Does FDI intensify Economics Growth? Evidence From China and India

Pratibha Neharkar * & Kedar Vishnu †

Abstract

China and India have emerged as one of the fastest-growing nations for attracting large FDI in the last two decades. Both the countries are more or less having similar characteristics like large market size, increasing working population but China has reached the top in attracting FDI from the world. During 2020 China has reported 15.0 % of World FDI inflow whereas India has just reported 6.14 % of world FDI shares. Most of the earlier studies emphasize on how the sector-wise distribution of FDI in India and China changed over a period of time and what factors determine the FDI inflow in India and China. Earlier studies have not emphasis on capture the impact of institutional factors for attracting the FDI in both countries. The study is unique due to more emphasis on the institutional variables for measuring the determinants of FDI. The study is based on secondary data compiled from UNCTAD and World Bank for the period of 1981 to 2020. The study has used regression for estimating what factors determine the inward FDI in China and India.

This study finds that trade openness, control on corruption, and investor confidence in the existing rule of law were highly significant factors for determining inward FDI to China; on the other hand, the exchange rate was found to be negatively affecting inward FDI into China. The study finds that Trade openness, control on corruption and political stability significantly and positively affect the FDI inflow into India. On the other hand, an increase in the inflation rate, GDP per capita and economic fitness were the factors discouraging FDI inflow into India. As compared with India, our study has revealed that China is able to attract more FDI mainly due to the institutional variables such as government effectiveness, rule of low and control on corruption and political factors such as political stability compared with another policy variable.

* Ph.D Scholar at Dr. Babasaheb Ambedkar Marathwada University (BAMU), Aurangabad.

Email: pratibhabamu@gmail.com

† Assistant Professor, Department of Data Science, CHRIST (Deemed to be University) Lavasa, Pune.

Email id: kedar.vishnu@christuniversity.in

The study results have several policy implications. first, it suggests that India can obtain more FDI by improving its institutional and government effectiveness. Second, some international organizations such as the international monetary fund and World Bank can play an important role in facilitating FDI by promoting efficient institutions in India.

Introduction

For the last two decades, the FDI inflow to developing countries has continuously increased with increasing growth, and the share of a developed country is declining. This has to go together with the increasing competition amongst the developing countries to attract FDI. The host country government is offering higher investment incentives and removing the restrictions on operations of freight firms in their countries. There has been a strong opinion about the Multinational Corporations Investment in specific locations mainly because of the apparent market size stable macro-economic environment. However, due to the huge increase in the competition among all the developing countries to attract FDI, the market size and policy-related factors may not be sufficient to attract the FDI. As a result, now it is essential to understand the impact of the government policies, investment agreements, and other factors in attracting inward FDI.

India and China are not exceptional for creating a positive environment for attracting FDI inflow. The government of India started implementing much economic reform to create a friendly environment and robust atmosphere for foreign investors to increase their investment from 1991 onwards. However, China has tried to implement various policies for attracting more FDI prior to India. The Indian government has taken many steps to bring more reform to make the country one of the important actors of global economies by introducing the country as the four most extensive and the second-fastest rising

As experienced by many developing countries, the impact of FDI inflow is unquestionable. It has significantly helped increase economic efficiency and productivity by providing massive capital flow, advanced technologies, and international-level managerial skills to the host country. But the most critical question remains unanswerable: Why do some counties attract more FDI inflow? Why are some counties able to benefit a lot from FDI, why the regional disparity is increasing within the country? Why have some countries experienced more technology spillover effects than others? Still, most of the above questions have not been apparent in the existing studies?

Review of literature

FDI and Economic Growth and Development

In the following section, we have tried to capture the studies related to FDI and Growth and Development. The international view on FDI is divided into two groups. The **first group** emphasizes capturing the impact of FDI on economic growth positively, which has been briefly addressed in the below section. The policymakers from developing countries realized the importance of FDI inflow and started giving more priority to attracting FDI inflow into their nations. They concentrated on the critical issue of how best to frame the domestic policy to maximize the benefits from a foreign company in the domestic market. FDI is seen as an essential instrument for productivity gains by establishing new practices, bringing capital-intensive technology, managerial skills, quality training, and access to international markets (Lin & Szenbberg, 1998). Since the developing nations regularly suffer from liquidity constraints, FDI plays an essential role as a substitute for local investment in the capital accumulation process (Vijayakumar et al.,2010). The existing literature on FDI talks about two benefits for developing countries: knowledge spillovers and capital accumulation.

Few studies have tried to look at how the FDI has impacted developing countries' economic growth. Most of the studies' results show that FDI positively affects technology spillovers, human capital formation, international trade integration, and increased competition in the host countries (Jonson, 2006; Borensztein & Gregorio,1998). These factors have helped achieve higher economic growth and reduce poverty in developing countries. OECD (2002) reported that FDI might even help to improve the host countries' environmental and social conditions. Furthermore, the existing studies identify technology transfers as one of the core and essential channels through which foreign firms' presence may provide and produce positive externalities in the developing country (Andreas Jonson, 2006). MNEs are frequently responsible for Research and Development (R&D) activity in developed countries which can transfer to the developing counties and create an environment for technological spillovers.

However, on the other hand**, critics have addressed the potential drawbacks of FDI for the host countries' economics**. The existing studies emphasize the deficiency in the domestic currency of the host countries (India) due to an inflow of FDI for the period of 1995-2011 (Garge & Dua, 2014). Other studies have talked about the worsening of the balance of payments, weak backward and forward linkages in the developing countries with the local firms, the impact of competition on the host country local producers, possibly damaging environmental effects of FDI in heavy industry, and adversative influences of the commercialization for developing countries during 1980 to 2000 (Kahai, Simran., 2004). Some studies have observed that an increase in the dependence of the host country on internationally operating activity represents a loss of political power for India and China from 1984 to 2002 (Ping Zheng,2009).

In addition, a few studies have observed that FDI raises income inequality in China during 1988-2003 (Sumei et al.,2012). Other studies have an emphasis on the minimal impact of FDI on economic growth in developing countries, mainly due to the low level of human capital, Limited domestic investment, and lack of macroeconomic stability in Brazil, Russia, India, China, and South Africa (BRICS) (Ahmed, Shahid.,2003). Increasing financial flow and its dependence and rising income inequality together created concerns for a few developed countries and the majority of the developing countries from the last decades. This has impacted the policymakers to explore the relationship between FDI inflow and income inequality. One study from China observed that trade openness increased economic inequality.

Similarly, (Agarwal and Atri 2015) revealed a positive relationship between FDI inflow and poverty reduction during 1980-2011. It is clear from the above discussion that the literature continues to debate the role of FDI and trade in economic growth. The existing studies have failed to address some of the exciting and essential issues in FDI.

FDI flow and institutional variables

How the institutional factors influence on FDI inflow has received considerable attention from the last two decades. It is a fact that parent country investors pay massive attention to the institutional factors of host countries when he is planning to invest (Kurul and Yasemin Yalta 2017). As a result, some recent studies show that developing countries have been trying to establish a robust institutional framework for attracting more inward FDI flows (Daude and Stein 2007). As a result, a growing body of literature has captured the relationship between institutional factors and FDI inflows from developing countries. After reviewing the recent literature, it is observed that most of the existing recent studies have not fully captured the institutional variables very systemically.

Further, the existing studies have only included one or two institutional variables in the estimation. Therefore, the existing studies have not thoroughly investigated the link between institutional factors and FDI inflows. We need to rely more on panel data analysis to capture the dynamic nature between FDI inflow and institutional factors. A study done by Arellano and Bond (1991) has caught the relationship between institutions and FDI. But the study has attempted to capture limited countries and sample periods. Further, Okada (2012) and Asiedu (2013) used the dynamic panel data to empirically understand the relationship between institutional factors that indirectly affect FDI inflow.

This section emphasizes those studies that have tried their best to capture the linkages between FDI and Institutional factors and used time-series data. Aside from the empirical estimation, the present study is also trying to contribute in two ways.

First, we have emphasized capturing the various institutional factors because the investment decision depends not only on one element. The overseas investor has an emphasis

on various institutional factors, which includes: level of corruption, political stability, the regulatory system in the host country, the level of trust in the design, level of well-defined property rights, level of enforcement of law and order, level of transparency in the market, the certainty of government policy, and the political structure of the host country (Kurul and Yasemin Yalta 2017). Therefore, instead of focusing only on a few institutional variables in the earlier studies (Wei 2000; Jensen 2003; Ahlquist 2006), we consider more institutional variables to capture how the different dimensions of institutions impact the inflow of FDI in the host country. This approach would also help us propose policy recommendations based on various institutional measures. Second, we use extensive data from 1990 to the most recent year. Our study also tries to consider the impact of the financial crisis in 2008 on FDI flows. We have also tried to include economic fitness, and political stability on FDI flows in our estimations.

This section has captured the empirical literature that examines the role of institutions on FDI inflow in the host country. The literature has been divided into three strands. The **first strand** of literature focuses mainly on measuring the impact of specific institutional variables such as host country corruption and the political regime of the host country in the inflow of the FDI. For example, the study done by Wei (2000) found that crime has negatively impacted the FDI location preference of investors due to the increasing cost of doing business and uncertainty in the host country market. Further, few studies have also tried to look at how democratic regimes impact FDI. Jensen (2003) and Ahlquist (2006) argued that more democratic countries could attract more FDI than the FDI in authoritarian type countries because democratic regimes countries are likely to decrease political hazards of nationalization expropriation and strengthen the honesty of the host country for foreign investors. Li and Resnick's (2003) conclusion shows that having democracy in a host country and FDI inflow are negatively correlated. Due to the provision of a lower-cost workforce, the having repression of labor unions, restriction for new firms and companies, and operation affordance in authoritarian regimes in the democratic host country. As a result, a country with democracy may have a low FDI inflow compared with a tyrannical government. **The second strand** of the literature analyzes the importance of institutional quality dimensions and their impact on FDI inflow. Gastanaga et al. (1998) focus more on examining the effects of various policies on FDI flows while using the "eclectic theory" of international investment, compensations of foreign ownership and internationalization. Host country policies can influence FDI flows provided the country has the advantage of having low corruption, low nationalization risk, effective and efficient contract enforcement for attracting the higher volume of FDI inflow.

Further, Asiedu (2006) argued that countries with a weak institutional framework would also have a higher level of corruption, lack of enforcement, and political instability, which deter FDI inflows in the host countries. Daude and Stein (2007) attempted to understand how the quality of governance in the host countries would affect the investment decisions of foreign investors. The study finding shows unexpected changes in the govt. policies, huge regulation

burden, and lack of government effort and commitment discourage FDI inflow in the host countries. Similarly, Gani (2007) from Latin American countries have observed that having more control over corruption, political stability, good regulatory superiority, and better government effectiveness has positively and significantly attracted massive FDI inflow.

The **third strand** of the literature discovers those studies that have combined some institutional indicators and brought very different dimensions for the institutional variables. For example, Wheeler and Mody (1992) study has used some of the integrated broad institutional indicators, including; bureaucratic red tape, corruptness level, political unpredictability in the host country, the effectiveness of the legal system. The study's findings show that these variables have not impacted the overseas investor's decision to invest in the host countries. Surprisingly, Wheeler and Mody (1992) argued that short-run incentives offered by the host countries had limited apparent impact on location chosen by the overseas investors. Globerman and Shapiro (2002) and Buchanan et al. (2012) obtained a composite index while including corruptness level, law and order, the administrative environment, and political turbulence in the host country. Further, the finding shows that the index of governance infrastructure was a significant and positive determinant of FDI inflow in host countries.

Further, Buchanan et al. (2012) have captured a new dimension, how the institutional quality index has adversely affected the unpredictability of FDI flows in the host country. More recently, Asiedu (2013) was found that the FDI risk variable, which consists of contract practicality, profit recovery, and late payment indicators, has not been negatively impacted the flow of FDI from developed countries to developing countries. Overall, most of the studies from the literature have linked the effectiveness of institutions on FDI inflow more positively. However, the dynamic relation between institutions and FDI inflow has not received sufficient attention in developing countries like India. The present study has a tray to fulfill some of the above research gaps and empirically capture the relationship between FDI flow and institutional variables.

After reviewing some of the published studies in recent times, it is observed that most of the existing recent studies have not fully captured the institutional variables very systemically. In other words, they have included very few variables in the estimations. Therefore, the existing studies have not fully grasped the link between institutional variables and FDI inflows. The present study has attempted to overcome the research gap.

Methodology

The present study is relay on secondary data. The required data for the present study were collected from various sources, which include: World investment reports, various bulletins of the Reserve Bank of India, Various publications of the Ministry of Commerce, Govt. of India, Economic and Social Survey, Some of the recent policy documents of Govt., of India. For

comparing the inward FDI into India and other countries, we used data from UNCTAD from 1981-2020. The GDP data for all the developed and developing countries were collected from the World Bank Investment Report from 1981 to 2020. Country-wise and industry-wise FDI inflow data were collected from various RBI annual reports & the National Bureau of Statistics of China. The analysis of the present study is based on regression. More emphasis has been given to the institutional economics variable in the regression analysis in the present study. The study analysis is based on the data collected from 1991 to 2020. However, an attempt is made to analyze the data set from 1981 to 2020 almost for all the variables to capture the recent trends in the data.

The equation to be estimated is:
(FDI inflow) t = α + β1 Infrastructure variables t + θ (Policy Variables) t + γ (Institutional Variables) t+ n (Political Risk Variable) t + ε t

Table 1: provides the summary description of the variables that are used in the empirical analysis

Type of variables	Variables	The direction of the expected effect
A. Policy Variables	1. Inflation rate, consumer prices (annual %)	-
	2. Official exchange rate (Exchange rate IND/Foreign currency)	-
	3. GDP at market prices (constant 2005 US$)	+
	4. GDP growth (annual %)	+
	5. Trade Openness (TO=Total exports +Total imports/GDP)	+
	6. Economic Fitness Metric ‡	+
B. Institutional	1. Government Effectiveness §	+
	2. Rule of low**	+

‡ "Economic Fitness (EF) is both a measure of a country's diversification and ability to produce complex goods on a globally competitive basis. Countries with the highest levels of EF have capabilities to produce a diverse portfolio of products, the ability to upgrade into ever-increasing complex goods, tend to have more predictable long-term growth, and attain good competitive position relative to other countries. The data was compiled from World Bank.

§ Government Effectiveness captures perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures. Estimate gives the country's score on the aggregate indicator, in units of standard normal distribution, i.e. ranging from approximately -2.5 to 2.5.

** Rule of Law captures perceptions of the extent to which agents have confidence in and abide by the rules

Variables	3. Corruption †† (Control of Corruption: Estimate)	+
C. Infrastructure variables	1. Telephone lines (per 100 people)	+
	2. Road density (km of road per 100 sq. km of land area)	+
D. Political Risk Variable	1. Political Stability and Absence of Violence/Terrorism‡‡	+

Source: The author has finalized the above variables.

Compounded Annual Growth Rate (CAGR) was used for analyzing the performance of the Economics

= ((Longest (Start Value/End Value) ^(1/Periods) -1)*100

Descriptive Statistics

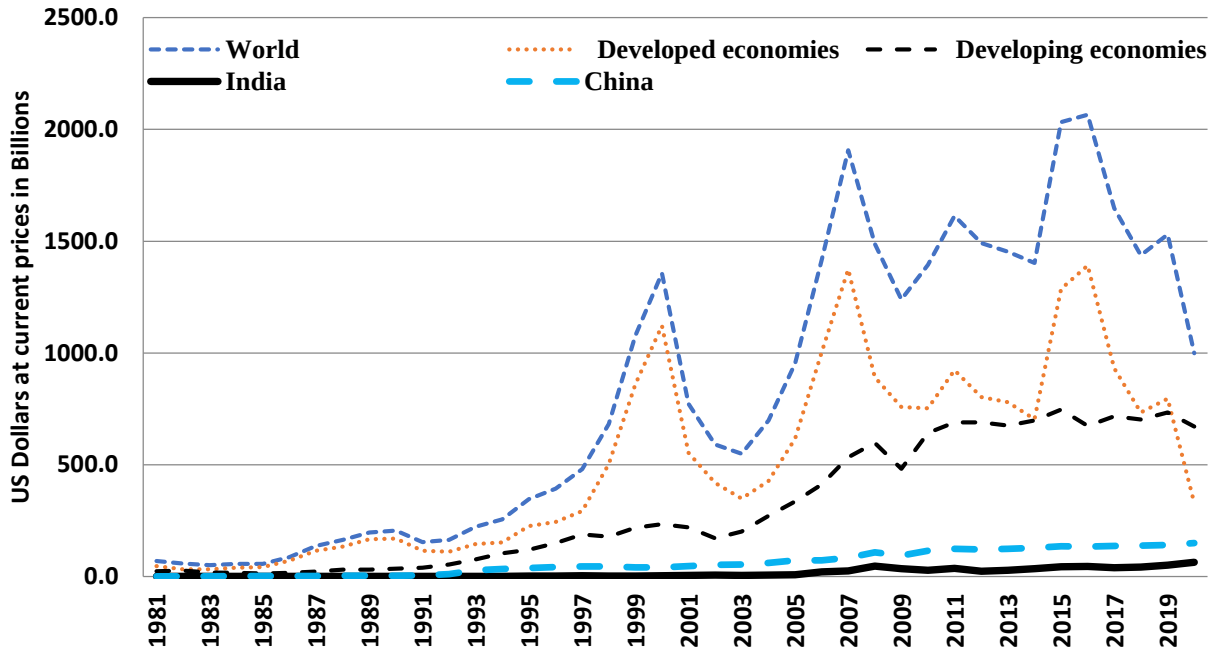
The FDI flows in the world is presented in figure 1. It can be observed from the figure that the FDI flow to developing countries has increased marginally during the 1990s and 2000 decade. But it has grown considerably high during the 2000s and 2010s decades. Traditionally, many academics consider that FDI was a singularity and primarily concerned with highly developed economies. Before a few decades, developed countries still drew a higher share of worldwide FDI than developing countries (Figure 1). However, in recent years, particularly from 2001 onward, the increase in FDI flows to developing countries turned out to be higher than the increase in FDI flows to developed countries for most of the period.

of society, and in particular the quality of contract enforcement, property rights etc. Estimate gives the country's score on the aggregate indicator, ranging from approximately -2.5 to 2.5.

†† Control of Corruption captures perceptions of the extent to which public power is exercised for private gain etc. Estimate gives the country's score on the aggregate indicator, ranging from approximately -2.5 to 2.5.

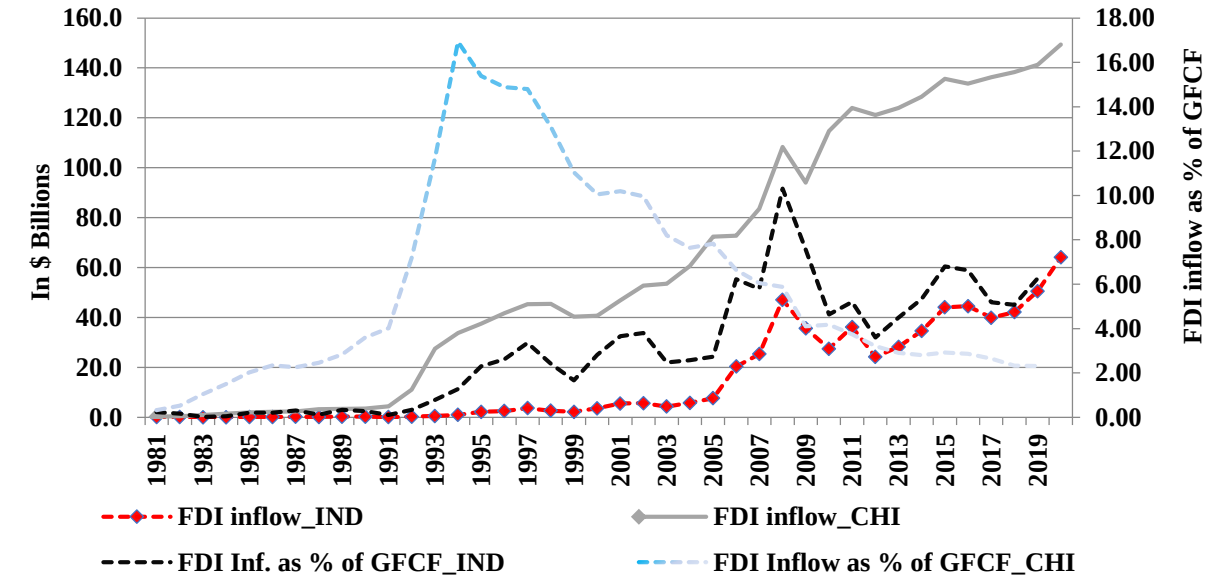
‡‡ Political Stability and Absence of Violence/Terrorism measures perceptions of the likelihood of political instability and/or politically-motivated violence, including terrorism. Estimate gives the country's score on the aggregate indicator, ranging from approximately -2.5 to 2.5".

Figure 1: FDI inflow in the World, 1981 to 2020



Source: UNCTAD

Figure 2: FDI inflow in India and China,1981 to 2020

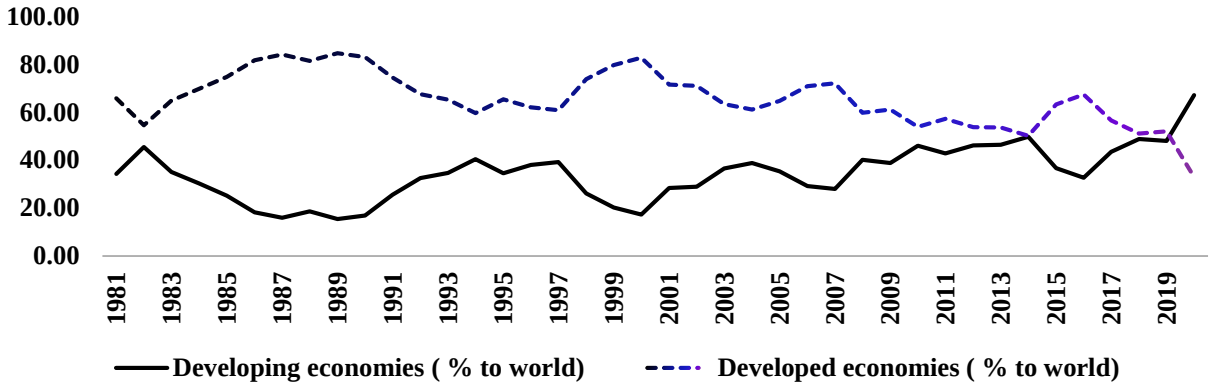


Source: UNCTAD

In relative terms, FDI plays a crucial role for developing countries compared with developed countries. In the previous, FDI inflows in 1981-90 signified an average share of almost 2.65 percent of gross fixed capital formation (GFCF), compared to 3.16 percent in

developed countries. In the case of India, FDI flow contributed only 0.19 percent in GFCA during 1981-90. Further, the contribution increased during 1991-2000 and reached 8.65 percent for developed countries, 6.61 percent for developing countries, and 1.82 percent in the case of India. Further reached a peak in 2001 to 2010 and went to 10.88 percent for developed countries and 8.35 percent for developing countries. A similar increasing trend was also observed for India; the contribution of FDI flow to GFCA reached a peak in 2001-2010 and accounted for 5.17 percent. After that, it declined and gained 7.47 percent for developed countries, 9.27 percent for developing countries, and 5.39 percent for India from 2011 to 2019. Even though the FDI flow contributed less to developing countries, minor may have a much more significant developmental impact than developed countries (Figure 2).

Figure 3: FDI inflow in Developed and Developing Economics (% to world)



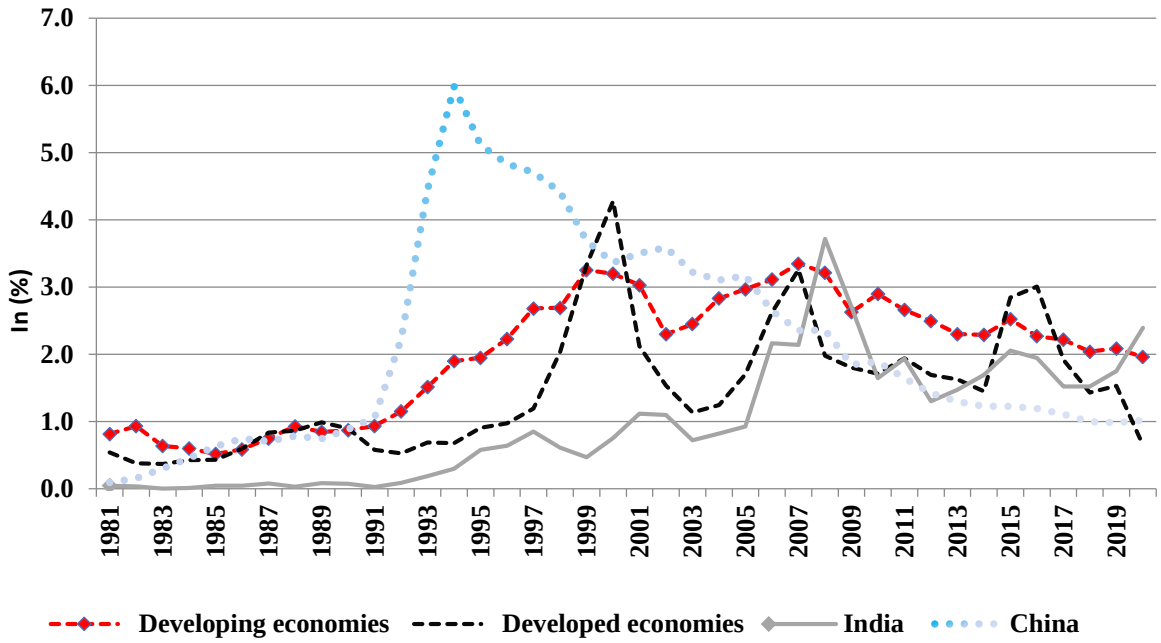
Source: UNCTAD

The FDI flow to developing countries declined from 45.5 percent in 1982 to 16.9 percent in 1990. Further, it accelerated in the mid-1990s and dropped in the 1990s. From 1991 onward, the share was showing an increasing trend and reached a peak in 2014-15 with 49.82 percent share in total world-wise FDI flow and reaming 50.18 was absorbed by developed countries. The developing countries have location advantages. The combination of excess natural resources, ample labor supply, and increasing growing domestic markets have helped massively create a lovely investment climate and the capability to rap a relatively large share of FDI inflow (Yue,1996). The favorable economic policy of developing countries for attracting more FDI is also one of the fundamental reasons.

The FDI flow as a percent of GDP for developed and developing countries is presented in the figure. 4. It can be observed that almost for all the years, the share of FDI flow as a percentage of GDP was higher for developing countries compared with developed countries (except for 2000 and 2016 years). Compared with developing countries, the variation in the FDI flow as a percent of GDP was observed higher for developed countries. In the case of India, except for the 2008-09 and 2020 years, the FDI flow as a percent of GDP reported almost lower

than developing countries, but the difference is declining in recent years.

Figure 4: FDI inflow as % of GDP, 1981 to 2020



Source: UNCATAD

Global rankings of an enormous FDI flow confirm the emergence of developing and transition economies: seven developing and transition economies ranked among the thirteen largest foreign investment recipients in the world in 2016, and China was the third most popular destination, and India was in the top ten most countries to attract the FDI flow. The United States is a major recipient, which accounted for 36.21 percent of the world FDI flow to developed countries during 1981, which declined to 22.39 percent of total world FDI flow in 2016. Of all the developing countries, the primary recipients of FDI flow have been China, Hong Kong SAR-China, Singapore, British Virgin, Brazil, Islands, and India. However, in 2020 lot of changes have taken place. United States has attracted 15.65 percent of the world FDI, followed by China with 15 percent share, China, Hong Kong SAR with 11.9 percent, Singapore with 9.07 percent share, and India with 6.41 percent share. We have observed that FDI inflow in Netherlands and United Kingdom has declined significantly during the covid-19 period during 2020. Surprisingly the FDI inflow in the Netherlands has shown negative value for the 2020 years. We conclude that the United States, United Kingdom, and Netherland's countries have been impacted worst by covid 19 during the 2020 period.

Table 2: Top 14 Country-Wise FDI flow from the World, 1971-2016

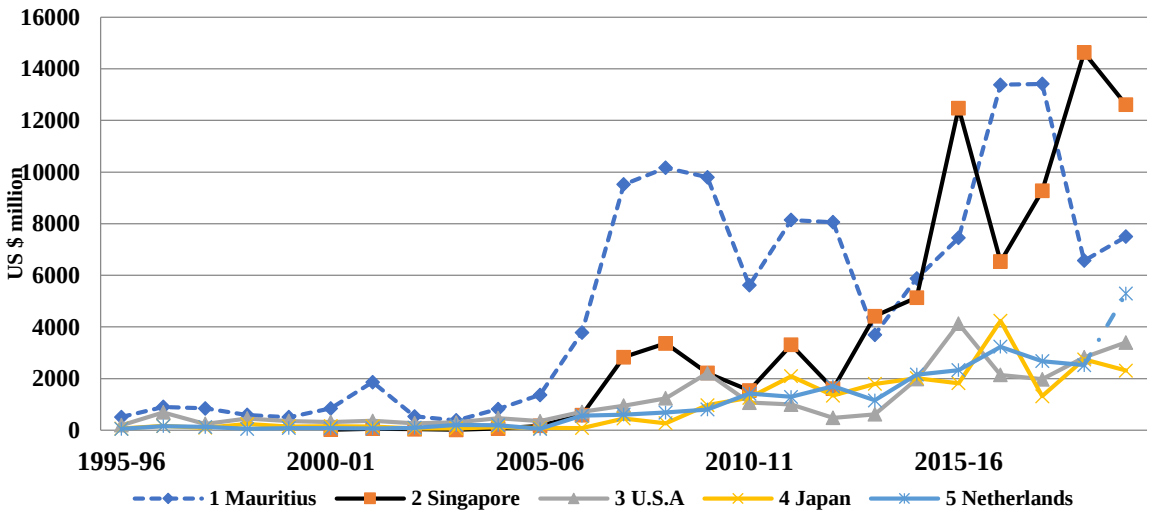
Country	Eco Status	FDI inflow (US $ Bill at current prices)						
		1971	1981	1991	2001	2011	2016	2020
United States	Developed	0	25.2	22.8	159.46	229.86	391.1	156.3
United Kingdom	Developed	1.77	5.88	14.85	35.95	42.2	253.83	19.7
China	Developing	-	0.27	4.37	46.88	123.99	133.7	149.34
China, Hong Kong SAR	Developing	0.06	2.06	1.02	29.06	96.58	108.13	119.2
Netherlands	Developed	0.75	1.88	6.07	51.93	24.16	91.96	-115.3
Singapore	Developing	0.12	1.66	4.89	17.01	49.16	61.6	90.6
British Virgin Islands	Developing	-	-	0	3.79	57.42	59.1	39.6
Brazil	Developing	0.45	2.52	1.1	22.46	96.15	58.68	24.8
Australia	Developed	1.16	2.35	4.06	7.82	58.91	48.19	20.1
Cayman Islands	Developing	-	0.1	-0.01	3.92	16.11	44.97	26.6
India	Developing	0.05	0.09	0.08	5.48	36.19	44.49	64.1
Canada	Developed	2.27	0.66	2.88	27.66	39.67	33.72	23.8
Ireland	Developed	0.03	0.2	1.36	9.65	23.54	22.3	22.30
World			69.9	154.0	772.8	1591.1	1746.4	998.9
		Share of FDI flows (% to total world)						
YEAR		**1971**	**1981**	**1991**	**2001**	**2011**	**2016**	**2020**
United States	Developed	6.11	36.21	14.81	20.63	14.45	22.39	15.65
United Kingdom	Developed	12.44	8.45	9.64	4.65	2.65	14.53	1.97
China	Developing	..	0.38	2.84	6.07	7.79	7.66	15.0
China, Hong Kong SAR	Developing	0.42	2.96	0.66	3.76	6.07	6.19	11.9
Netherlands	Developed	5.29	2.71	3.95	6.72	1.52	5.27	-11.54
Singapore	Developing	0.81	2.39	3.17	2.2	3.09	3.53	9.07
British Virgin Islands	Developing	..	..	0	0.49	3.61	3.38	4.0
Brazil	Developing	3.15	3.62	0.72	2.91	6.04	3.36	2.5
Australia	Developed	8.11	3.37	2.63	1.01	3.7	2.76	2.0
Cayman Islands	Developing	..	0.14	-0.01	0.51	1.01	2.57	2.4
India	Developing	0.33	0.13	0.05	0.71	2.27	2.55	6.41
Canada	Developed	15.96	0.95	1.87	3.58	2.49	1.93	2.4
Ireland	Developed	0.18	0.29	0.88	1.25	1.48	1.28	3.35

Source: UNCATAD

We observed that a few new countries have invested in India compared with the earlier period. Country-wise, investments routed through Mauritius remained the most significant component of FDI in India during 2015-16, followed by Singapore. Japan and USA were in the third and fourth positions, respectively (Figure 5). We have observed that the FDI inflow from Singapore and Netherland into India increased from 1995-96 to 2015-16 period. Although Mauritius continues to be the single largest source of FDI into India, its relative significance has been declining. Similarly, the FDI inflow from Hong Kong, the USA, Germany, and United Kingdom fell sharply in 2016-17 compared with 1995-96 and 2005-06 years.

Country-wise, investments routed through Singapore remained the most significant component of FDI in India during 2019-20, followed by Mauritius. Netherlands and Cayman Islands were in the third and fourth positions, respectively (Figure.5). We have observed that the FDI inflow from Mauritius, Singapore, and the Netherlands into India increased from 2010 to 2020 period. Although Mauritius continues to be the single largest source of FDI into India, its relative significance has been declining, and Singapore and Netherlands contributions to India's total FDI is increasing (Figure 5).

Figure 5: FDI inflow to India from top 5 countries, 1995-96 to 2015-16



Details of the variables used in the study

why is China able to attract more inward FDI than India? What are the reasons for the massive difference in inward FDI in each country? What role is played by FDI in China and India's economic growth?

Policy variables:

Inflation rate: consumer prices (annual %); the existing literature has revealed that a country with a higher inflation rate will prevent FDI outflow because the higher inflation rate will depreciate the home currency (Zheng, 2009). Similarly, a higher inflation rate increases a country's macroeconomics risk; hence if the inflation rate decrease, FDI inflow increase in the host country (Cevis and Vamurdan 2007).

Inflation rate (in %)= CPI_2 – CPI_1/ CPI1*100

The official exchange rate: between India and home country (Exchange rate $_{IND}$/Foreign currency, t). The theoretical literature on exchange rate revealed that the country which has weak currency would attract more inward FDI from the stronger currency economy as this investment would increase the purchasing power in the host country. Therefore, a higher official

exchange rate will be negatively associated with the inward FDI in the host country (Sarasa, Singh, and Morris 2014).

GDP at market prices (constant 2005 US$) & GDP at growth rate (in percent);

The theoretical literature shows that GDP at market prices and the host country's growth rate was considered one of the main determinants of inward FDI in the host country. Market size straight affects the FDI investment returns and the profit. Similarly, higher market growth shows the potential big market in the host country. This is used as one of the essential variables for the international expansion strategy of the home country from India (Zheng, 2009; Culem, 1988). Therefore, both the variables show a positive association in FDI inflow in the host country.

Trade Openness (TO=Total exports +Total imports/GDP); the study by Quazi (2007) identifies, along with domestic investment climate, trade openness as one of the important factors for attracting more FDI. (Sarasa et al. 2014) also find a significant impact of trade openness on FDI inflow in India during 1996–2012. Trade openness is expected to play a positive role in attracting FDI inflow in the host country.

Economic Fitness (EF) measures a host country's divergence and ability to produce various complex goods on an internationally competitive basis. Having a higher level of EF means the host countries have a considerable ability to produce complex goods and upgrade. The host country is likely to have higher and predictable sustainable growth and has an excellent competitive position compared with other countries. The data was compiled from World Bank.

Institutional Variables

Institutional and political environments have played a crucial and important role in attracting more FDI in the host country. The institutional nature is significantly important for firms that expand their business internationally (Zheng, 2009). Coase (1937) & North (1989) argued that money inflow and economic growth are positively associated with institutions' effectiveness, rule enforcement, and regulation. Furthermore, Nunnenkamp (2007) argues that "favorable institutional conditions help positive growth effects of FDI".

Government Effectiveness; this is an indirect measurement that captures the perceptions of the effectiveness of the public service and quality, the quality of the civil services, and the level of its autonomy from political pressure. The estimate of government effectiveness gives the country-wise score on the aggregate indicator, in units of standard normal distribution, i.e., ranging from approximately -2.5 to 2.5.

Rule of Law; measure the perceptions of the scope to which people have confidence in and abide by the rules of society, and in particular, the effectiveness of contract enforcement, property rights, etc. Estimate gives the country's score on the aggregate indicator, ranging from approximately -2.5 to 2.5. A very few studies in the literature have considered linkage between

the rule of low and FDI inflow in India from 2001 to 2005 (Chatterjee, Mishra, and Chatterjee 2013). The study finds that competition laws and policies have a significant role in attracting FDI in India from other countries.

Control of Corruption; captures perceptions of the degree to which public power is used for private gain, etc. Estimate gives the country's score on the aggregate indicator, ranging from approximately -2.5 to 2.5. The developing countries' institutional imperfections such as bureaucracy and higher corruption may negatively efficiency-seeking FDI inflows (Zheng, 2009). Similarly, (Moudatsou 2018) also found a significant negative impact of crime on FDI inflow in the European Union.

Infrastructure variables

Road density (km of road per 100 sq. km of land area)

Road density was found to be one of the important factors for FDI inflow in the host country for trade and industrial development in India during 1970-98 (Box and Haven 2000). Furthermore, a similar finding was revealed during 2001-02 to 2005-06 in India (Chatterjee et al. 2013). Here, Road density is expected to impact inward FDI in the host country positively.

Telephone lines (per 100 people)

Ogunjimi's (2017) result shows that telephone line has a positive impact on attracting FDI into Nigeria during 1981-2014. We expect telephone lines to impact inward FDI in the host country positively.

Political Risk Variable

Political Stability: the political environment has been increasingly circular for investors making an international investment. Having a stable political environment makes the investor more comfortable. “Absence of Violence and the lack of terrorism dealings observations of the probability of political instability and politically-motivated violence. Estimate gives the country's score on the aggregate indicator, ranging from approximately -2.5 to 2.5”. Therefore, political Stability may positively impact FDI inflow in the host country.

Table 3 presents the estimated regression model describing the determinants of FDI for India**.** The study used time series data from 2001 to 2020. In the first step of the estimation process, we have to check whether our estimation has the problem of multicollinearity and fulfill stationarity properties. For most variables, non-stationary time series might lead to Ordinary Least Square (OLS) regression being incorrect or to spurious conclusions (Woodridge, 2002). Therefore, apply the Dickey-Fuller test to identify whether we have stationary in our used variables or not. We found that some of the variables did not have stationarity; hence, we took fast differences to overcome the no stationarity problem in our estimation. The results of the Dickey-Fuller test are presented in the annexure tables. The log length on this exact term is shown in table 3 in the second column; for example, we have taken 1st difference for the

inflation rate and the second difference for the exchange rate to have the stationarity in the estimation. To check whether there is a problem of heteroscedasticity or not in our analysis, we have applied the white test. We have used the Durbin-Watson test to check whether we have an autocorrelation problem in our estimation. This test includes additional lagged terms of the dependent variables to eliminate autocorrelation.

Furthermore, variance inflation factors were applied to detect the multicollinearity problem amongst variables. The GDP per capita and GDP growth rate were highly correlated. Thus, to avoid multicollinearity, we drop the GDP per capita. Other regression diagnostics were checked before finalizing the empirical results. The expected sign of the variables is presented in table (3). All the variables do not have the expected sign. The first estimated model shows that all other policy variables have shown expected signs for China except for economic fitness. Trade openness positively promotes FDI, whereas the exchange rate plays a negative role in attracting FDI in China. Both these variables are highly significant. For the institutional variables category, all the variables have predicted signs, and the coefficient of all the three variables was positive. Thus, control of corruption, government effectiveness, and the proper rule of law were major determining factors for attracting more FDI. Furthermore, the political Stability was found to be insignificant but had positive signs. The study has revealed that Trade openness, control on corruption, and investor confidence in the existing rule of law were the highly significant factors for determining inward FDI to China. On the other hand, the exchange rate was found to negatively affect the inward FDI into China.

The empirical result of the study has revealed that except for Exchange rate, GDP per capita, and economic fitness, all other variables had expected signs. The study has shown that Trade openness, control on corruption, and political stability significantly and positively affect the FDI inflow into India. On the other hand, increasing the inflation rate, GDP per capita, and economic fitness discouraged FDI inflow into India.

Compared with India, our study has revealed that China can attract more FDI mainly due to the Institutional variables compared with other policy variables. Furthermore, among all the institutional variables, control of corruption was the major factor for attracting more FDI in China. The investor confidence in the existing rule of law reflects the effectiveness and the enforcement of the legal system in China. However, in the case of India, the coefficient of the rule of law was positive but insignificant for attracting inward FDI due to less effectiveness and enforcement of the existing legal system. While other existing studies have revealed that political instability deters FDI inflow, we find that political stability was one of the most important factors for FDI inflow in India; however, political stability might not play a significant role in attracting FDI into China.

Along with institutional variables, the policy variables were also important for attracting more FDI. For China, among all the policy variables, trade openness and inflation rate were the

major factors for attracting FDI; however, along with trade openness, the exchange rate was the major determinant for India. Our empirical finding shows the positive association between FDI and trade volumes, implying that countries that wish to attract more FDI should increase the trade. Economic fitness has an unexpected sign. Economic Fitness (EF) measures a country's diversification and ability to produce complex goods on a globally competitive basis. The empirical result of our study revealed that an increase in the diversification and ability to produce complex goods declined the FDI inflow in both countries.

Table 3. Empirical Results of Regression

Variables	Short-form with specification	China	Short-form with specification	India
Inflation rate, consumer prices (annual %)	CPI_Price_YTY_d1	4,281	cpi_price_yty_no_sesional_d2	-3,094*
		(1,185)		(1,278)
Exchange rate	Ln_off_exc_rate_d2	-5934***	Ln_exc_rate_perusd_d1	49,295
		(3,482)		(44,444)
GDP per capita	-	-	gdp_per_capita_c2005_d1	-376,952*
				(185,405)
Economic Fitness	Ln_eco_fitness	-52,045	LN_eco_fitness	-125,595
		(37,821)		(52,044)
Trade Openness	TB_2_d2	375.8**	TB_1_d1	2.45008*
		(225.3)		(1.1208)
Corruption (Control of Corruption: Estimate)	Ln_con_on_corr	43,140*	con_on_corr	88,913*
		(57,559)		(41,355)
Government Effectiveness	Ln_govt_effec	7,214	govt_effec	22,570
		(23,931)		(15,648)
Rule of low	Ln_rule_law	55,709***	Ln_rule_law	37,231
		(34,270)		(31,553)
Political Stability	Ln_poli_stabilty	949.5	Ln_Poli_stabilty	40,136**
		(53,068)		(12,091)
Road density (km of road per 100 sq. km of land area)	road_density_per100sq_d1	286.1		
		(1,384)		
	Constant	144,107	Constant	235,789
		(98,087)		(83,138)
	Observations	19	Observations	19
	R-squared	0.912	R-squared	0.866

* Note: Show the second difference to obtain stationary data

Source: Data complied from various reports of RBI. *** p<0.01, ** p<0.05, * p<0.

Conclusion and Policy Suggestion

The study attempted to examine FDI determinants in China and India and answer why China is attracting more inward FDI than India. The result indicates that FDI inflow in India increased from US $ 0.08 billion in 1991 to US $ 64.06 billion in 2020. However, the country is far behind in comparison to China. FDI inflow in China increased from US $ 4.3 billion in 1991-92 to US $ 149.34 billion in 2020. The study has revealed that China started attracting world FDI inflow from 1990 onwards. FDI inflow has drastically increased from 2004 onward for India due to an opening of FDI cap in many sectors. Similarly, all other countries have also observed a huge increase in the FDI inflow from 2004 onwards. However, Indian and China has been among the top spot for foreign investors, particularly in India.

The empirical result of the study revealed that trade openness, control on corruption, and investor confidence in the existing rule of law were the highly significant factors for determining inward FDI to China. On the other hand, the exchange rate negatively affected the inward FDI in China. The study has revealed that Trade openness, control on corruption, and political stability significantly and positively impact the FDI inflow into India. On the other hand, increasing the inflation rate, GDP per capita, and financial fitness discouraged FDI inflow into India. Compared with India, our study has revealed that China can attract more FDI mainly due to the Institutional Variables compared with other policy variables.

The study results have several policy implications; first, it suggests that India can obtain more FDI by improving its institutional and government effectiveness. Second, some of the international organizations such as the global monetary fund and the World Bank can play an essential role in facilitating FDI by promoting efficient institutions in India. India need to implement some of the policy like China to attract the FDI.

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