



Does Foreign Direct Investment Induces Societal Development in India?

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ABSTRACT

Objective – This paper argues the retrospective effect of foreign investment inflow. The FDI not only causes economic growth in the nation also it vindicate the societal development in the host nation. It is assumed that FDI does affect societal development either directly or indirectly also it can be constructive or dubious.

Methodology – The societal development indicators have been taken for the study such as access to electricity, refugee population, and total natural resource on rent. The Ordinary Least Square (OLS) method used for regression analysis, Augmented Dickey-Fuller (ADF) used to analyse stationarity and Autoregressive Distributive Lag (ARDL) used for empirical results.

Findings – The result shows the consistency in FDI inflows, but all the taken indicators have not experienced the positive effect of FDI on the societal development of a nation.

Novelty –Also, the policies of the government and initiative related to foreign investment inflow have major impact on societal growth in the nation.

Type of Paper: Empirical

Keywords: Electricity; FDI; India; Natural Resources; Refugee Population; Societal Development

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JEL Classification: A1; E01; M14; M16

1. Introduction

The foreign investment is contemplated as hefty source for economic growth in host nation since its inception. Along with monetary investment foreign direct investment also brings essential technological up-gradation, diverse work culture, brain-drain, technical know-how, foreign exchange, labor force participation and much needed influence in market space.

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The active role of foreign investment in boosting economy of host nation is indisputable. India unfurled its hands towards foreign investment with major economic reform in 1991. This was counseled by then Prime Minister P.V. Narasimha Rao and Finance Minister Dr. Manmohan Singh. This major step shaped the Indian economy and changed the perception of western investors for ever. Now, the two largest economies in world, India and China are competing against each other to forge their country into investment hubs. Till now, economists, academicians and researchers major interest lies in economic growth of nation by bringing in investments from overseas. The visualization of nations growth stand alone on economic development is utterly biased because societal development also plays a major part in shaping country's future. A wide income distribution difference within society is still a root cause for corporate greed in foreign investment, ignorance and asymmetrical growth in society. The focal point of researchers and academicians also reclines on economic interest. In foreign investments, societal interest always positioned in a loop because prime objective of these companies is to accumulate the maximum profit from host nation by exploiting cheap labor, rich natural resources, easy access to raw material, tax avoidance and bracing political benefits. This opens up a contentious debate on significant of FDI in societal growth of India as well as loopholes in surveillance on these investments. This is clear that FDI encourages economic prosperity but we can't ignore its retrospective impact on societal development. Thus foreign investment influences growth in society through corporate social responsibility and implanting industries in backward area. It provides employment to locale which uplifts their living standard, stimulates hygienic practices and helps them to access the basic facilities essential for human lives. India is diverse in population division, income parameters, natural resources, living standard which makes it a perfect blend to analyze the social development and indicators selected for comparison will give more accurate result. The paper will clearly define the role of FDI in societal development directly or indirectly.

Research Gap

The numerous studies are conducted on foreign direct investment and its impact on economic development of India but societal growth still not studied thoroughly. The studies related to establishment of relationship between FDI and societal development is rarely available and that too studied in segments. The factors contributing societal development such as poverty reduction, primary education, CO2 emissions, mortality rate, population growth, gender equality etc. are already discussed in earlier literature. In this paper the researcher has taken Access to electricity, Natural resources rent and Refugee population as societal growth indicators. The study tried to adjoin the relationship between FDI and taken societal development indicators. The researcher tries to explore significance of foreign direct investment for the development of taken societal development indicators such as access to electricity, natural resources rent and refugee population of India. Also, it will evaluate the annual growth of taken societal development indicators and foreign direct investment. The study will compel academicians, researchers and investors to look after the social aspect of the foreign investment as well.

2. Literature Review

Nabil Md. Dabour (2000) examined the perspective of foreign direct investment and country's general welfare. Also, the researcher insists to invest in building infrastructure and social sector. Particularly education and health sector because this enhance the labour productivity. Chr. Michelsen Institute (2004) provides evidence that corruption increases FDI flows in tertiary sector but there is no relationship elsewhere. Shraddha Sathe and Morrison Handley-Schachler (2006) their findings indicate that cultural and social indicators have significant impact on the FDI among which urbanization is the important one in India. Organization for Economic Co-operation and Development (2008) explored the relationship between FDI and social development. The study shows that foreign investors raise average wages in short-term within firms especially in emerging economies. They found out that there is a significant role for public initiatives

which designed to raise ethical labour practices within supply chain. Gaston GOHOU, Issouf SOUMARÉ (2010) in their paper confirms the positive relationship between FDI and reduction in poverty in Africa. This paper supports that in low-income African countries FDI is more effective in reducing poverty as compared to middle-income ones. Meltem Şengün Ucal (2014) developed a data set in paper and an econometric model to examine the relationship at macro level panel data set. This study proposed that FDI and poverty is statistically significant and have positive relationship between FDI and reduction of poverty in developing country. Olaf J. De Groot (2014) analyzed the impact of FDI on societal development and found that there is no significant impact of FDI on household consumption growth but impact of FDI is helpful in reducing income inequality in Latin America and Caribbean. University of Gothenburg (2016) in published bachelor thesis they found no causal link between FDI and societal development. In long run the significant effect is possible but impact of FDI in Gini-index is nothing in Latin America and Caribbean. Hanna Spinova, Kiyyaa Ougate (2017) reported that FDI is insignificant for life expectancy with respect to income level and Gini-index regression shows that FDI is significant with negative coefficient in developing European countries. Gabriel Adu (2018) findings suggest that even after contribution made by mining companies in rural development, the local communities and their lives affected negatively due to mining activities in Ghana.

3. Research Methodology

The study is empirical and data is collected from World Bank reports. It includes theoretical approach of policies and empirical analysis on FDI and growth in societal development indicators. The period of study is 25 years from 1993-1994 to 2017-2018.

3.1 Framework

To study the performance and evaluation of FDI and growth in societal development indicators in India the statistical tools such as Ordinary Least Square (OLS), Augmented Dickey Fuller (ADF) and Autoregressive Distributed Lag (ARDL) are used.

3.2 Tables

Table 1. Results of Fitting an OLS Model

Independent Variable	Dependent Variable	Coefficient estimate	t-stat	Std. Error	p-value
FDI	ATE	-0.1377	-1.7436	0.0790	0.0946
FDI	NRR	0.0066	0.7651	0.0086	0.4520
FDI	RPC	0.3981	2.2122	0.1799	0.0372*

Note: *Significant level at 5 percent

Result: Computed

Table 2. Results from the Augmented Dicky-Fuller Test

Variables	ADF test stat	p-value	First difference	p-values
FDI	-4.244759	p < .05		
ATE	1.214176	0.9971	-4.145576	p < .05
NRR	-2.115535	0.2406	-5.604561	p < .05
RPC	-2.399644	0.1523	-4.998737	p < .05

Note: *Significant level at 5 percent

Result: Computed

Table 3. Estimated long-run coefficient: ARDL (1, 1, 0, 0) model

Variable	Coefficient	Std. Error	t-Statistic	p-values
FDI(-1)	0.042505	0.220491	0.192772	0.8493
ATE	-3.617769	1.721359	-2.101693	0.0499
ATE(-1)	3.850594	1.79785	2.141777	0.0461
NRR	4.940416	4.509663	1.095518	0.2877
RPC	0.447203	0.291237	1.535529	0.142

Note: p-values and any subsequent tests do not account for model selection.

Result: Computed

Table 4. Error Correction representation of selected ARDL model (1,1,0,0)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
FDI(-1)*	-0.957495	0.220491	-4.342562	0.0004
ATE(-1)	0.232825	0.629903	0.36962	0.716
NRR**	4.940416	4.509663	1.095518	0.2877
RPC**	0.447203	0.291237	1.535529	0.142
D(ATE)	-3.617769	1.721359	-2.101693	0.0499

Note: * p-values incompatible with t-bounds distribution

** Variable interpreted as $Z=Z(-1)+D(Z)$

Result: Computed

3.3 Illustrations

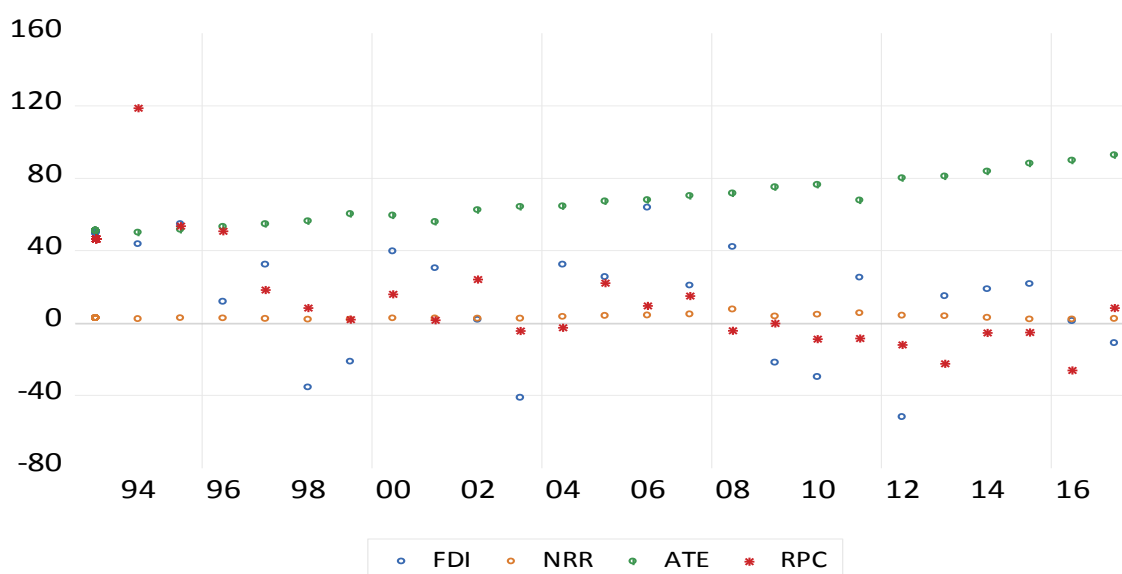


Figure 1. Annual growth in FDI, ATE, NRR and RPC (in percent)

4. Results

In this section, the result drawn from empirical analysis explains briefly the relationship between FDI and societal development.

4.1 Results from OLS, ADF and ARDL analysis

After fitting OLS model contained access to electricity, natural resources on rent, and refugee population dependent on the factor FDI. The researcher noticed that in case of refugee population, FDI is a significant

factor at 5 per cent level of significance (refer table 1) and FDI is not a significant factor for natural resources. In case of access to electricity FDI is not a significant factor but it's quite close to significance level. The result provided in table 2 shows that at a level of significance 5 per cent, all variables appears to be stationary after first-order differencing except FDI. In ARDL analysis (refer table 3), the probability value for access to electricity is less than 0.05 with a significant level of 5 per cent. Hence, there long run levels relationship exist between FDI and ATE. In case of NRR and RPC the null hypothesis is accepted. The error correction p-value (0.049) is significant and suggests a moderate speed of coupling to equilibrium. The result above in table 4, shows that FDI has no short-term impact on natural resources on rent and refugee population while has a short-term impact on access to electricity.

4.2 The trend in FDI growth and societal development indicators being studied

It is clearly seen that from Figure 1, there is a huge ebb and flow in foreign investment growth. The huge increase in FDI inflow noted in 2006-2007 with annual growth of 63 per cent which dipped down to negative in numbers in 2017-2018 with -11 per cent. The taken societal development indicators show a positive growth since 1993-1994. In 1993-1994, only 59 per cent of Indian population has access to electricity which observed to 92 per cent in the year 2017-2018. The motion in natural resources on rent doesn't detect much swings but in 2007-2008 country's 7.35 per cent natural resources was on rent which brought back down to 2.14 per cent in 2017-2018 quite closer to figure in 1993-1994. The percentage growth in refugee retreat is also decreased in India since 1993-1994 till 2017-2018. There was 118.69 per cent annual growth of refugee population from India in 1994-1995 which merely recorded as 8.22 per cent in year 2017-2018.

4.3 Equations

In this paper, regression model is dependent variable y_t addresses linear combination of exploratory variable x_1, x_2, \dots, x_p :

$$y_i = \beta_1 x_{1i} + \dots + \beta_p x_{pi} + \varepsilon_i \quad (1)$$

Where x_{ij} is the i th observation on the j th dependant variable b_1, \dots, b_p are the regression coefficient and ε is the error term.

We construct following regression model for each variable:

$$ATE = \beta_1 + \beta_2 FDI + \varepsilon_i \quad (2)$$

$$NRR = \beta_1 + \beta_2 FDI + \varepsilon_i \quad (3)$$

$$RPC = \beta_1 + \beta_2 FDI + \varepsilon_i \quad (4)$$

In analyses each equation contains the one dependent (for example access to electricity) and one independent (FDI). Likewise regression calculated between natural resources on rent and FDI, and refugee population of India and FDI growth.

Before performing ARDL analysis, author examines the stationarity of data through unit root test with following equation (refer table 2).

$$\Delta y_{it} = \alpha y_{it-1} + \sum_{j=1}^{p_i} \beta_{IJ} \Delta y_{it-1} + x_{it} \delta + \varepsilon_{it} \quad (5)$$

Autoregressive Distributed Lag (ARDL) model carry out an essential outcome to determine the economic and social growth in Table 3. The researcher formulates the following model:

$$\Delta FDI_t = \alpha + \beta_1.FDI_{t-1} + \beta_2.ATE_{t-1} + \beta_3.NRR_{t-1} + \beta_4.RPC_{t-1} + \sum_{i=0}^p \alpha_{1i} \Delta FDI_{t-i} + \sum_{i=0}^p \alpha_{2i} \Delta ATE_{t-i} + \sum_{i=0}^p \alpha_{3i} \Delta NRR_{t-i} + \sum_{i=0}^p \alpha_{4i} \Delta RPC_{t-i} + \varepsilon_t \quad (6)$$

Error correction representation of selected ADRL model (1, 1, 0, 0) is selected by Akaike info criterion (refer table 4) through following equation:

$$FDI = C(1)*FDI(-1) + C(2)*ATE + C(3)* NRR + C(4)* RPC (-1) + C(5) + C(6)*@trend \quad (7)$$

5. Discussion

We can see empirical analysis exhibit the consistent effect of FDI on refugee population. Also, it discloses the insignificant effect of FDI on access to electricity and natural resources on rent in regression model. The indicator taken for study as societal development, FDI is not a significant factor for access to electricity but it's quite close to significance level which we can see more comprehensively in out-turn of ADRL analysis. The further analysis done by researcher revealed that FDI has significant impact on access to electricity in long run. Also, error correction model of ARDL suggests that FDI has no short term impact on natural resources on rent and refugee population while has a short term impact on access to electricity. The researcher examined the stationarity and stability of model in this study which indicate to proceed with further model. The motion of access to electricity is in positive path but velocity observed in natural resources on rent and refugee population is quite complex and close to each other and FDI movement is obscure in nature during the study period.

6. Conclusion

The study concludes that there is an association between FDI and most of the taken indicators for societal development. It can be short term as well as long term impact on variable discussed. The argument contradicts the significance of FDI on societal development because government scheme and its impact not discussed in this study and government schemes and policies play a major role in eradicating social differences. In this study, based on outcome India need to understand the role of FDI in societal growth and need to pressurize the foreign investors to indulge in social activities through corporate social responsibilities activities. It can boost the societal development along with foreign investment in righteous way.

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Appendix

ATE – Access to Electricity, NRR – Natural Resources on Rent, RPC – Refugee Population per Country, OLS – Ordinary Least Square, ADF – Augmented Dickey Fuller, ARDL – Autoregressive Distributed Lag.