

A Study on Foreign Direct Investment of South Asian Association of Regional Countries (SAARC)

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Abstract

This paper examines the impact of factors determining foreign direct investment (FDI) inflow of South Asian countries using annual data sets from the period 2005-2017 and estimates overall trends and factors impacting FDI in South Asian countries. The study utilizes panel data analysis and examines the selected variable like GDP, export and import of goods and services, and exchange rate. The empirical results are robust in general for alternative variable determining FDI inflow. The policy inference of the study is that expanding the interest of economic integration around the globe and interdependence of FDI between member's countries is a vital feature for maintaining the sustainability of growth.

Key Words: FDI, South Asia, Panel data, Export and import of goods and service and official Exchange Rate.

1. Introduction

The world experienced a massive transformation process of globalization in terms of economic production and investment. The role of investment (FDI) in the process of transformation is very decisive. FDI has become a principle criterion of economic development in both developed and developing countries. FDI is defined as an 'investment involving a long-term relationship and reflecting a long-lasting interest and control by a resident entity of one country of an enterprise resident in a different economy'. FDI influences the income, prices, production, employment, development and economic growth and general welfare of the South Asian countries. The benefit of FDI can be in the form of knowledge and technology spillover, employment generation and enterprise development. FDI going in and out of these emerging and transition economies like Sri Lanka, Pakistan, India, Bhutan, Afghanistan, Nepal, Maldives and Bangladesh collectively known as South Asian

countries, which are of economic significance in the process of Global Transformation. It was seen that FDI inflow in south Asian countries was \$470billion in 2018.

In 2017, FDI flow witnessed a descending trend; global flows of foreign direct investment (FDI) fell by 14% in 2017 to an estimated \$1.52 trillion. As a result of higher expected FDI growth in developed countries, the regional distribution of FDI may tilt back towards the developing countries in the global inflow. FDI flow of developing economies reached to 46% of global inflow, developing Asia (33%) continues to be the region with highest FDI inflow significantly above European Union (21%) traditionally the region with the highest share of global FDI. FDI inflow was up also in the other major developing regions, Africa (3%) and Latin America and the Caribbean (10%). Although FDI to developed economies resumed its recovery path after the steep fall in 2012, it remained at a historically low share of the total global FDI flow (49%) and still 57% below its peak in 2007. Thus developed countries maintained their lead over developing countries. Developing economies and transition economies now constitute

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half of the top 20 economies ranked by FDI Inflow.

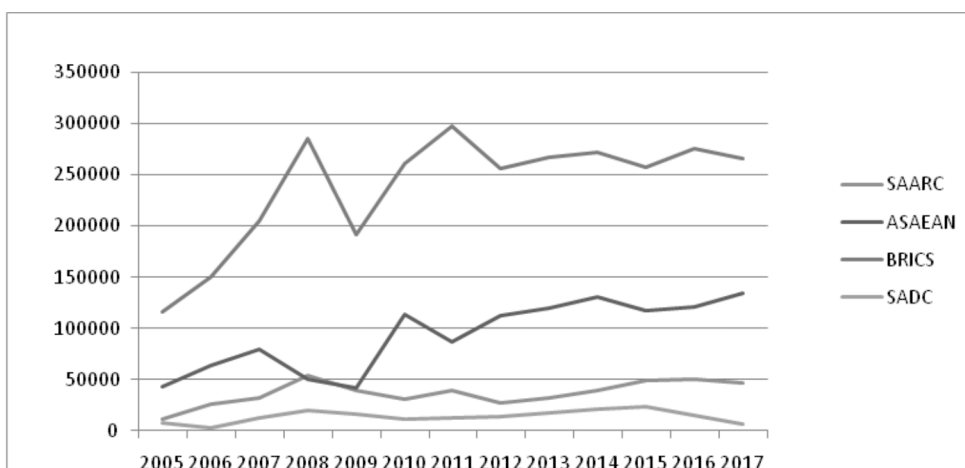
South Asia (Sri Lanka, Pakistan, India, Bhutan, Afghanistan, Nepal, Maldives and Bangladesh) are eight biggest economies **that are expected to remain the fastest-growing region in the world** with 6.9 percent in 2018 and it was anticipated that growth should

further strengthen to 7.1 percent on average in 2019-20 despite the brittleness in some emerging markets. “FDI recovery continues to be on a bumpy road” said UNCTAD Secretary-General Mukhisa Kituyi. It was seen that FDI in SAARC countries w continuously decreasing from the previous year as shown in below Table 1.

Table 1: FDI Inflow to selected regional and interregional groups (Amt. in million)

Regional Group	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
SADC	8255.7	3304.3	12561.2	19141	15966.49	11779.4	13193.05	14069.88	16877.27	20591.4	23101.14	14962.1	7229.9
SAARC	11292.9	26271.9	32576.8	54617	39495.73	31262.83	40049.95	27704.74	32547.62	39333.7	49129.9	50825.0	47028.2
ASAEAN	42738.1	63794.18	78584.7	49508	41386.31	112977.4	86012.2	111823.5	118913.5	129544.	117278.6	120607.	133764.2
BRICS	116116	149618	204915.7	285537	191836.8	261203.6	297438.5	256120.2	267372.1	271374.	257552.6	275600	265557.4

Source: UNCTADFDI-TNC-GVC information system, FDI/TNC Database (www.unctad.org/fdistatistics). Note : SAARC South Asia association of regional council, ASEAN Association of southeast Asian Nation, BRICS Brazil Russia, India, China, South Africa, SADC



Source: Predicted by Researcher

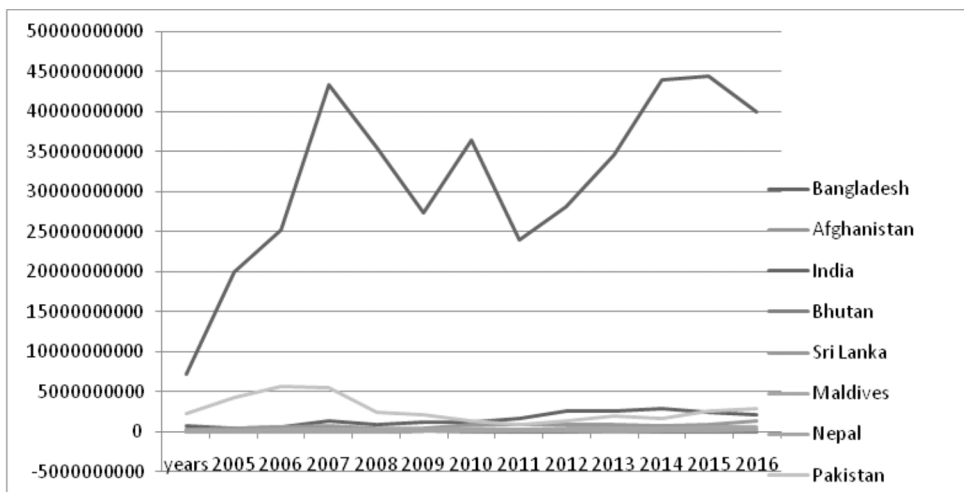
It was seen from the above trend that FDI Inflow in SAARC countries is 3%, ASAEAN is 9 %, BRICS is 18 % and SADC is 0.5%. It was seen from the above table that compounded annual growth rate was decreasing for SAARC by -0.67 because of instability in India due to demonetization and GST. And India is the largest recipient of FDI Inflow in South Asia as shown by the below trends after India, Pakistan is the largest recipient of FDI in SAARC.

2. Review of literature

Asmat Ali Refhat-un-Nisa Akib Ahmed and Amir

Amanullah (2015) “The present study attempts to investigate the growth and development of the scholarly literature published by the SAARC Nations. The study is based on the Data harvested from Scopus-one of the largest indexing and abstracting database in the fields of science, technology, medicine, social sciences and arts and humanities. Data congregated encompasses research publications published for the period, 1900- Dec 2013.”

Duran (1999) used panel data and time series technique to find out the drivers of FDI for the period



Source: Predicted by Researcher

of 1970-1995. The study indicated that the size, growth, domestic saving, country's solvency, trade openness and macroeconomic stability variable are catalyst of FDI. The UNCTAD (1999) advocated both positive and negative association between growth and FDI, depending upon the incorporation of various variable like infrastructure, market integration etc.

DierkHerzer(2009) "Purpose – The purpose of this paper is to examine the impact of outward foreign direct investment (FDI) on economic growth. In this Two econometric approaches are used: cross-country regressions for a sample of 50 countries and time-series estimators for the USA and Both approaches tell the same story: outward FDI is positively associated with growth. This finding is robust to several model specifications, potential outliers, and different estimation techniques. In addition, Granger-causality tests for the USA indicate that causality is bidirectional, suggesting that increased outward FDI is both a cause and a consequence of increased domestic output. This paper, in contrast, deals with the effects of aggregate outward FDI on the economy as a whole.

The classical model for determinants Of FDI begins from the earlier research work of Dunning (1973, 1981) which provide a comprehensive analysis based on ownership, location and internationalization paradigm. Lucas (1993) examined the determinates of FDI inflow for select East and south Asian

economies during 1960 to 1987 by using a model based on traditional derived –factor of a multiple product monopolist .The study finds that FDI inflow are more elastic with respect to cost of capital than wages and also more elastic with respect to aggregate demand in export than domestic demand.

Balasubramanyan et al. (1996) found significant positive association between FDI and economic growth and suggest that the above relationship is more holistic in the export promotion policy in contracts to import substitution policy of the country.

Sing and Jung (1996) argued that political risk, business, condition and macroeconomics policies matter for FDI in developing countries.

The above studies indicate mixed result and mostly provided information about determinants related to FDI inflow in SAARC Countries. Thus the review helped in choosing the factors or alternative that may gauge empirical analysis of determinates of FDI in SAARC.

3. Data and methodology

This section describes the data used for empirical analysis. The data comprises of annual observation from 2015-2017 for eight emerging economies namely Sri Lanka, Pakistan, India, Bhutan, Afghanistan, Nepal, Maldives and Bangladesh collectively known as South Asian countries. The

dependent variable is FDI inflow in respective countries in current US \$ taken from world development indicator published by world bank (2017). It is denoted by FDI. The required data set

for the selected countries was obtained from “World Development Indicator (WDI)”. The variable used for measuring the financial development are described in Table 2.

Table 2: List of variable used in the Analysis

Variable	Definition	Reason for inclusion	Source
FDI	Foreign direct investment	Measuring Impact of FDI	WDI
GDP	Gross domestic product	Measure of market size	WDI
E&I	Export and import of goods and services	Measure of openness	WDI
Official ER	Official Exchange Rate	Measure of currency value	WDI

This study compliments the exiting literature by providing empirical analysis on South Asian countries only as the exiting studies contain large number of countries but do not have China and South Africa in their list which is the major recipient of FDI in the world. In this study the dependent variable is FDI, net inflow (BOP in current US \$ and independent variable is Export and import of goods and service, GDP per capita (current US\$), official exchange rate (LCU per US\$, period average / consumer price).Real effective Exchange rate is taken for the more accurate results.

Based on the above hypotheses posed, the estimation model is as follow:

$$LFDI = \alpha + \beta_1(LGDP) + \beta_2(LE\&I) + \beta_3(LOER) + \epsilon$$

Where,

LFDI : Log value of Foreign Direct Investment

LGDP :: Log value of Gross Domestic Product Per capita

LE &I :: Log value of Export and Import of goods and services

LOER: Log value of Official exchange rate

This study comprise analysis of eight emerging economies of the world know as South Asian countries

4. Panel Data Analysis

The panel data estimation is employed in the study to capture the dynamic behavior of the parameters

and to provide more efficient estimation and information of the parameters. Panel data technique is used because of its advantage over cross sectional and time series analysis in using all the information available, which are not detectable in pure cross sections or in pure time series. Battag and kao (2000), Hsiao (1958, 1986) and Baltagi (1995) argued panel data sets posses several major advantages. Panel data suggests individual heterogeneity to deducted the risk of producing biased result and revised a large number of data points to enhance the degree of freedom and variability and to be able to study the dynamic of adjustments. The panel data model includes three different methods.

- 1) Random effects
- 2) Fixed effect
- 3) Common constant method

The panel data estimation is employed in the study for the SAARC to capture dynamic behavior of the parameter and to provide more efficient estimation and information of the parameter. Here the Hausman test (1978). Prove that we have to use the random affect model for the analysis. Random affect model assist in controlling for unobserved heterogeneity when the heterogeneity is constant over time and not correlated with independent variables. This constant can be removed from the data through differencing, for example by taking a first difference which will remove any time invariant components of the model.

Table 3: Inter correlations Matrix

Variables	LFDI	LGDP	LE&I	LOER
LFDI	1			
LGDP	0.20* 0.012	1		
LE&I	0.46* 0.00	0.017 0.84	1	
LOER	0.03 0.66	-0.11 0.18	0.08 0.33	1

Note: Calculated by researcher and star (*) shows significance at the .05 level

5. Empirical Results

Present study analysis technique to estimate the dynamic behavior of determinants of FDI inflow in SAARC beforeproceeding to estimated with panel data analysis, correlation analysis has been carried out. Correlation matrix indicates correlation of LFDI with LGDP to be (0.20) and with LE&I (0.46). Existence of high correlation was found among the independent variable as shown in above Inter-correlation matrix. The variable Official Exchange Rate was found to be least correlated with the variables. The existence of correlation among the independent

variable will lead to problem of multi -collinearity in the estimation, still we considered these variables because of the statistical nature of panel data estimation which take care of the collinearity problems. So, we have chosen Panel data analysis, and in panel data analysis we have used Random Affect method of Estimation because fixed effect model is rejected in the analysis based on Hausman specification test. Further, highest value of Hausman test rejects the validity of fixed effect test. The estimates through panel data analysis through Random Affect Method are show in Table 4.

Table 4: Panel Data estimates through Random Affect Method

LFDI	Coefficient	St.Error	t-value	p-value	Sig.
LGDP	1.535	0.795	1.93	0.053	**
LE&I	1.337	0.486	2.75	0.006	**
LOER	0.012	0.077	0.16	0.877	
Mean dependent var	18.329		SD dependent var	6.769	
Overall r-squared	0.256		Number of obs	144.000	
Chi-square	14.866		Prob > chi2	0.002	
R-squared within	0.038		R-squared between	0.708	

Note: The panel data estimation result based on Random effect and p value is less than equal to 0.05 which is indicated by the ** (stars) in the above table.

The empirical result (in Table 4) achieved from random estimate show that regression model with dependent variable LFDI fits well with independents determinant variables as value of adjusted R-Squared is significant between(0.70). Highest value of R squared also

indicates that the explanatory variable included in the equation can explain most of the variation in the dependent variable between the nation. The coefficient of the Gross domestic product at per capita and Export and imports of goods and services are statistically

significant at 5 percent level which shows that determinates are potential determinants of FDI inflow, where the Exchange rate is not significant which indicate that this determinants might not be important determinants in this case. The positive value of the coefficient indicates perfect synchronization of determinants variable with FDI inflow whereas negative sign shows that they affect FDI inflow in reverse manner i.e. decreasing value of the determinants. The coefficient of LGDP and LE&I show that foreign investor are highly sensitive to the market growth as 1 percent increase in the variable leads to 1.53 percent and 1.33 percent increase in FDI respectively. Whereas coefficient of Official Exchange rate indicates that 1 percent increase in leads to 0.012 percent increase in FDI which is very nominal in nature.

6. Conclusion:

As stated earlier the motive of the study is to examine the factors that determine the FDI inflow to the SAARC countries. Economic integration provides development and security to the respective countries and world at large. It can be concluded from the analysis that financial system that is growth of the GDP plays a very significant role in mobilizing FDI inflow in to the nation. The study made an attempt to recognize the factor determinants the FDI inflow in SARRC countries from 2000-2017 for which determinants include GDP, Export and import and Foreign exchange rates. The study found the GDP and Export and Imports are potential determinants of the FDI inflow. The challenges for the SARRC countries isto maintain its GDP growth so that FDI inflow shouldcontinue and follow the upward trend. Moreover the governments of the respective countries

10. References

1. Baltagi, Badi H. (2008). *Econometric Analysis of Panel Data* (4th ed.). New York, NY: Wiley. pp. 17–22. ISBN 978-0-470-51886-1.
2. Diggle, Peter J.; Heagerty, Patrick; Liang, Kung-Yee; Zeger, Scott L. (2002). *Analysis of Longitudinal Data* (2nd ed.). Oxford University Press. pp. 169–171. ISBN 0-19-852484-6.
3. Laird, Nan M.; Ware, James H. (1982). "Random-Effects Models for Longitudinal Data". *Biometrics*. 38 (4): 963–974. JSTOR 2529876.

have to optimize their economic conditions to attract more FDI.

7. Policy Implication

GDP and Exports and Imports are crucial factors in engaging FDI, which may help to make appropriate policies for improving the performance of domestic economy. In addition, the business facilitating dimension in the form of treaties and investment promotion agencies may be supported by good political environments, corporate governance, efficient economic policies and sound infrastructure measure to exploit the benefits from FDI.

8. Limitation

The study analyzes the impact of determinants of FDI Inflow in the eight economies of the SAARC as a whole unit but it does not analyze how the selected determinants variable influence the FDI inflow on each country on individual basis. There are other important determinants which are not covered under this study like Gross capital formation, labourcost, work force, market capitalization, inflation etc. Labour cost are import determinants in the India, Pakistan, Nepal.

9. Scope For Further Research

The research can be further extended to analyze how profit remittance homes countries by direct investors contributes to current account deficit (CAD). It can be constructed from the above study that as a policy implication FDI can cause worsening of balance of payment position by causing current Account Deficit (CAD) in long run. Another area of further research can be sect oral analysis to enhance the understanding of the industry specific FDI flow and its determinants to analyze whether FDI stock and output are reinforcing manufacturing sectors along the primary sectors or not.

4. UNCTAD.(2017). World Investment Report. New York, United Nation
5. Sung, HL (2008). How investment Promotion affect attracting Foreign direct investment: Analytical arguments and empirical analyses. *International business review*.17(1):39-53
6. Sahoo, P. (2006) Foreign Direct Investment in South Asia: Policy, Trends, Impact and Determination .ADB institute Discussion paper no. 56
7. Dunning, J. (1981). International Production and multinational enterprise. London: Allen and Unwin
8. Vallejo, h. and Aguilar, C. (2002). Economics integration and the attraction of foreign direct investment : The case of Latin America. *In Seventh annual meeting of the Latin America and Caribbean economic association*. Madrid.
9. Agarwal, S. and Mohtadi, H. (2004). Financial market and the financing choice of firms: evidence from developing countries. *Global Financial Journal*, 15(1) : 57-70
10. Chakraborty, C. and Basu, P. (2002). Foreign direct investment and growth in India: A cointegration approach. *Applied economics* 34(9):1061-1073.DOI:10.1080/00036840110047019
11. Ranjan, V and Agarwal, G (2011). FDI inflow determinants in BRIC Countries: Apanel data analysis. *International business Research*,4(4):255-263. DOI:10.5539/ibr.v4i4.p225.
12. Lucas, R (1993). On the determinants direct foreign investment: evidence from East and South East Asia. *world development*. 21(3):291-406
13. Globerman, S. and Shapiro, D(2002). Global Foreign direct investment flow: The role of governance infrastructure. *world development*, 30(11):1899-1919.
14. Sing, H and Jun, K.(1996). The determinants of foreign direct investment in developing countries. *Transnational corporation*, 5(2):67-105.
15. <http://www.worldbank.org/en/region/sar/overview>
16. www.gfmag.com/topics/macro-economy-and-globalization/countries-most-fdi-inflows-2018