DETERMINANTS OF FOREIGN DIRECT INVESTMENT IN INDIA

Dr. A. PANDIAMMAL, Guest Lecturer**,** Department of Economics, Government Arts and Science College, Andipatti, Tamil Nadu, India.

P. SATHEESH KUMAR, Assistant Professor, Department of Economics, G.T.N. Arts College (Autonomous), Dindigul - 624 005, Tamil Nadu, India.

Abstract

This research paper analyzed the determinants of Foreign Direct Investment in India during 1990-91 to 2022-2023. The results support the theoretical predictions derived from recent developments in International trade theory, demonstrating that they account for 91.5 percent of the variations in foreign direct investment (FDI) in India. The analysis indicates that FDI inflows are influenced by factors such as GDP, the Debt-GDP ratio, and trade openness. Consequently, it can be inferred that merely adopting liberalized policies for foreign direct investment is insufficient to secure substantial inflows; it is essential to align economic parameters accordingly. Given that FDI is most responsive to trade openness, it is imperative to enhance the Trade-GDP ratio. Additionally, fostering a more rapid growth in GDP is crucial. Therefore, for a favorable increase in foreign direct investment in India, the growth rate of trade must surpass that of GDP.

Keywords: Foreign Direct Investment, Gross Domestic Product, Openness Trade, Trade, Exports.

Introduction

The influence of foreign capital is undeniably significant in shaping national economies across all levels of development. For advanced economies, it is vital to propel sustainable development efforts, while developing nations rely on foreign investment to enhance capital accumulation and stimulate more vigorous economic growth. Transitional economies, which are navigating the shift from central planning to market-driven systems, greatly benefit from foreign investment as it supports essential reforms, addresses historical economic obstacles, and engenders a stable environment for GDP growth and global economic integration. Realizing the inherent potential in developing regions requires a substantial influx of foreign capital. Such capital inflows which encompass foreign direct investment, portfolio investments, and external borrowing mechanisms are instrumental in providing critical resources and technological advancement. They also significantly alleviate domestic savings shortfalls necessary for fueling investment. In situations where the marginal productivity of capital is superior within these countries, foreign capital allows for greater consumption and investment than what domestic production alone can support. Additionally, these inflows are conducive to progress toward the Millennium Development Goals and are aligned with the National Economic, Empowerment, and Development Strategy. As nations work towards greater openness and global integration, the significance of capital flows will only deepen.

A variety of frameworks have been developed to analyze the factors influencing and the consequences of Foreign Direct Investment. Among these, John Dunning's "Eclectic Theory" is particularly notable for its adaptability and increasing acceptance. This theory asserts that specific characteristics of both the firm and the host nation are critical for a firm's foreign investment decisions. A multinational enterprise will invest in a foreign country when it is most beneficial to utilize its oligopolistic advantages; otherwise, it will pursue market opportunities through exports.

According to Dunning, the volume and structure of foreign production by firms, particularly that which is funded by foreign direct investment, will be contingent upon the importance of three specific groups of variables.

1. The competitive advantage held by investing firms is largely influenced by the nationality of their ownership, which provides them with specific advantages ('O' advantages) that are distinct from those of firms with different national ownership. This advantage is complemented by the firms' ability to transfer, utilize, or enhance these benefits beyond their home countries.

2. Different specialized regions present varying degrees of attractiveness as investment locations, known as 'L' specific advantages. These advantages are crucial for both the generation and acquisition of new 'O' advantages, as well as for the effective application of existing 'O' advantages. The 'L' specific advantages of certain regions are contingent upon the ability of national or sub-national markets and government entities to furnish a unique collection of immobile assets, which are vital for both domestic and foreign investing firms to optimize their mobile assets. Additionally, the relative advantages for investing firms in aligning their 'O' specific advantages with the 'L' advantages of particular regions can be achieved through various channels, including arm's length markets, internal organizational structures, or intermediary strategies such as alliances. When a firm decides to replace market mechanisms with these advantages, it is presumed to possess internationalization ('I') advantages.

3. The eclectic or ‘OLI’ paradigm posits that the likelihood of foreign direct investment (FDI) increases with the presence of significant ownership (O) and internalization (I) advantages among firms, alongside favorable location (L) advantages that can be leveraged from a foreign context. Conversely, if firms possess considerable O and I advantages but the L advantages are more pronounced in their home country, they are likely to favor domestic investments over outward FDI, relying on exports to meet foreign market demands. In scenarios where firms have O advantages that are optimally acquired and utilized in foreign markets, FDI may be supplanted by inter-firm alliances or market transactions, leading to the transfer of certain assets typically associated with FDI, such as technology, capital, and management expertise. Among these assets, equity or loan capital is a critical component of FDI.

The degree to which the ‘OLI’ framework supports FDI or alternative forms of international economic engagement is contingent upon various contextual factors. The effectiveness of the eclectic paradigm is enhanced when it is explicitly connected to these factors, allowing for the development of operationally testable theories. These contextual factors can be categorized into four primary types. The first category pertains to the four distinct

motives for FDI, each aimed at enhancing the economic success of the investing firms, such as improving overall profitability, fostering long-term growth, and increasing market share. The initial motive involves the pursuit of natural resources, including minerals, raw materials, or unskilled labor, which is referred to as resource-seeking FDI. The second motive focuses on the identification and exploitation of new markets for finished products, known as market-seeking FDI. The third motive aims to reorganize existing investments (whether resource-seeking or market-seeking) to achieve a more efficient allocation of international economic resources, a process termed rationalization.

The eclectic paradigm posits that the determinants of foreign direct investment can vary significantly based on the home countries initiating the investment (for instance, Japan investing in Canada) and the host countries receiving it (such as Nigeria receiving investment from Switzerland). The specific arrangement of the 'OLI' variables that elucidate FDI is likely to be contingent upon the sector or activity in question. Consequently, factors such as patent protection, wage levels, government policies, cross-border transportation expenses, and economies of agglomeration play a crucial role in shaping the extent and distribution of transnational corporation activities in sectors like computer software and pharmaceuticals, which are expected to differ markedly from those in industries such as iron and steel or construction. Furthermore, even within the same industry, the nature and composition of the 'OLI' advantages for individual firms may fluctuate based on contextual elements including their size, historical background, product diversity, degree of vertical integration, geographical location of foreign operations, and managerial strategies.

Review of Literature

Wagner, C. and Delios, A. (2023), The authors observe that India's shift towards a knowledge-based economy is drawing foreign direct investment that focuses on asset enhancement rather than asset exploitation. Investors are inclined to pursue long-term opportunities by leveraging India's digital resources, research and development capabilities, and an expanding pool of specialized talent in fields such as analytics, biotechnology, engineering, and pharmaceuticals. Furthermore, foreign investors do not appear to be significantly discouraged by existing infrastructural issues or legal and regulatory constraints.

Azam and Ling Lukman (2017), This research investigates the impact of various economic factors on foreign direct investment inflows into Pakistan, India, and Indonesia over the period from 1971 to 2005. A log-linear regression model was employed for each country, utilizing the least squares method to estimate the effects of different economic determinants on FDI inflows. The findings indicate that key economic determinants of FDI include market size, external debt, domestic investment, trade openness, and physical infrastructure. Additionally, the study reveals that the empirical results for India align closely with those for Pakistan, with the exception of two determinants, while the results for Indonesia do not correspond with those of Pakistan and India. To promote increased FDI in Pakistan, India, and Indonesia, it is essential for management authorities to focus on ensuring economic and political stability, improving infrastructure, maintaining peace and security, upholding law and

order, fostering domestic investment, reducing external debt, and giving equal attention to effective monetary and fiscal policies.

Kour (2013), Foreign direct investment inflows to the developing countries have increased with a greater pace in the 1990s accounting for about 46.1 % of global FDI inflows in the year 2010. Similar trends have also been visualized in India where FDI has expanded rapidly following the economic reforms initiated in the early 1990s. These were directed towards increased liberalization, privatization and deregulation of the industrial sector, integrating the economy with that of world economy by reducing trade barriers and adapting favourable policy framework towards expansion of foreign investment in the country. This has made Indian economy a favourable destination for foreign investors. The present study explores the determinants of FDI that influence the inflows of FDI into India. Explanatory variables used in the study are gross domestic product (GDP), foreign exchange reserves (RES), long-term debt (LTD), inflation (INF), exchange rate (EXCH) and openness (OP). Empirical analysis concludes that the variables OP, Reserves, GDP and LTD have found to have positive impact on FDI, while negative impacts of INF and EXCH on FDI have been noticed.

Niti Sury (2008), In the context of many developing nations, the promotion of FDI is a crucial component of the ongoing economic reforms in India. To create a foreign investment policy that effectively encourages FDI, it is essential to first analyze the factors influencing FDI in a country. This analysis will enable policymakers to implement measures that are not only necessary but also likely to result in increased investment. This study identifies the factors affecting FDI in India by utilizing ordinary least squares regression analysis on quarterly data spanning from 1991 to 2003. It investigates the influence of GDP, taxation, trade openness, labor costs, and political stability on FDI inflows. The findings indicate that FDI inflows into India are significantly influenced by anticipated national income, tax rates, trade openness, and labor costs during the specified period.

Methodology

The prime objective of this article is to determinants of foreign direct investment in India during the period from 1990-91 to 2022-23. For this purpose, the secondary data on Determinants of India's Foreign Direct Investment have been collected from various issues of Monthly Statistics of the Foreign Trade of India, Economic Survey, RBI Bulletin and Handbook of Statistics on Indian Economy. The collected data were analyzed with the help of econometrical tools such as Correlation model and Multiple Regression model. By using SPSS 19 software, the study has been done.

Correlation Model

$$r = \frac{N\sum dxdy - \sum dxdy}{\sqrt{[N\sum dx^2 - (\sum dx)^2]\,[N\sum dy^2 - (\sum dy)^2]}}$$

Where

dx = X - A

dy = Y - B

N = Number of pairs of observations A and B are assumed mean of X and Y respectively.

Multiple Regression Model

$$FDI = \psi_0 + \psi_1 GDP + \psi_2 OPEN + \psi_3 DBT/GDP + \psi_4 DTSER/EX + \psi_5 EXRES + \psi_6 REER + U$$

Where,

FDI = Inflow of Foreign Direct Investment.

GDP = Gross Domestic Product at factor cost.

OPEN = Sum of Exports and Imports as a proportion of GDP.

DBT/GDP = Total long-term debt as a proportion of GDP.

DTSER/EX = Debt servicing as a proportion of Exports.

EXRES = The Foreign Exchange Reserves.

REER = The Real Effective Exchange Rate of the Indian Rupee.

$\psi_1, \psi_2 \ldots \psi_6$ = Regression co-efficient.

U = Stochastic disturbance term.

Results and Discussions

Economic time series typically exhibit a tendency to move in tandem, which raises the potential for multicollinearity when all aforementioned variables are incorporated into the equation concurrently. To identify variables that may not be suitable for simultaneous inclusion, a correlation analysis was conducted involving all anticipated explanatory variables alongside the dependent variable. The results of the correlation analysis facilitated the selection of several variables as potential explanatory factors. Furthermore, the correlation analysis revealed a significant degree of interrelationship among all explanatory variables. The correlation analysis pertaining to Foreign Direct Investment and other variables is presented in Table 1.

Table 1

Correlation Analysis of Foreign Direct Investment

	FDI	GDP	OPEN	DBT / GDP	DTSER / EX	EXRES	REER
FDI	1						
GDP	0.911	1					
OPEN	0.785	0.669	1				
DBT / GDP	-0.801	-0.819	-0.495	1			

DTSER / EX	-0.787	-0.822	-0.521	0.932	1		
EXRES	0.946	0.926	0.771	-0.882	-0.871	1	
REER	-0.331	0.352	0.110	-0.569	-0.447	0.406	1

Source: Author's own calculation.

A strong correlation of 0.946 was observed between foreign direct investment and foreign exchange reserves. Additionally, the correlation between FDI and gross domestic product (GDP) was also significant, recorded at 0.911. The relationship between trade openness and FDI exhibited a correlation coefficient of 0.785. Conversely, a negative correlation was anticipated between the real effective exchange rate (REER) and FDI, which was measured at r = -0.331. Furthermore, both the debt-to-GDP ratio and the debt service ratio demonstrated negative correlations with FDI. In contrast, a robust correlation was identified between foreign exchange reserves and GDP, as well as between foreign exchange reserves and trade openness. Additionally, a strong correlation was noted between long-term debt as a percentage of GDP and debt servicing as a percentage of exports.

Regression Results

Using Ordinary Least Square, linear equation the explanatory variables were regressed. The regression results are presented in the Table 2.

Table 2

Regression Analysis of Foreign Direct Investment

Eq. No.	Constant	GDP	DBT/GDP	OPEN	R^2	F
1	-8175.372		-916.618	5842.329**	87.5	52.344
2	-4197.125	0.009**			85.3	111.103
3	-21753.159	0.006**		3624.421	92.5	88.237
4	2175.602	0.007**	-217.316		86.1	59.431
5	-18639.123	0.005**	-391.137*	3183.294**	91.5	56.623
e		1.26	-1.23	3.74		

Source: Author's own calculation.

** one per cent level of significant.

* five per cent level of significant.

e Elasticity of FDI with to GDP,DBT/GDP and OPEN.

In the conducted regression analysis, it was determined that GDP, Openness, and long-term debt-to-GDP ratios exhibit statistical significance and align with expected signs. The coefficients for GDP and Openness are

both positive and highly significant, effectively accounting for variations in foreign direct investment (FDI) inflows. Conversely, the coefficient for the debt-to-GDP ratio is negative and statistically significant. The coefficient for foreign exchange reserves lacks significance, attributed to multicollinearity with other explanatory variables. Additionally, variables such as the real effective exchange rate (REER) and the debt-service ratio do not significantly account for variations in FDI inflows. The elasticity of FDI concerning the explanatory variables has been assessed to identify which variables exhibit the highest elasticity. Elasticity is defined as the percentage change in FDI resulting from a percentage change in the explanatory variables.

The elasticity of foreign direct investment (FDI) in relation to gross domestic product (GDP) is measured at 1.26. This indicates that a one percent variation in GDP results in a corresponding 1.26 percent variation in FDI. Furthermore, the elasticity concerning trade openness and long-term debt is recorded at 3.74 and -1.23, respectively. This implies that a one percent increase in trade openness is expected to yield a 3.74 percent increase in FDI, while a one percent rise in the debt-to-GDP ratio is likely to decrease FDI by 1.23 percent. Consequently, FDI demonstrates the highest elasticity in relation to trade openness. To enhance FDI inflows, it is essential to promote trade with other nations. Additionally, fostering GDP growth is crucial. A decrease in long-term foreign debt as a proportion of GDP would also positively influence FDI by reducing financial burdens.

Conclusion

The results support the theoretical predictions derived from recent developments in International trade theory, demonstrating that they account for 91.5 percent of the variations in foreign direct investment (FDI) in India. The analysis indicates that FDI inflows are influenced by factors such as GDP, the Debt-GDP ratio, and trade openness. Consequently, it can be inferred that merely adopting liberalized policies for foreign direct investment is insufficient to secure substantial inflows; it is essential to align economic parameters accordingly. Given that FDI is most responsive to trade openness, it is imperative to enhance the Trade-GDP ratio. Additionally, fostering a more rapid growth in GDP is crucial. Therefore, for a favorable increase in foreign direct investment in India, the growth rate of trade must surpass that of GDP.

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