra_{it}) \text{ .....(2)}$$

where gross enrollment in secondary education is represented by **Secedcn** and level of infrastructure is denoted by **Infra** respectively.The inclusion of these two variables are also supported by the findings of Levin and Raut (1997) and Roy and Berg (2006) who concluded that these variables are growth-enhancing.

As per the contributions of Romer (1990) and extending the hypothesis of Boreinstein et. Al (1998), the issue of absorptive capacity can be captured by the interaction terms such as the levels of FDI multiplied by the levels of human capital and infrastructure. If the coefficients related to the interaction terms are found to be positive and statistical significant, then the countries having high levels of human capital and infrastructure will be conducive to economic growth.

The Equation **2** can be modified as below:

Specification-III

$$Y_{it} = f(L_{it}, K_{dit}, K_{fit}, Secedcn_{it}, Infra_{it}, Secedcn_{it}*Kf_{it}, Infra_{it}*Kf_{it}) \text{.....(3)}$$

Here the indirect impact of FDI on economic growth can be investigated by the interaction terms, Secedcn and Infra multiplied by foreign capital proxied by FDI flows.

Finally, the output equation in per capita terms with the variables in logarithmic form can be stated as:

Specification-IV

$$\log(GDPC_{it}) = \alpha_0 + \alpha_1 \log(GCFPC_{it}) + \alpha_2 \log(FDIPC_{it}) + \alpha_3 \log(SECEDCN_{it}) + \alpha_4 \log(INFRINDEX_{it}) + \alpha_5 \log(FDIPC_{it}*ASC_{it}) + \eta_i + \varepsilon_{it} \text{..... (4)}$$

Where,

log ($GDPC_{it}$): natural logarithm of GDP per capita in real terms as a proxy for economic growth used as dependent variable for all specifications

log ($GCFPC_{it}$): natural logarithm of Gross Domestic Capital Formation per capita in real terms as a proxy for domestic capital. The inclusion of this variable is supported by the findings of Olofsdotter (1998) and Sahoo (2006) in explaining the determinants of economic growth.

log ($FDIPC_{it}$): natural logarithm of inward FDI flows per capita in real terms as a proxy for foreign capital.

log ($SECEDCN_{it}$): natural logarithm of the percentage of gross enrolment in secondary education as a proxy for human capital. A higher level of human capital is expected to boost up the potentials of FDI in stimulating growth (Aleksynska et al. 2003).

log ($INFRINDEX_{it}$): natural logarithm of infrastructure index computed for all the selected countries on the basis of variables† related to all types of infrastructure, namely transport, ICT, energy and banking.

log($FDIPC_{it}$*ASC_{it}): The multiplicative product of FDI with the host country's absorptive capacity variables **(ASC_{it})** , namely gross enrollment in secondary education and infrastructure captures the interaction term or the indirect impact of FDI on economic growth. This will determine the education and infrastructure threshold levels.

i and t : Country (i) and time period (t) respectively ; η_i **:** unobserved country specific effect ; $\varepsilon_{it:}$ the disturbance term

Given the above model specifications, the expected results that can examine the role of host country's absorptive capacity factors to channelise the impact of FDI on economic growth can be illustrated as follows:

1. If both α_2 and α_5 have positive (negative) sign in the growth equation, then FDI inflows have an unambiguously positive (negative) effect on economic growth.

† Infrastructure Variables: Transport- air freight million tonnes per km area and length of roads network per 10,000sq km,.ICT- number of telephone lines per 1000 inhabitants,Internet – number of internet users per 1000 inhabitants, Energy- energy use per inhabitant and Banking- domestic credit provided by the banking sector.

2. If $\boldsymbol{\alpha_2}$ is positive, but $\boldsymbol{\alpha_5}$ is negative, then FDI inflows have a positive effect on growth, and this effect diminishes with the improvements in the host country's absorptive factors.

3. If $\boldsymbol{\alpha_2}$ is negative and $\boldsymbol{\alpha_5}$ is positive, then this means that the host country has to achieve a certain threshold level (in terms of absorptive capacity developments) for FDI inflows to have a positive impact on economic growth.

The threshold level of host country's absorptive capacity is computed by the partial differentiation of FDI on growth.[‡] The above specified growth model is empirically tested in a panel structure comprising of 27 countries in Asian continent covering the period,1975 to 2010.This paper looks into the time-series properties of panel data followed by panel estimation methods.

IV. Data and Methodology

The scope of this study is limited to 27 Asian economies covering the period 1975 to 2010. The secondary data on the variables namely GDP per capita (PPP), Gross Domestic Capital Formation (GCF) , Foreign Direct Investment Inflows(FDI), Gross enrolment in secondary education (SECEDCN) and total labour force are collected from World Development Indicators published by World Bank. The variables Gross Domestic Capital Formation (GCF) and Foreign Direct Investment Inflows (FDI) are converted to real terms at constant prices. The Infrastructure Index is constructed with the help of Principal Component Analysis (PCA)[§].

The empirical treatment involves the applications of panel based econometric procedures namely panel cointegration techniques and panel estimation procedures. Panel cointegration analysis

[‡] $\partial \log(GDPC) / \partial \log(FDI) = \alpha_2 + \alpha_5 (ASC) = 0$, ASC refers to absorptive level of capacity

then the threshold level of host country's absorptive capacity can be computed as,

$(ASC) = - \alpha_2 / \alpha_5$.

[§] PCA :The PCA is a multivariate technique used to reduce the number of variables without loosing informetion.It results in fewer variables which explain most of the variation in original variables.The KMO test of sampling adequacy compares the magnitudes of the observed coefficients with that of the magnitudes of partial correlation coefficients.High value of KMO test statistic indicates the appropriateness of PCA technique.

ensures the attainment of long run equilibrium relationship between economic growth and its explanatory variables as specified in the growth equation (4).Non-stationarity of the macro economic variables pose problems in the estimation results. Ordinary least Squares Regression results with non-stationary variables will lead to spurious results. Recent developments in the panel unit root tests include: Levin, Lin and Chu (LLC), Im, Pesaran and Shin (IPS), Maddala and Wu and Hadri.

Among the different panel unit root tests developed in the literature, LLC and IPS are the most popular. Both of the tests are based on the ADF principle. However, LLC assumes homogeneity in the dynamics of the autoregressive coefficients for all panel members. In contrast, the IPS is more general in the sense that it allows for heterogeneity in these dynamics. Therefore, it is described as a "Heterogeneous Panel Unit Root Test". In addition, slope heterogeneity is more reasonable in the case where cross-country data is used. In this case, heterogeneity arises because of differences in economic conditions and degree of development in each country. As a result, the test developers have shown that this test has higher power than other tests in its class, including LLC. Hence IPS test is more preferred that LLC.

The next step is to test for cointegrating relationship. The concept of cointegration was first introduced into the literature by Granger (1987). Cointegration implies the existence of a long-run relationship between economic variables. The principle of testing for cointegration is to test whether two or more integrated variables deviate significantly from a certain relationship (Abadir and Taylor, 1999). The shortcomings of traditional cointegration procedures led to the application of panel cointegration techniques. A heterogeneous panel cointegration test developed by Pedroni (2001) overcomes the problems of small samples and allows different individual cross-section effects for heterogeneity in the intercepts and slopes of the cointegrating equation.

The FDI led Growth proposition is further analyzed using panel estimation technique namely Random Effect estimator. Random Effect estimator controls the heterogeneity by by including time-dummy variables for each group (Wooldridge 2006).It is more appropriate for testing unbalanced panel data, where there are limitations or missing observations in the panel data set

(Asteriou and Hall 2007). However both Fixed and Random effect estimations are conducted in panel framework. Difference between Fixed effect and Random effect models arises in the sense that fixed effect assumes that each country differs in its constant term, whereas latter assumes that each country differs in its error terms. Random effect model treats the intercepts for each section not as fixed but as random parameters (Asteriou and Hall 2007). However, the choice between RE or FE is dependent on whether unobserved component and other control variables are correlated. It is important to have a test for examining this assumption (Wooldridge 2006). Hausman (1978) developed a test to choose between Random Effect and Fixed Effect estimators.

3. Results and Analysis

The main purpose is to justify long run dynamism of FDI on economic growth and to investigate whether the countries have the absorptive capacities to reap the potential gains of FDI.This paper applies the panel econometric techniques to justify the propositions using a growth equation stated in **Section-III.**

This paper attempts to establish the presence of cointegration among the variables specified in the growth equation in Section III. For this exercise the first step is to ensure stationarity for the panel variables. As discussed in the Methodology section, this paper applies panel unit root tests namely IPS, LLC, ADF-Fisher and PP-Fisher tests respectively. Table 1 presents the results of the tests both at level and at first-difference including constant and constant with time trend. The four panel series variables namely GDPC, GCFPC, FDIPC, INFRINDEX and SECEDCN are found to be non-stationary at their level form, which accepts the hypothesis regarding the presence of panel unit root with and without time trend respectively. The last part of Table1 shows the results of IPS, LLC, ADF-Fisher and PP-Fisher tests at their first-differences with and without time trend respectively. The results confirm that all the panel series variables are stationary at their first difference that is the null hypothesis regarding the presence of panel unit root is rejected at 5% level of significance. Further the results provide strong evidence regarding the series that they are all individually integrated of order one (*I (1)*) across countries.

To investigate regarding the existence of long run relationship between the panel variables, it is necessary to look for panel cointegration. This exercise is justified since all the variables are

integrated of same order, I (1).Pedroni (2001) test is conducted to ensure the presence of cointegration with the presence of individual intercept as well as intercept with constant trend. The summary of the results of Pedroni panel analysis with intercept and with both intercept and trend are reported in Table 2.

With regard to the Specification 1 as specified in Section III, Pedroni tests are carried out. This model specifies that output per capita proxied by GDPC (GDP per capita) is a function of domestic capital per capita proxied by GCFPC (Gross Domestic Capital Formation per capita and foreign capital proxied by FDIPC (Foreign Direct Investment per capita) respectively. At intercept level in the absence of trend, all the test statistics provide strong evidence regarding the presence of cointegration among the panel series variables, GDPC, GCFPC and FDIPC respectively. These results strongly reject the non-presence of cointegration in heterogeneous panels for first and second group of tests or the tests for within dimension and between dimensions respectively. With the inclusion of trend except one test statistic, all the remaining test statistics reject the null hypothesis (no cointegration) at 5% level of significance. Hence this paper ensures the presence of long run equilibrium relationship among the above stated variables which justifies the underlying theory of neo-classical type production function.

This paper further attempt to estimate the cointegrating relationships in logarithmic form established above with the help of panel estimation techniques. In addition this paper contributes to the existing literature by determining the threshold level of absorptive capacity in the host country. Before proceeding to the estimation results, the standard Breusch-Pagan Lagrange Multiplier (LM) Test for the adequacy of the poolability assumption is conducted. The results reported in Table 4 confirm very high computed value of LM statistic which favors the fixed effect/random effect model over cross-section model.Hausman test is then conducted to choose between random and fixed model for all the specifications. The test statistic in this case accepts the null hypothesis of random effect model.

The growth equation already specified in Equation 4 of Section III is finally estimated and the Table 3 reports the estimation results.

Specification 1 refers to the basic model with core variables and all of them are statistically significant at 5% level. It is observed that the variable, FDIPC significantly contributes to economic growth such that one percent increase in FDI inflows increases economic growth by 0.14 percentage points. This finding corroborates with the conclusions of Zhang (2001). FDI boosts up the competitive potentials through the transfer of technology, acquisition of capital stock and enhancing the growth momentum. However unlike the previous literature, the estimated coefficient of GCFPC is negative but statistically significant for all specifications. It can be inferred that domestic investment proxied by gross domestic capital formation is not conducive to economic growth for Asian economies due to the mismatch between capital requirement and saving capacity. On the contrary as mentioned above FDI inflows stimulates economic growth.

Specification 2 presents the estimated results of the growth equation with the inclusion of absorptive capacity variables, SECEDCN and INFRINDEX respectively.The coefficients of FDIPC and GCFPC (as a proxy for domestic investment) are statistically significant but they affect economic growth with opposite signs. The coefficient of SECEDCN (education) estimated under random-effect model is found to be positively significant confirming the positive correlation between the level of human capital and economic growth (Barro,1995).In this case one percent increase in the level of secondary educational attainment increases economic growth by 0.457 percentage points. This justifies the inclusion of this variable in the growth equation. The coefficient of infrastructure index positively and significantly contributes to economic growth such that it rises by 3.062 percentage points due to the improvement in infrastructure. However as addressed in World Bank (1994) studies, Asian economies need to improve the effective usage of infrastructure stocks and services..

To look more closely into the indirect impact of FDI on economic growth, the interaction terms are included in the estimation procedures. Specification 3 tests the hypothesis that the contribution of FDI to economic growth is conditional to the level of infrastructural development. The coefficient of FDI in column 4.3 is negative but the interaction term of FDI with INFRINDEX is positive and significant. According to the propositions stated in Section III of this paper, this result suggests that relation between FDI inflows and economic growth is

contingent to the threshold level of infrastructural development for Asian countries. Following the procedure as mentioned[**], the infrastructure threshold for Asian economies in panel structure is computed. It equals 0.78.This value is obtained by considering derivative of the growth equation with respect to FDIPC and setting them equal to zero. By solving it the infrastructure threshold value is found to be positive. By taking exponential of this value the minimum level of threshold is computed. Among the Asian countries under study, only those countries which will satisfy this infrastructure threshold level will enjoy the benefits of FDI inflows and it will be conducive to economic growth.

Specification 4 tests the hypothesis regarding the growth effect of FDI in terms of interaction term with secondary education as a proxy for human capital. It reports that FDI has a negative impact on economic growth while the interaction term with secondary education is positive and significant to economic growth. The coefficient of the interaction term captures the effect of a well-educated workforce on the absorptive capability of the economy. Using the similar procedure, secondary education threshold is computed and reported in Table 3. It is found to be positive which confirms that that a minimum level of human capital is required for FDI to contribute positively to growth, confirming the results of Borensztein et al. (1989). By taking exponential of the education threshold value, it is suggested that the Asian economies having relatively well educated labour force satisfying this threshold level will have the potentials to reap the benefits of FDI inflows. The graphical interpretation of the absorptive capacities of individual countries is explained in Figure-1.The horizontal axis plots the countries against the average level of secondary education threshold plotted in the vertical axis. Among 27 selected countries under study, six countries namely Bangladesh, Pakistan,Nepal,Oman,Papua Guinea and Oman are below the threshold education level which equals 35.75.The remaining 21 countries satisfied this threshold level and are capable enough to absorb the spill-over effects of FDI inflows over the period from 1975 to 2010.

Specification 5 examines the impact of the interaction term between FDI inflows and domestic investment on economic growth. The results differ from the previous studies. It is observed that FDI inflows positively contributes to economic growth but its impact is found to be negative and

[**] The procedure is explained in Section-III under footnote-5.

significant as far as the estimated coefficient of the interaction term is concerned. According to the discussions in Section III, it can be concluded that the positive effects of FDI diminishes with the improvement in domestic investment. Thus the empirical results obtained are to some extent on the expected lines and this call for policy recommendations.

4. Conclusion (10pt)

This paper investigates the impact of FDI on economic growth in Asia using a cross-country sample of 27 economies for the period 1975 to 2010.There has been a paradigm shift in the orientation towards FDI in Asian countries for the last two decades. This paper further supports the view that FDI can act as tool to supplement growth momentum but the effect of FDI depends on the threshold conditions of the host country. The panel cointegration technique is applied to the empirical specification of neo-classical type production function. Further the panel estimation techniques are carried out for policy results.

The empirical results clearly reveal that there exists panel cointegrating relation and hence the estimation procedure can be justified. This finding asserts that the production function in per capita terms exist in the long run. The inclusion of the absorptive capacity variables does not deviate the results from the attainment of long-run equlibrium.Hence their inclusion is justified. The random effect panel estimation procedure is applied to the panel cointegrating relation. The results clearly reflect that FDI contributes positively to economic growth followed by significant coefficients for human capital and infrastructure, which supports the empirical literature. The findings confirm that certain Asian economies do not satisfy the threshold education and infrastructure levels and hence these countries need to invest more in education and infrastructure.

A more ambitious policy to upgrade the local environment, enhance human capital endowment in terms of skills and expertise ,creating strong infrastructure base in tandem with FDI inflows is complementary to economic growth. Hence Asian economies can reap the benefits of foreign capital in terms of its capabilities measured by the levels of human capital and infrastructure.

References(10pt)

- Adewumi, S. (2006). The Impact of FDI on Growth in Developing Countries: An African. *Jonkoping International Business School , Sweden* .
- Agosin, M. R. (2000). Foreign investment in developing countries: does it crowd in domestic investment ? *United Nations Conference on Trade and Development Discussion Papers No 146* , 1-16.
- Aleksynska, M., Gaisford, J. and Kerr, W. (2003). Foreign Direct Investment and Growth in Transition Economies. *MPRA Paper* No. 7668.
- Alexander, I. a. (2000). Infrastructure restructuring and regulation : Building a base for sustainable growth. *Policy Research Working Paper Series No 2415 Washington DC* .
- Alfaro, L. (2003). Foreign Direct Investment and Growth: Does the Sector Matter? *Harvard Business School Working Paper* .
- Ali Yousif, Y. (2002). Financial Development and Economic Growth: Another Look at the Evidence from Developing Countries". *Review of Financial Economics II* , 131-150.
- Asteriou, D. a. (2007). *Applied Econometrics: A Modern Approach using Eviews.* Hampshire, UK and New York, USA: Palgrave Macmillan.
- Athreye, S. a. (2002). Private Foreign Investment in India: Pain or Panacea? *World Economy 24(3)* , 399-424.
- Bank, T. W. (2008). *World Bank Indicators.* The World Bank.
- Barro, R. a.-I.-M. (1995). *Economic Growth.* Cambridge, MA: McGraw Hill.
- Barro, R. a.-I.-M. (1997). Technological Diffusion, Convergence, and Growth. *Journal of Economic Growth 2(1)* , 1-27.
- Basu, P. C. (2003). "Liberalization, FDI, and Growth in Developing Countries: A Panel Cointegration Approach. *Economic Inquiry 41(3)* , 510-516.
- Berg, R. a. (2006). FDI and Economic Growth : A Time-Series Approach. *Global Economy 6(1)* .
- Granger, E. a. (1987). Cointegration and Error Correction: Representation, Estimation and Testing. *Econometrica 55* , 255-286.
- Harris, R. a. (2003). *Applied Time Series Modeling and Forecasting.* Chickester UK: Wiley Publications.

- Haug, A. (. (1996). Tests for cointegration: A Monte Carlo comparison. *Journal of Econometrics 71* , 89-115.
- Hausman, J. (1978). Specification Tests in Econometrics. *Econometrics 46(6):* , 1251-1271
- Herzer, et.al (2008). In Search of FDI-led Growth in Developing Countries: The Way Dorward. *Economic Modelling 25* , 793-810.
- Im, K. S. (2003). esting for Unit Roots in Heterogeneous Panel. *Journal of Economics 115 (1)* , 53-74.
- Kaushik,. et.al. (2008). Export Growth, Instability,Investment and Economic Growth in India: A Time Series Analysis. *Journal of Developing Areas*
- K.H.L, Z. (2001). Foreign Direct Investment Promote Economic Growth? Evidence from East Asia and Latin America. *Contemporary Economic Policy 19* , 175-85.
- Krugman, P. (1998). *What Happened in Asia?* Retrieved from MIT, Cambridge, Massachusetts.: http://www.web.mit.edu/krugman/www/DISINTER.html
- Kumar, N. (1995). Industrialization, Liberalization and Two Way Flows of Foreign Direct Investments: The Case of India. *Discussion Paper series No. 9504, The United Nations University,INTECH* .
- Olofsdotter, K. (1998). "Foreign direct investment, country capabilities and economic
- growth." *Review of World Economics* 134(3): 534-547.
- Pedroni, P. (2001). Purchasing Power Parity Tests in Cointegrated Panels. *The Rev. Econ.Statistics 83(4)* , 727-731.
- Perron, P. (1988). Trends and Random Walk in Macro Time Series: Evidence from a New Approach. *Journal of Economic Dynamics and Control 12* , 297-332.
- Sahoo, P. (2006). Foreign Direct Investment in South Asia: Policy, Trends, Impact and Determinants. *ADB Institute, Discussion Paper No. 56.*
- Sala-I-Martin, X. (2002). 15 years of new growth economics: What have we learnt ? *Journal Economia Chilean 5(2)* , 5-15.
- Schumpeter, J. (1911). *The Theory of Economic Development : An Inquiry into Capital,Profits,Credit,Interest and Business Cycle*. Cambridge Mass: Harvard University Press.

- UNCTAD (1999). Egypt: *Investment Policy Review*. Switzerland, United Nations.
- Woolridge. (2003). *Introductory Econometrics: A Modern Approach.* Mason Thomson.
- World Bank (1994).*World Development Report: Infrastructure for Development.OUP*
- Yusop, Z. (1992). Factors Influencing Foreign Direct Investment in the Manufacturing Sector of Malaysia. *Unpublished Master Thesis, Universiti Putra Malaysia, Malaysia*.
- Zhang, K. (2001). Does foreign direct investment promote economic growth? Evidence from East Asia and Latin Americ. *Contemporary Economic Policy 19(2)* , 175-185.