



## **FDI Inflows in India: An Analysis of Source Country Factors with Special Reference to Tax Havens**

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### **ABSTRACT**

*This study examines the impact of source country factors on the inflow of foreign direct investment (FDI) into India between 2004 and 2013 with special reference to tax havens. In this paper, the FDI inflows in India are considered as function of relative GDP, relative GDP per capita, inflation, FDI openness, relative tax rates and tax haven dummy. The multiple regression (fixed effects) model on panel data is employed to identify the determinants of FDI inflows from top 20 source countries in India. The empirical results indicate that relative GDP per capita, source country FDI openness and inflation significantly affects FDI inflows in India. The results also verify that tax havens have special role to play.*

**Keywords:** *Foreign Direct Investment, Source country factors, Tax havens.*

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### **1.0 Introduction**

Globalisation has led to greater integration and interdependence of economies. In recent years, the international mobility of corporate activity has increased due to the process of globalisation. Thus, it has resulted in erosion of business boundaries. Removal of trade barriers has increased capital flows among countries. Therefore, there is significant growth in volume of trade and foreign direct investment (FDI) across countries. Further, there has been expanding academic literature in quest to explain these flows in context of both source and home country.

### **1.1 FDI: Theoretical framework**

FDI refers to investment made by business enterprise resident in one country with a view to have ownership stake in a firm resident in other country.

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According to IMF, FDI refers to, “The acquisition of at least ten percent of the ordinary shares or voting power in a public or private enterprise by non-resident investors. Direct investment involves a lasting interest in the management of an enterprise and includes reinvestment of profits”. As per OECD definition, there should be a substantial degree of influence and control of investor in the management of enterprise. There must be a long term relationship between the direct investor and enterprise. The investment can be made in many ways- by setting up a subsidiary or affiliate in a foreign country or it can be a merger or joint venture.

### **1.2 Benefits and costs of FDI**

Benefits and costs of FDI can be viewed from two perspectives: source country and host country. FDI benefits host country as it leads to transfer of capital, technology, management resources and also creates employment opportunities. FDI also affects balance of payments in positive way by bringing initial capital flows, import substitution and subsequent exports from host country. It can also become costly by affecting balance-of-payments adversely when capital outflows and inputs for production are imported from abroad. The other costs for host country are adverse competition and perceived loss of sovereignty. Benefits of FDI for source country are reverse-resource effects as they can learn valuable skills and experience by investing abroad and also have positive impact on balance-of-payments when foreign earnings are repatriated to the source country. The costs for source country arise when FDI substitutes exports of the country and jobs are exported abroad.

### **1.3 FDI and international taxation**

Conventionally, tax is not considered as major determinant of FDI. Multinationals take investment decisions for making foreign investments by taking into consideration only determinants like market size and demand, resources, cost of production, laws, trade restrictions, stability and predictability of business climate etc. But, in the recent times tax has become important determinant of FDI. As the production facilities of MNC's are located in different countries and there are many steps in global value chains, so tax emerged as important factor in determining country's attractiveness for investment. MNC's makes efforts to structure their investment in most tax-efficient way. Corporate tax policies practiced in one country can have an impact on other countries in different ways. If domestic country's tax rate is relatively high to other countries, then tax base can shift to less burdensome tax regime, leading to outward flows of FDI. The multinationals corporations can arrange an array of transactions – royalty payments, dividend repatriations, intra-firm lending and transfer price for within-

firm international transactions, with a motive to reduce their total tax obligations. Countries which are keen to attract foreign capital face significant international pressure to abate their tax on income earned by foreign investors.

#### **1.4 FDI and tax havens**

Since, minimisation of taxation of foreign investors has led to budgetary and policy compromises, not all countries want to entice foreign investment in this manner. The countries known as “tax havens” offer very low tax rates and other tax features to attract foreign investors. Tax havens are the countries which offer them to be used as off shore financial centers, have high level of secrecy and good infrastructure. However, there is no generally established meaning of a tax haven. There are some practices that create a tax haven. There are roughly 50 major tax havens in the world today. The key factors to identify tax havens given by OECD in its 1998 report are: (i) no or only nominal taxes, (ii) lack of effective exchange of information, (iii) lack of transparency, and (iv) no substantial activities.

Tax havens are used as conduit of investments to avoid taxes. Even more money is directed through ‘special purpose entities’ (SPEs), set up for enabling investment or for some specific purposes. The problem of round tripping has emerged due to presence of tax havens. Round tripping means investing back in one’s own country by routing investment through another country. Both developed and developing countries are exposed to inward investment from tax havens and offshore hubs. As per World Investment Report 2015, “On average, across developing economies, an additional 10 percent share of inward investment stock originating from offshore investment hubs is associated with decrease in the rate of return of 1 to 1.5 percentage points.” Inward investment in developing countries from offshore hubs leads to estimated \$100 bn revenue losses.

India has experienced a significant surge in foreign direct investment. India has become an important host country. Since 1991, it has abandoned protectionist policies in favour of policies that sought to encourage and attract FDI. The purpose of this paper is to study the source country factors that explain FDI flows in India with special reference to tax havens. Because of lack of reliable data, FDI into emerging markets has been generally limited and is also concentrated on host country factors rather than source country factors. The literature on source country factors driving FDI into India is sparse. Through this study, an attempt is being made to identify the various source country factors that cause these economies to invest in India and how it is different in case of tax havens.

### **1.5 Objectives of the study**

The study attempts to achieve the following objectives:

- To study the trends of FDI inflows in India.
- To review literature on source country factors affecting FDI flows in host countries.
- To conduct empirical analysis to examine the impact of source country factors on FDI inflows in India with special reference to tax havens.

### **1.6 Layout of the paper**

The rest of the paper is organized as follows. Section two depicts emerging trends and patterns of FDI inflows in India. Section three reviews the literature on the subject. Section four describes the research methodology and provides description of variables. The empirical finding and results from estimation are discussed in Section five and section six gives concluding remarks.

## **2.0 Trends in FDI inflows in India**

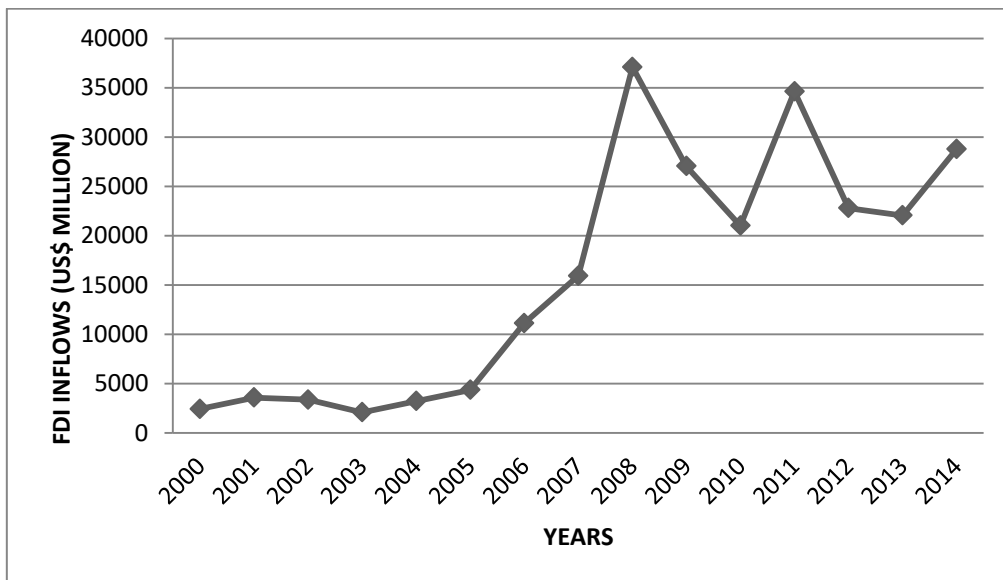
Prior to 1991, Indian economy adopted a selective approach towards FDI characterised by self-reliance, protection of domestic industries, export promotion etc. In 1991, there was a paradigm shift with the onset of economic reforms and structural changes. The restrictive and regulative policies on foreign investments had been given up. Thus, with liberalisation and other policy changes, India is now regarded as attractive destination for FDI. The period 2000-10 was an excellent decade for foreign direct investment (FDI) in India. As shown in Figure 1 below, the upward trend for FDI inflows started in year 2003. FDI inflows show a rising trend up to year 2008. The highest growth in FDI inflows witnessed in year 2006 was more than 150%. Thereafter, in year 2009-10 it showed a downward trend because global economy was witnessing the impact of recession. In 2011, FDI inflows growth recovered and it falls again in 2012-13 due to financial crisis. In 2014, flows recovered because of the promises made by new government to deal with the matters that are holding up new investment and discover a fresh action plan for stimulating the investment climate in the country.

Table 1 depicts that a large share of FDI inflows into India came from Mauritius i.e. 35.43% of total inflows. Mauritius emerged as the top investing country in India by contributing 84,604.46 US\$ million. This is because of the fact that India has a favorable Double Taxation Avoidance Agreement (DTAA) with Mauritius. Many investors route their investments through Mauritius to take benefit of treaty and avoid taxes. Mauritius enjoys the status of being tax haven and remains the dominant investing country in India. Other major investing countries are Singapore, UK, Japan, Netherlands, US, Cyprus,

Germany etc. The top 20 investing countries in India together contribute approximately 91% of the total FDI inflows and 9% by the rest.

According to *World Investment Report 2015*, FDI inflows to developing economies witnessed a 2% rise over previous year and reached high level at \$681 bn in 2014. Five developing countries are in the list of top 10 FDI recipients countries in the world. India's ranking improved from being at 15<sup>th</sup> position in 2013 to 9<sup>th</sup> position in 2014. There is significant increase of 22% in FDI inflows to \$ 34 bn.

**Figure 1: Year-wise FDI Inflows into India: 2000-14**



Source: Department of Industrial Policy and Promotion, Ministry of Commerce and industry, Government of India.

### 3.0 Review of Literature

The dominant theoretical foundation in the area of FDI has been propounded by Hymer (1960) who is also considered as the father of International business. Hymer explains market imperfections lead to relocation of production facilities and this phenomenon is also called 'tariff jumping'. Numerous theories of FDI have been proposed by many researchers. Among them Dunning's (1988) eclectic paradigm popularly known as OLI theory is a comprehensive approach that explains key determinants of FDI namely- ownership advantage, location advantage and

internalization advantage. Further Dunning (1998) professed, FDI location can be decided on the basis of investment motive of firm whether the investment is market-seeking, resource-seeking, efficiency seeking or strategic assets-seeking. The existing literature on FDI determinants can also be split into ‘push’ or ‘pull’ factors. The push factors refer to home (source) country factors that leads to FDI outflows, while the pull factors are the host country factors that attract FDI inflows. Following is the brief review of literature on the push factors and source country factors that lead to FDI flows.

**Table 1: Country-Wise FDI Inflows into India: January 2000 to December, 2014**

S.No.	Country	FDI Inflows (In US\$ million)	% of Total FDI Inflows
1	Mauritius	84,604.46	35.34%
2	Singapore	29,759.08	12.43%
3	United Kingdom	21,806.45	9.11%
4	Japan	17,774.96	7.42%
5	Netherlands	13,834.66	5.78%
6	USA	13,547.25	5.66%
7	Cyprus	7,926.91	3.31%
8	Germany	7,299.90	3.05%
9	France	4,460.65	1.86%
10	Switzerland	2,966.39	1.24%
11	UAE	2,925.26	1.22%
12	Spain	2,031.04	0.85%
13	Italy	1,648.59	0.69%
14	South Korea	1,517.68	0.63%
15	Hong Kong	1,288.36	0.54%
16	Luxembourg	1,165.29	0.49%
17	Sweden	1,081.21	0.45%
18	Cayman Islands	1,021.84	0.43%
19	Russia	1,003.03	0.42%
20	British Virginia	823.97	0.34%
	Total FDI Inflows	239,427.35	91.25%

Source: Department of Industrial Policy and Promotion, Ministry of Commerce and industry, Government of India.

***Studies for developed economies***

Tallman (1988) studies the impact of 14 Western industrialized home countries economic and political factors on FDI flows in United States over the period 1974-1980. The researcher takes into account the lagged effects of explanatory variables i.e. GDP per capita, GDP, net cooperative domestic events and international events. The Ordinary Least Square (OLS), Least Square Dummy Variables (LSDV), and Error Components (EC) models are used to analyze pooled cross-country time-series data. The home country economic development (GDP per capita) and international cooperation between home country and U.S. positively significant in explaining FDI flows to U.S... On the other hand, net cooperative domestic events inversely related to FDI in U.S.

Grosse and Trevino (1996) examine the push factors of FDI inflows in U.S. from 23 source countries for the period 1980-1991. The macro-economic factors broadly economic, political and distance are considered. Various multivariate techniques like Least Square Dummy Variable (LSDV) and random effects Generalised Least Squares for pooled time series and cross-section data are employed. The dependent variable FDI in U.S. is measured in 2 different ways: (1) book value of FDI investment by country (2) value of sales by U.S. affiliates of foreign investors. The most important and positively significant driving factors of FDI in U.S. are bilateral trade and home country market size. Further, exchange rate, geographic distance, cultural distance and home country imports from U.S. are significantly negatively related to FDI in U.S... On the other hand, per capita income and political risk of home country are found insignificant to explain FDI inflows. Moreover, to check any structural changes two separate regressions are run for the period 1980-84 and 1985-91. The results for the latter period are same as for the whole period under study.

Kyrkilis and Pantelidis (2003) explains home country specific features impacts FDI outflows from 5 European Union member and 4 non-European Union member countries over the period 1977-1997. Home country incomes, exchange rate, technology, human capital, openness of economy, interest are the various independent variables considered in the study. Each country's log linear equation is examined separately using Ordinary Least Square (OLS) approach. Income and exchange rate turns out to be the major determinants of outward FDI from a country. The study concludes that FDI from EU countries is more human capital intensive whereas non- EU countries is more technology intensive.

Frenkel, Funke and Stadtmann (2004) explore both home country push factors and host country pull factors which affect FDI flows. This study includes bilateral flows from G-5 countries (U.S.A., Japan, U.K., Germany and France) to 22 emerging economies in Asia, Latin America and Central Eastern Europe for the period 1992-2000.

For the purpose of analysis various pull factors considered are GDP growth, openness of economy, inflation, exchange rate and risk of host country. GDP growth is also considered as push factor of FDI inflows from home country. By applying panel analysis and Gravity model with different specifications, the results indicates that distance home and host country negatively related to FDI flows as there is transaction cost related to FDI. The empirical analysis indicates that GDP growth is important push factor positively explaining FDI to emerging economies. In case of pull factors, GDP growth and stability of host country positively influences FDI whereas inflation and exchange rate does not play a significant role.

Kimino, Saal and Niegel (2007) analyse home country factors that affect inflows of FDI into Japan for the period 1989-2002 from the panel of 17 source countries. The explanatory variables identified are source country market size, bilateral trade, relative exchange rate, exchange rate volatility, relative borrowing cost, relative labour cost and source country investment climate. Pooled Ordinary Least Square (PLS), random effects (RE) and fixed effects (FE) model are used and when the country specific heterogeneity is accounted, variables significant in PLS become insignificant. The analysis shows that export performance of source country negatively impacts FDI inflows in Japan and on the other hand, investment climate positively affects FDI inflows. Thus, they are the important determinant of FDI inflows in Japan.

#### ***Studies for developing, emerging and transition economies***

Thomas and Grosse (2001) investigate the impact of country-of-origin factors on FDI into an emerging market- Mexico. The analysis includes 11 countries from which FDI flows into Mexico over the period 1980-1995. Economic, political, cultural and geographic factors are the four broad categories of determinants considered. The various independent variables considered in the study are existing bilateral trade, GDP, exchange rate, labor and borrowing cost differentials, political risk, geographical distance and cultural distance. Further, two dummy variables are considered one regarding U.S. that can affect FDI inflows in Mexico and the other to capture effect of 1995 economic crisis on FDI inflows. By using Generalized Least Square (GLS) regression, the results show economic variables significantly influences inflows' of FDI in Mexico. Other variables like cultural and geographic distance between source country and Mexico positively affect FDI inflows in Mexico, contrary to hypothesized relationship. Political risk of source country also affects inward FDI to Mexico positively. They conclude that inflows of FDI into emerging markets are influenced by all the categories of variables, not necessarily by economic factors only.



Pan (2003) studies how the country-specific home and host country macro-level factors impacts the inflow of FDI in China. Source country exchange rate, cost of borrowing size, external trade, closeness to host country, host country risk conditions and management orientation depicting the economic, political and cultural aspects are considered. Dummy variable capturing political risk of 1989 when FDI inflows to China falls drastically is also used. With the use of regression analysis, the results show the size of source country negatively influences FDI in China. Both exchange rate and closeness to host country are not significant in explaining FDI inflows in China. The reason being profits are kept for long period so exchange rate does not influences FDI flows. Thus, there are some differences in explaining FDI in case of transitional economies compared to developed world.

Zhao (2003) makes an attempt to study the determinants of FDI flows to China. For the purpose of analysis, the researcher considers the source country factors with comparison to host country (China) factors i.e. differentials. This study incorporates impact of 3 broad factors: - market conditions, risk and financial factors on FDI inflows in China. GDP per capita, GDP growth rate, export competitiveness, lending rates, nominal exchange rate, political risk and operating risk are the various explanatory variables. The analysis includes pooled data from 21 source countries for the period 1983-1999. By using multiple regressions taking lag of one year for all explanatory variables, the results indicate relative growth, export competitiveness of China and appreciation of home country currency positively influences FDI flows to China. On the other hand, high financial cost, political and operating risk negatively influences flows. Further, the relative GDP per capita which is once considered important turns out to be marginally contributing FDI flows to China.

Tolentino (2008) studies the relationship between level of FDI outflows from China and India and various home country specific macro-economic factors for the period 1982-2006 and 1980-2006 respectively. To gauge the causal relationship between these variables, the researcher used Vector Autoregressive model. The results of the study shows that, in case of China, the home-country macro-economic factors like income per capita, openness of economy, interest rate, exchange rate, exchange rate volatility, human and technological capability do not granger cause level of outward FDI of China and vice-versa. On the other hand, level of outward FDI of India is influenced by technological capability of India. Moreover, FDI outflows from India granger causes their national interest rate.

Zheng (2009) studies both the home and host country factors that determine FDI inflows in China and India from various home countries around the world. Market size, market growth and labor cost are predictor variables considered in the analysis. The

various control variables included are exports, imports, relative exchange rate, relative inflation, relative borrowing cost, country and policy risk/ policy liberalization, geographic and cultural distance. In the case of China, a panel data of FDI inflows from 28 countries for the time period 1984-2002 is considered whereas for India flows from 29 home countries for 1991-02. For the purpose of empirical analysis Pooled Ordinary Least Squares (POLS) and the random effects (REs) model are used. The results show exchange rate and inflation are insignificant in explaining FDI inflows in both China and India. The determinants which are common in both the countries are market growth, imports, labor costs and country political risk/ policy liberalization. The analysis shows the most important determinants of FDI inflows in China are exports, market size and borrowing cost. Further, in case of India, geographic and cultural distance turns out to be most important as it has efficient English-language skills. The researcher also employed structural break framework to find out is there any difference in determinants for the largest source countries in India and China by dividing sample into two groups: top 15 source countries and the remaining group. As far as China is concerned, most of the other variables remaining same, top 15 source countries motive behind FDI is to achieve efficiency (lower labor and borrowing cost). On the other hand, inflation became significant in explaining FDI from top 15 source countries into India while geographic distance becomes insignificant.

Kayam (2009) examines home country factors for outflows of FDI from 65 developing and transition economies including 12 African, 16 American, 23 Asian and 14 transition economies for period 2000-06. Predictor variables like home country GDP, GDP per capita, inflation, exports, imports, employment population ratio, infrastructure, inward FDI, health, govt. stability, bureaucracy quality and investment profile depicting economic and institutional quality are considered. They used fixed effects regression estimation technique as the countries in economic and social aspects are heterogeneous. The empirical results show that size of the market is small for African firms so they go for outward FDI. The main driver of FDI outflows for transition economies is competition faced from imports. As far as American and Asian firms are concerned, they face competition from inflows of FDI. Moreover, as institutional factors like investment risk and govt. stability improves, Outward FDI decreases. This study concludes that the business and political stability in home country plays a very important role along with economic condition being a major determinant of FDI outflows.

Lu (2010) examines how FDI inflows in China are affected by source country characteristics over the period 1989-2006. This study incorporates Intellectual Property Rights (IPR) as a push factor for FDI inflows along with other macro variables like source country size, bilateral trade, relative exchange rate, exchange rate volatility,

relative borrowing cost, relative labor cost and source country risk. The panel data analysis is done using System Generalised Method of Moments (System GMM) to incorporate any endogeneity along with OLS (fixed effects and random effects) model. The results indicate that source country market size negatively influences FDI inflows in China. Further, strong IPR protection and other macro variables significantly impacts China's FDI inflows except source country risk which is insignificant in explaining FDI inflows.

Banga (2000) studies the determinants of outward FDI from panel of 13 developing economies of South, East and South-East Asia for the period 1980-2002. Three set of factors: trade-related, capability-related and domestic drivers for outward FDI are identified. Some of the explanatory variables considered in the study are exports, imports, bilateral investment agreements, skills, GDP, infrastructure, FDI inflows, cost of skilled labor, taxes on profit etc. the regression for both fixed effects and random effects models is run. Though, trade-related factors strongly influence outward FDI but they need to be complemented by home country capability. Domestic factors also significantly impacts FDI outflows except market size because of higher integration other markets are also available.

Masron and Shahbudin (2010) investigate the impact of country specific push factors for the period of 1980-2006 on outflows of FDI from Malaysia and Thailand. They have recognized various home country drivers like market conditions (GDP), cost of production (relative wage rates), business conditions (inward FDI) and Govt. policies (countries openness level). They have taken additional variables like interest rate, trade agreements and institutional quality for robustness test. The empirical analysis is done using Johansen's Maximum Likelihood method of Co-integration and error correction model for long-run relationship is used. All variables significantly impact outflows of FDI but in both countries, domestic market condition plays the dominant role followed by Govt. policies.

Bhasin and Jain (2013) examine the home country factors of FDI outflows from 10 Asian economies for the period 1991-2010. They have identified and categorized the macro-economic variables into 4 broad categories: - market conditions, policy variables, economic variables and production factors. The various explanatory variables are GDP, GDP per capita, FDI and trade openness, interest rate, exchange rate, technology and human capital. With the use of fixed effects Least Square Dummy Variable (LSDV) model and Principal Component Analysis, they identified GDP and FDI openness variable is most significant. Both the variables have positive sign depicting high level of GDP and FDI openness of home country leads to FDI outflows.

Das (2013) investigate the source country determinants of FDI outflows of 56 developing nations situated in different geographic regions. The analysis is carried out over period 1996-2010. In order to allow comparison among economies of different sizes, the dependent variable FDI outflow is normalized by GDP of an economy. GDP per capita, trade openness, political risk, technological factor and exchange rate are the predictor variables considered in the study and to know their explanatory power they are included in the model sequentially. The empirical analysis is done using random effects Generalized Least Square Model and also includes regional dummies. The findings of the study suggest that though the exchange rate is not significant but high level of economic development, trade openness, political risk and technological advancement of home country push FDI outwards from the home country. Thus, the researcher concludes that Government should frame such policies which maintain the balance between domestic and foreign investment and don't be at the cost of each other.

#### **4.0 Data and Research Methodology**

This paper examines the source country characteristics of FDI inflows in India with special reference to tax havens. The top 20 FDI investing countries in India are considered for the purpose of analysis. The analysis is done using multiple regressions on the panel data for the period 2004-13.

##### **4.1 Sample period**

The paper employs panel of 18 top investing countries over the period of ten years (2004-2013) to analyse the source country determinants of FDI inflows in India. The countries included in the study are Mauritius, Singapore, U.K., Japan, Netherlands, U.S.A., Cyprus, Germany, France, Switzerland, UAE, Spain, Italy, South Korea, Hong Kong, Luxembourg, Sweden and Russia. Cayman Islands and British Virgin Islands are not included in the study because of data unavailability. Together, flows from these countries form more than 90% of total inward FDI flows into India. Further, due to lack of availability of data of corporate tax rates prior to 2004, the above period has been selected.

##### **4.2 Description of variables and data sources**

For the purpose of present study, we focus on source country factors that drive out investment from their own economy to India and special emphasis is given to FDI from tax havens. The independent variables considered in the study are the following:

*Relative GDP:* GDP depicts the supply side of funds for FDI. For the purpose of study, we have taken GDP in relative terms i.e. GDP of source country divided by GDP of host country. Thus, we expect higher the ratio of source-to host-country GDP, the higher the flow of FDI from source to host country. As GDP of source country is relatively more, more funds would be available for investment abroad.

*Relative GDP per capita:* It is used as a proxy for market demand. It tells us about the buying capacity of consumers and also shows the level of economic development in a country. The higher the ratio of source-to host-country GDP per capita, the lesser would be the FDI flow from source to host country. As the relative demand in host country would be low, lesser would be FDI flows.

The data for above two variables is sourced from World Development Indicators database, The World Bank.

*Inflation:* Inflation refers to the sustained increase in general level of prices of goods and services. The proxy used to measure inflation is average consumer price index. With the increase in inflation of source country, the source country currency depreciates. In terms of host country, the same amount invested by source country means less in value. Thus, we expect negative relationship between inflation of source country and FDI inflows in host country. The data source for inflation is World Economic Outlook 2015 database, IMF.

*FDI Openness:* It means no restrictions on movement of capital abroad. The free mobility of capital has a positive impact on FDI flows. FDI openness is measured by ratio of outward FDI stock to GDP of source country. FDI openness of source country is calculated by using UNCTAD statistics.

*Tax Haven dummy:* This variable indicates a tax haven status of source country. It takes a value of 1 if country is a tax haven and takes 0 otherwise.

*Relative Tax:* Tax rates emerged as important determinant for FDI. For the purpose of analysis we have taken relative corporate tax rate of source country to host country. If the ratio of corporate tax rate of source to host country is high, it means more outward flow of FDI from source to host country to take the benefit of low taxes and other tax incentives. The corporate tax rates are extracted from World Corporate Tax Guide, EY.

**Dependent Variable:** The dependent variable for our study is FDI inflows in India from source countries selected for the study. The data is sourced from Secretariat of Industrial Assistance (SIA) Newsletter, Department of Industrial Policy and Promotion, Ministry of Commerce and industry, Government of India.

**The general form of our model is given as:**

FDI inflows in India= f( relative GDP, relative GDP per capita, inflation, FDI openness, tax haven dummy, relative tax rates)

## 5.0 Results and Analysis

The result of the fixed effects panel data regression are provided in Table 2. The analysis of the results is provided below.

**Table 2: Results for Fixed effects Panel Data Regression**

Dependent Variable: FDIINFLOWS_IN_INDIA				
Method: Panel Least Squares				
Periods included: 10				
Cross-sections included: 18				
Total panel (balanced) observations: 180				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1940.696	500.5010	3.877506	0.0001
TAX_RATES	248.3579	504.2540	0.492525	0.6230
TAX_HAVENS	2522.138	338.9343	7.441377	0.0000
RELATIVE_GDP_P_C_	-36.44711	6.525219	-5.585576	0.0000
RELATIVE_GDP	78.19256	50.82841	1.538363	0.1258
INFLATION	-1.461654	0.757410	-1.929806	0.0553
FDI_OPENNESS	6.736708	1.428758	4.715081	0.0000
R-squared	0.361953	Mean dependent var		929.1789
Adjusted R-squared	0.339824	S.D. dependent var		1961.950
S.E. of regression	1594.108	Akaike info criterion		17.62413
Sum squared resid	4.40E+08	Schwarz criterion		17.74830
Log likelihood	-1579.172	Hannan-Quinn criter.		17.67447
F-statistic	16.35666	Durbin-Watson stat		0.495843
Prob(F-statistic)	0.000000			

- The significance of the whole model is checked by **F-statistic**. The probability of F-statistic in our analysis is 0.0000 depicting our model is well specified. The number

of variables chosen, the type of variable chosen, the form of variable chosen and the functional form of equation chosen is appropriate.

- $R^2$  measures the proportion of the variance of the dependent variable about its mean that is explained by independent variables.  $R^2$  depicts goodness of fit. Here  $R^2$  (Coefficient of Determination) of the model is 0.361953. It implies that 36.19% of variation in FDI is explained by the independent variables considered here.
- Relative GDP per capita of source country with respect to India is statistically significant in explaining FDI inflows in India. With p-value of 0.0000 less than the level of significance 0.05, GDP per capita remains important determining factor of FDI inflows in India from various source countries. The sign of coefficient shows the negative relationship between FDI inflows in India and relative GDP per capita which depicts higher the ratio, lesser would be flows. This could be due to the fact that if GDP per capita of India is relatively less to source country GDP per capita then the buying capacity of Indian population is comparatively less and the foreign firms entering India will not be able to achieve economies of scale.
- FDI Openness of source country is statistically significant at 0.05 level of significance. The coefficient of FDI openness is positive as expected as it indicates free mobility of capital from source country.
- The dummy variable used in the analysis to show the tax haven status of source country also turns out to be statistically significant at 0.05 level of significance. The coefficient of tax haven dummy have a positive sign depicting source countries with tax haven status leads to more FDI flows in India in comparison to other source countries.
- Among the variables studied, relative GDP, inflation and relative tax rates have p-value greater than level of significance 0.05. These variables turn out to be insignificant when analysed with respect to the source country FDI inflows in India.
- To capture the impact of taxation on FDI Inflows in India, the relative corporate tax rates have been used. Though the variable turns out to be insignificant, but the coefficient has positive sign as expected. The positive sign indicates, if the corporate tax rates in source country are high as compared to India, the FDI flows from source country to India to take the benefit of lower taxes and other tax incentives. But, as stated above the impact is insignificant.
- Inflation of source country is statistically insignificant at 0.05 level of significance but it turns out to be significant at 0.10 level of significant with p-value of 0.0553. The sign of the coefficient is negative as expected because high inflation leads to depreciation of source currency and thus low purchasing power in host currency.

- Relative GDP i.e. GDP of source country to GDP of India is insignificant. But the coefficient is positive, which depicts higher the ratio of source to host country GDP, higher the funds would be available for FDI investment in India.

## **6.0 Conclusion**

The primary purpose of this paper was to examine whether a broad set of source country attributes extracted from previous literature, have influenced FDI inflows in India during the period 2004-13. In general, research on inward FDI in India has been scarce with respect to source country characteristics. In this study effort has been made to include two additional variables to capture the impact of taxation on FDI flows i.e. relative corporate tax rates and tax haven dummy. Even the variables to capture market size and market demand are taken in relative terms i.e. ratio of source country to host country to analyse the relative impact of the variables on FDI inflows. The empirical analysis is done using multiple regression (fixed effects) model on panel data.

The results indicate relative GDP per capita, source country FDI openness and inflation significantly affects FDI inflows in India. Higher relative GDP per capita and source country inflation act as a deterrent and discourage FDI. Similarly, more open and liberal policy of FDI of source country leads to more inflows of FDI in India.

Our analysis shows that significant FDI inflows in India come from tax havens. Thus, tax havens have special role to play. It shows even India is exposed to inward investment from tax havens and offshore hubs. Tax is still not an important consideration for source countries to invest in India. Still, there are other factors which play a major role in context of FDI inflows in India.

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