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STATEMENT OF THE PROBLEM
OBJECTIVES
HYPOTHESIS (ES)
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RESULTS & DISCUSSION
FINDINGS
RECOMMENDATIONS/SUGGESTIONS
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- Hunker, H.L. and A.J. Wright (1963), "Factors of Industrial Location in Ohio" Ohio State University, Nigeria.

CONTRIBUTIONS TO BOOKS

- Sharma T., Kwatra, G. (2008) Effectiveness of Social Advertising: A Study of Selected Campaigns, Corporate Social Responsibility, Edited by David Crowther & Nicholas Capaldi, Ashgate Research Companion to Corporate Social Responsibility, Chapter 15, pp 287-303.

JOURNAL AND OTHER ARTICLES

- Schemenner, R.W., Huber, J.C. and Cook, R.L. (1987), "Geographic Differences and the Location of New Manufacturing Facilities," Journal of Urban Economics, Vol. 21, No. 1, pp. 83-104.

CONFERENCE PAPERS

- Garg, Sambhav (2011): "Business Ethics" Paper presented at the Annual International Conference for the All India Management Association, New Delhi, India, 19–23

UNPUBLISHED DISSERTATIONS

- Kumar S. (2011): "Customer Value: A Comparative Study of Rural and Urban Customers," Thesis, Kurukshetra University, Kurukshetra.

ONLINE RESOURCES

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WEBSITES

- Garg, Bhavet (2011): Towards a New Gas Policy, Political Weekly, Viewed on January 01, 2012 http://epw.in/user/viewabstract.jsp

IMPACT OF GDP ON FDI INFLOWS IN INDIA: AN ANALYSIS OF LONG TERM EQUILIBRIUM ASSOCIATION

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ABSTRACT

Foreign Direct Investment (FDI) was considered to be the lifeblood of economic development especially for the developing and underdeveloped countries. FDI is imperative for the economy as it is a momentum of growth, strengthens domestic capital, generates employment, augments productivity, and fosters exports through up gradation of technology and many more. Thus, there are innumerable determinants which lead to increase or decrease in the flows of FDI in any economy. In the light of this background, the current study aimed to determine long term equilibrium association between GDP and FDI inflows in India for the period of 1991 to 2014. GDP was taken as an exogenous variable while FDI was considered as an endogenous variable. To examine whether long term equilibrium association between the two variables existed or not, Engel-Granger Approach (or Bi-variate Approach) of Co-Integration test was used and further, Co-Integration Vector was built. The empirical results of co-integration revealed that there existed a long-run equilibrium association between FDI Inflows and GDP followed by Error Correction Mechanism.

KEYWORDS

FDI, GDP, co integration, equilibrium, economic growth.

JEL CLASSIFICATION

C22, F43, F21.

1. INTRODUCTION

FDI gained huge amount of significance globally as an instrument of international economic integration. Foreign direct investment (FDI) was of immense importance to developing countries in their efforts to catch up and develop their economies (Hooda, 2011). Foreign direct investment (FDI) refers to the net inflows of investment to acquire a lasting management interest (10% or more) in an enterprise operating in an economy apart from that of the investors (Laura, 2014). Foreign direct investment was the sum of equity capital, reinvestment of earnings and other long or short term capital as shown within the balance of payments. It usually involved participation in management, joint venture, transfer of technology and expertise (Malankar, 2013). FDI was distinguished from portfolio investment as the former provided an opportunity to the investor to have an effective voice in management and was more stable form of investment whereas the latter was concerned with maximising short term returns and a passive investment in the securities of another country such as stocks and bonds (Thuhid, N et.al.2016).

There were two main strategies of investing in a foreign country (Lahiri, 2009):-Greenfield Investment (an investment made to set up new facilities in the host Country), Mergers and Acquisitions (a foreign investor takes over an existing Company).A foreign company could as well choose a form of International Joint Venture (Gentvilaite, 2010).

There was plethora of factors that stimulate FDI inflows in a particular country. FDI usually proved conducive to the host country. Various benefits which India could avail through FDI Inflows were use of advanced technology, expertise, better infrastructural developments, widened product basket, raising standard of living, uplifting the brand quality, fostering competitiveness, improved foreign relations, boosting exports, and providing India with a global platform (Rahul S, 2011).

2.1 REVIEW OF LITERATURE

The section briefly discusses some of the important studies of relationship of macro-economic variables with FDI inflows in India.

Kamath, G.B. (2009) showed that exchange rate and economic growth seemed to show least impact on FDI inflows in Indian economy and human capital and openness of the economy played a significant role in attracting inflows. The study made use of linear regression analysis using Ordinary Least Square equation.

Gentvilaite, R. (2010) using Panel Regression discovered that among various determinants chosen for the study, significant determinants were private sector, openness (share of trade in GDP), R&D expenditures and infrastructure.

Ranjan, V. & Agrawal, G. (2011) using Random Effect Model in the study revealed that market size, trade openness, labor cost, infrastructure facilities and macro-economic stability and growth prospects were potential determinants of FDI inflow in BRIC whereas gross capital formation and labor force were insignificant, although macroeconomic stability and growth prospects had very little impact.

Meerza, S.I.A. (2012) investigated empirically the causal relationship between trade, foreign direct investment (FDI) and economic growth of Bangladesh for the period of 1973 to 2008. To analyze the same, Johansen Co integration test and Granger causality test was used. The co -integration analysis suggested that there was a long run equilibrium relationship among the variables. The results of Granger causality test identified that there was a causal relationship among the mentioned variables. The results of the study revealed that economic growth of Bangladesh led both FDI and export growth and it was observed in the study there was a unidirectional causal relationship between FDI and export with direction from export to FDI.

Gaikwad, P.S. (2013) analyzed the effects flow of foreign direct investment (FDI) arising from the implementation of liberalization polices on the gross domestic production (GDP) growth in Indian economy using a Cobb–Douglas production function and ARDL method during the period 1990-2008. The empirical results of the study showed that in the long run there was a long-run relationship among the growth of gross domestic production and its major determinants of the labor force, the real capital and the real foreign direct investment. The findings of the study indicated that foreign direct investment had positive effect but small significant on Gross Domestic Production, while the labor force and capital had the most effect on gross domestic production.

Nosheen, M. (2013) investigated the impact of foreign direct investment on Growth (GDP) for Pakistan. It studied a long run relationship between the foreign direct investment and gross domestic investment in Pakistan. By using co integration analysis, the study demonstrated that long run relationship was observed between the two variables. The GDP was taken as dependent variable while FDI was considered as an independent variable. The data used for the study purpose was from 1980 to 2010. The results of the study showed that there was a long term relationship between GDP and FDI.

Khan, G.S.& Mitra, P. (2014) endeavored to explore the short run and long run causal relationship between selected macroeconomic variables (GDP, Exchange Rate & Inflation Rate) and FDI inflows in Indian context by applying Co integration test followed by Vector autoregression (restricted/unrestricted) model and Granger causality test. Further, with the help of simple regression model, the exponential growth rate of FDI inflows in India was calculated. Eventually, Chow test was employed to detect the presence of significant structural break in the data series of FDI inflows. The results of the study revealed that long run equilibrium was there among the concerned variables. The Granger-causality test results concluded that exchange rate and GDP statistically significantly influenced FDI, whereas, inflation rate was insignificant variable to predict FDI inflows. Further, the growth analysis result claimed that the total FDI inflows grew exponentially at a rate of 23% per annum. However, the results of Chow test exhibited that 1991-92 was a statistically significant structural break year in the context of FDI inflows in India.

Olatunji, L. and Shahid, M.S. (2015) established an empirical relationship between foreign direct investment (FDI) and economic growth in Nigeria under the framework of co integration analysis over the period 1970-2010. The econometric evidence from the Engle Granger co integration tests suggested that there was no long-run relationship between FDI and economic growth in Nigeria. However, there was a short-run dynamic relationship between FDI and economic growth. And finally the study concluded that for the achievement of a long-run relationship between FDI and economic growth in Nigeria, there was a need to improve the business environment, with the provision of necessary infrastructure and political stability in the country.

RESEARCH GAPS: In the previous study (Gaikwad, 2013) GDP was considered as a dependent variable and FDI as an Independent variable, and study made an attempt to examine the impact of FDI on GDP in the context of an Indian Economy. However, the current study considered FDI as a dependent variable and GDP as an Independent variable in order to analyse the long run equilibrium association between them.

3. OBJECTIVE OF THE STUDY

The objective of the study was to ascertain long-term equilibrium association between GDP and FDI inflows for the period 1991-2014 in the context of Indian Economy.

4. HYPOTHESIS

To achieve the objective of the study, following hypothesis was incorporated.

H_o: There was no long-term equilibrium association between GDP and FDI Inflows during the post-liberalized period.

5. RESEARCH METHODOLOGY

In order to accomplish the objective of the study, following research methodology was incorporated.

5.1 SCOPE OF THE STUDY: The variables considered for the study were FDI Inflows and GDP for the period 1991 to 2014. FDI was taken as a dependent variable and GDP was taken as an independent variable. Relative figures of both the variables were taken in the study.

5.2 VARIABLES FOR THE PURPOSE OF THE STUDY

Macroeconomic variables of an economy were considered as the driving factors of FDI inflows to a country.

Foreign Direct Investment: FDI is considered as a long term commitment to host country and significantly contributes to gross fixed capital formation in developing countries. FDI has numerous advantages over other types of capital flows, for instance, its' greater stability and the fact that it does not create obligations for the host country. It not only provides financial resources for investment in a host country but also augments domestic saving efforts. FDI serves as an engine of economic growth, assists technological development, enhances foreign exchange reserves, and improves management and organizational competencies.

GDP: Gross domestic product is a monetary measure of the value of all final goods and services produced within a country's borders during a specific time period either quarterly or yearly. GDP includes all private and public consumption, government outlays, investments and exports minus imports that occur within a defined territory. In simple words, GDP is a broad measurement of a nation's overall economic activity.

5.2 PERIOD OF THE STUDY: The empirical analysis employed annual data on GDP and FDI for India for the period of 1991-2014. For the purposes of the study, secondary data was used. The secondary sources included World Development Indicators published by World Bank, FDI Fact Sheet published by Department of Industrial Policy & Promotion, Ministry of Finance, Handbook of Statistics on Indian Economy, Reserve Bank of India Bulletin, Economic Survey, International Financial statistics yearbook etc.

5.3 ANALYTICAL TOOLS: Before applying Co-Integration test on time series data, the properties of the time series data regarding stationarity of the data were checked using Augmented Dickey-Fuller (ADF) Unit root test and to apply Co-Integration test, it was seen whether the data was integrated at same order or not. The variables considered in the model were exhibited in natural Logarithms. Thereafter, in order to examine the impact of GDP on FDI Inflows in the context of Indian Economy, the below mentioned linear regression equation for the model was used:

$FDI_t = \alpha_t + \beta_t\, GDP_t + U_t$

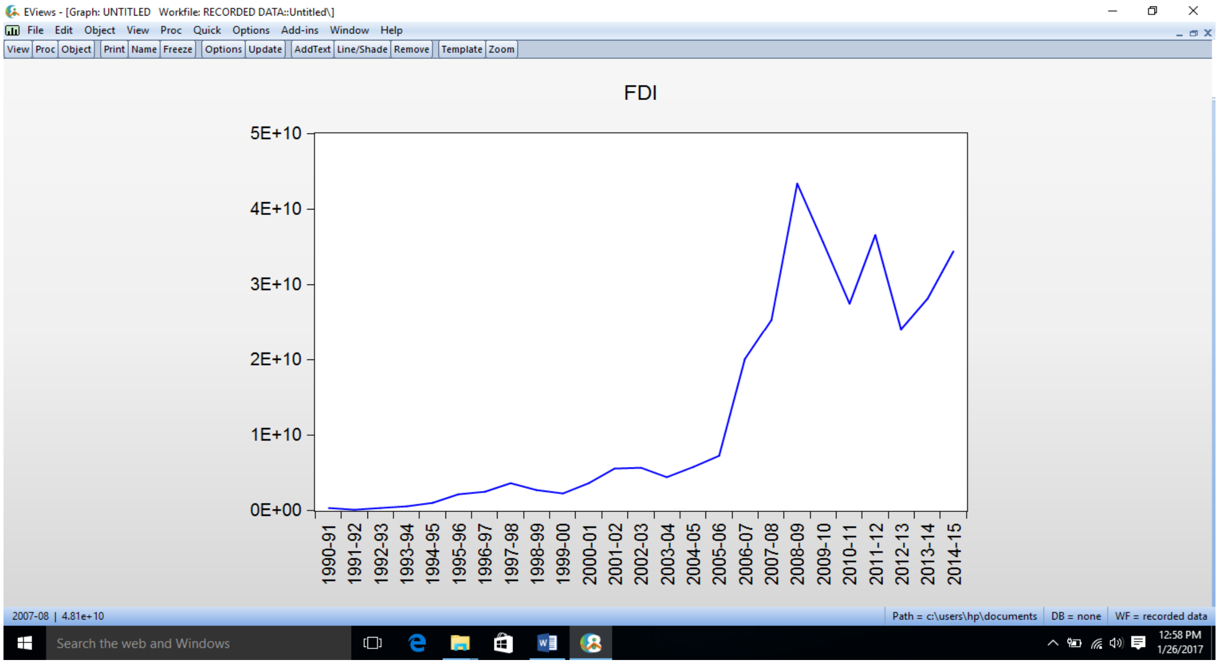
Where; FDI and GDP represented Foreign Direct Investment and Gross Domestic Product at a particular time respectively while U_t represented the "noise" or error term; α_t and β_t represented the slope and coefficient of regression. The coefficient of regression, β_t indicated elasticities, i.e., how a unit change in the independent variable (GDP) affected the dependent variable (FDI). The error term was incorporated in the equation to cater for numerous other factors that may influence FDI (Egbo, 2011)

Further, to examine Co-integration between GDP and FDI inflows, Engel-Granger Approach of Co-Integration was used. If both the variables were co integrated, there existed a long-run relationship between them. On the other hand, if the variables were not co integrated, there was no long-run relationship between the selected variables. It was only after Co-Integration between the two variables that Error Correction Mechanism was built.

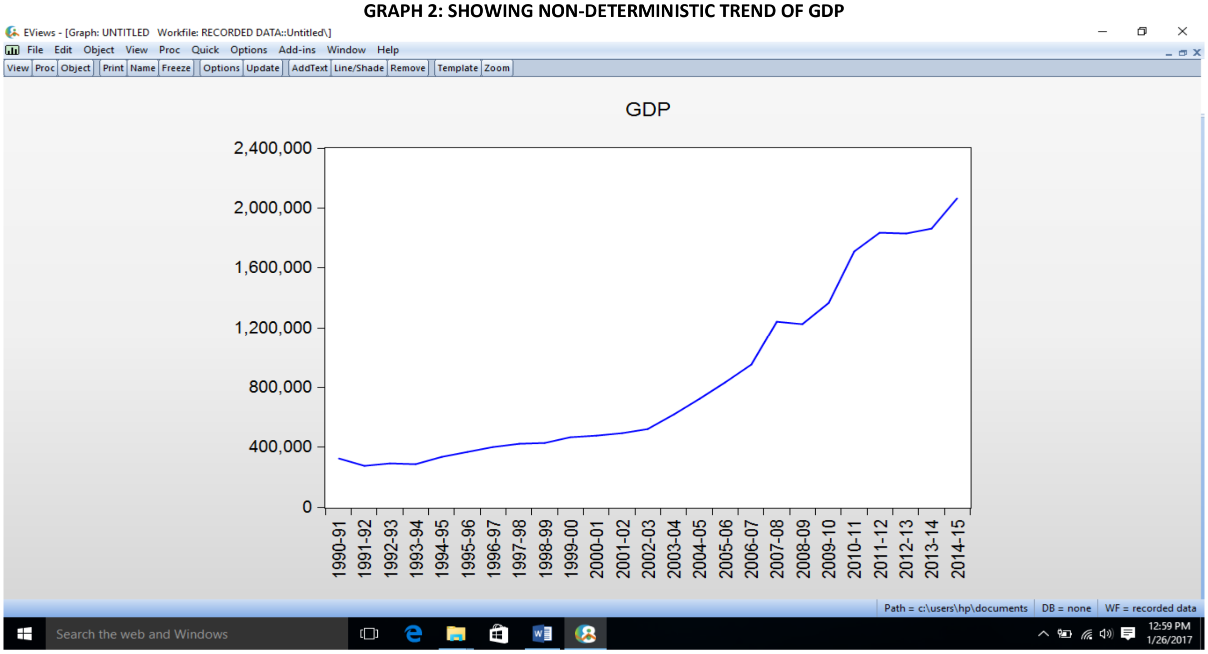
6. DATA ANALYSIS & INTERPRETATION

The application of Augmented Dickey Fuller Unit root test on the current data revealed that data was Stationary at order of Integration one due to the existence of Difference Stationary Process and thus, facilitated the application of Co-Integration Test. With the help of Graph, it was observed that the data had a Difference Stationary process (Phillips, et al 1988).

GRAPH 1: SHOWING NON-DETERMINISTIC TREND OF FDI INFLOWS



GRAPH 2: SHOWING NON-DETERMINISTIC TREND OF GDP



The plots indicated in Graph 1 and Graph 2 showed an upward trend, indicating that the mean, variance and covariance of the series was changing and was not static over a period of time. Thus, it suggested that the series had a unit-root and was non-stationary in nature. (Shumway, at el, 2011)

Ho: - There was a Unit Root in the series. (Data was Non-Stationary)

Ha:-There was no Unit Root in the series. (Data was Stationary)

Thus, for applying Co-Integration test, the basic assumption was that data ought to be stationary at same order of Integration. Thus, the first step was that through Augmented Dickey Fuller Unit Root test, the stationarity of the data was checked and both the variables came out to be stationary at order of Integration 1 with Drift model.

FDI~I (1)

GDP~I (1)

TABLE 1: RESULTS OF ADF TEST WITH INTERCEPT/DRIFT ONLY

Variables	Level	Ist Difference	Null Hypothesis	Results
FDI	-1.3471021 (0.5905)***	-6.082140 (.0000)***	Rejected at Ist Difference	Variable is stationary at 1st difference
GDP	-.951901 (.9945)***	-5.265267 (.0003)***	Rejected at Ist Difference	Variable is stationary at 1st difference

Source: Author's own work

Notes: denote significant at 5% using t-stat approach

Null Hypothesis (H_0): Selected variable was not stationary

Alternative Hypothesis (H_1): Selected variable was stationary

The second step before testing Co-Integration between the variables was to estimate the equation using OLS Regression which displayed the following results:

TABLE 2: OLS REGRESSION

Dependent Variable: FDI				
Method: Least Squares				
Date: 02/04/17 Time: 15:58				
Sample: 1 25				
Included observations: 25				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-5.40E+09	2.25E+09	-2.397744	0.0250
GDP	21406.94	2173.302	9.849961	0.0000
R-squared	0.808368	Mean dependent var		1.29E+10
Adjusted R-squared	0.800036	S.D. dependent var		1.43E+10
S.E. of regression	6.39E+09	Akaike info criterion		48.06957
Sum squared resid	9.38E+20	Schwarz criterion		48.16708
Log likelihood	-598.8696	Hannan-Quinn criter.		48.09661
F-statistic	97.02174	Durbin-Watson stat		1.108456
Prob(F-statistic)	0.000000			

Thus, Co-Integration Vector was: - $\begin{bmatrix} C & -5.40\text{E}+09 \\ GDP & 21406.94 \end{bmatrix}$.

The third step in Engle Granger procedure was to examine the stationarity of residuals at model none through ADF Unit root test. Engel-Granger Approach of Co-Integration exhibited that residuals were stationary at none model (i.e. without drift and intercept), thereby, disclosing the existence of long run equilibrium association between GDP and FDI inflows in an Indian Economy.

TABLE 3: RESULTS OF CO-INTEGRATION TESTS

Variables	Level	Results
Resi_fdi(-1)	-2.941994 (.0051)**	Stationary at none thus, co-integration exists between the variables.

**significance at.05 level

Residuals in Matrix Form was presented as

I_t= FDI_t –ά- β GDP_t

= [1- ά- β`] [FDI $_t$ 1 GDP $_t$]

Thus, Co-Integration existed between GDP and FDI inflows during the post-liberalized period. As per Engel Granger Approach (1987), if the variables were co integrated, then there must prevail vector error correction mechanism (VECM) (Egbo, 2011). Thus, Error Correction Term was calculated as:

TABLE 4

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	9.82E+08	1.54E+09	0.638525	0.5300
D(GDP)	7331.330	13525.02	0.542057	0.5935
RESI_FDI(-1)	-0.483837	0.205248	-2.357327	0.0282

The above table made it clear that Growth in GDP would positively contribute growth in FDI. Furthermore, 1% increase in the growth of GDP would accelerate FDI by 7331 percent. It was an instantaneous impact. In addition to, the result further revealed that GDP was found to be complementary with FDI. As residual was negative and statistically significant (as p value was less than.05), thus the model was considered to be stable. Thus, the error correction term was -0.483837 rapid speed of convergence to equilibrium (Gaikwad, 2013).

7. CONCLUSIONS

The study used annual time series data of GDP and FDI Inflows in India from 1991 to 2014 in order to identify long run equilibrium association between them. Before applying any statistical test on the data series, it was important to find out the order of integration of the variables by applying ADF test of stationarity. However, it was found that GDP and FDI were integrated of order one [I (1)]. The stationarity of the data was checked using Augmented Dickey Fuller test. The empirical analysis suggested that the variables had a difference stationary process. The study employed Engel Granger Approach of Co-Integration to determine long run equilibrium association between the variables which proved that there existed Co-integration between the variables. Further, error correction term was built which stated that growth in GDP was found to be complementary with growth in FDI. The error correction coefficient, estimated at -0.48 was statistically significant and suggested a rapid speed of convergence to equilibrium (Gaikwad, 2013).

8. SCOPE FOR FURTHER RESEARCH

As the present study considers only two variables i.e. FDI Inflows and GDP in the context of an Indian Economy, a developing economy, however, in future, research could be done by considering the same variables of other developed or developing countries and thus, Panel Co-Integration test could be applied. Furthermore, by selecting more variables in the study of various countries for longer time period, Auto Regressive Distributed Lag Model could also be applied in order to determine Long run equilibrium between the considered variables.

REFERENCES

1. Amaya G, C.A. and Rowland, P. (2004), "Determinants of Investment Flows into Emerging Markets," Working Paper, Banco de la Republica, Number 131. www.banrep.gov.co/docum/ftp/borra313.pdf.
2. Egbo, O.P. (2011), "Bivariate Casuality Analysis on the Impact of FDI Inflows and Economic Growth in Nigeria," Journal of Internet Banking and Commerce, ISSN: 1204-5357.
3. Gaikwad, P.S. (2013), "The Impact of Foreign Direct Investment (FDI) On Gross Domestic Product (GDP) in Indian Economy," Information Management and Business Review, Vol. 5, No. 8, pp. 411-416.
4. Gentvilaitė, R. (2010), "Determinants of FDI and its Motives in Central and Eastern European Countries," Research Paper, Lund University.
5. Gudaro, A.M., Chhapra, I.U. and Sheikh, S.A. (2012), "Impact of Foreign Direct Investment on Economic Growth: A Case Study of Pakistan," Journal of management and Social Sciences, Vol. 8, No.2, pp. 22-30.
6. Hooda, S. (2011), "A Study of Fdi and Indian Economy," Thesis, Department Of Humanities and Social Sciences, National Institute of Technology, Kurukshetra.
7. Hussain, F. and Kimuli, C.K. (2012), "Determinants of Foreign Direct Investment Flows to Developing Countries," SBP Research Bulletin, Volume 8, Number 1.
8. Kamath, G. B. (2009), "Macroeconomic Determinants of Foreign Direct Investment in India," Bauddhik, Vol. 1, No. 2.

9. Khan, G.S. and Mitra, P. (2014), "A Casual Linkage between FDI Inflows with select Macroeconomic Variables in India- An Econometric Analysis," IOSR Journal of Economics and Finance, Volume. 5, Issue 5, pp.124-133.
10. Laura A. (2014), "Foreign Direct Investment: Effects, Complementarities, and Promotion," Harvard Business School Working Paper, No. 15-006.
11. Malankar, S. (2013), "Indian Economy and Foreign Direct Investment," International Monthly Refereed Journal of Research in Management & Technology, Volume.2, pp.28-32.
12. Md. Thuhid Noor, Shahjahan Ali, Khandaker Jahangir Alam, Md. Shafiul Islam (2016), "Significance of Foreign Direct Investment on Economic Growth in Bangladesh," International Journal of Scientific & Engineering Research, Vol. 7, No. 9, pp.495-503.
13. Meerza, S.I.A. (2012), "Casual Links between trade, foreign direct investment and economic growth for Bangladesh," Working paper, Department of Economics, South Dakota State University.
14. Nayak, D. and Choudhury, R.N. (2014), "A selective review of foreign direct investment theories," ARTNeT Working Paper Series No. 143, Bangkok, ESCAP. Available at www. artnetontrade. org.
15. Nosheen, M. (2013), "Impact of Foreign Direct Investment on Gross Domestic Product," World Applied Sciences Journal, Vol.24, No. 10, pp. 1358-1361.
16. Olatunji, L. and Shahid, M.S. (2015), "FDI and Economic Growth in Nigeria: A Co-Integration Analysis," Business and Economic Research, Vol.5, No. 1.
17. Phillips, C.B.P. and Perron, P. (1988), "Testing for a unit root in time series regression,"Biometrika, Vol.75, No.2, pp.335-346
18. Ranjan, V. (2011), "FDI Inflow Determinants in BRIC countries: A Panel Data Analysis," International Business Research Vol. 4, No. 4.
19. Sahgal R. (2011), "Foreign Direct Investment Decision-Making Processes: The Case of Swiss Companies in India", Dissertation, University of St. Gallen.
20. Sahni, P. (2012), "Trends and Determinants of Foreign Direct Investment in India: An Empirical Investigation," IJMT Volume 2, Issue 8.

WEBSITES

21. http://Business.Mapsofindia.Com/Fdi-India/States/Haryana-Economy.Html
22. http://Commerce.Nic.In/Eidb/Default.Asp
23. http://data.worldbank.org/indicator/FI.RES.TOTL.CD?page=5
24. http://Fdiindia.In/Guidelines-For-Consideration-Of-Fdi-Proposals-By-Fipb.Php
25. http://Finmin.Nic.In/Reports/Ind_Ext_Debt.Asp
26. http://Theindiaeconomyreview.org/…ticle.aspx?aid=106&mid=5
27. http://www.Economywatch.Com/Database/Foreigninvestment2.Html
28. http://www.tradingeconomics.Com/India/Industrial-Production
29. Press Release, Government of India Department of Industrial Policy and Promotion, Ministry Of Commerce And Industry Consolidated FDI Policy (April 5, 2013).
30. www.finance.duke.edu
31. www.indexmundi.com
32. www.Planningcommission.Nic.In/Aboutus/Committee/Strgrp/Stgp_Fdi.Pdf
33. www.Rbidocs.Rbi.Org.In/Rdocs/Notification/Pdfs/15mcnfdi270613.Pdf
34. www.theglobaleconomy.com

BOOKS

35. Shumway, Robert H. and Stoffer, David S., (2011), "Time Series Analysis and its applications." Springer, New York.

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