

# **An Introduction to Empirical Study of India's Inward and Outward Foreign Direct Investment with Emphasis on BRICS Economies Destination**

## **1.1 Introduction**

The BRICS countries namely Brazil, Russia, India, China, and South Africa are recognized as the emerging economies of the world. The economic development encompasses abroad improvement in terms of agriculture, industry, banking and finance, and other service sector. This phenomenal development has attracted foreign investment (both portfolio and direct) to these countries, including internal transfer of funds between member economies of BRICS. According to Andreff, W. (2016) the early 2000s saw an increase in inward and outward FDI from post-communist and fast-growing developing countries. BRICS countries are among the ten largest countries in the world, both by land mass and population.

The exciting fact about the BRICS grouping is that the five countries have huge domestic markets. The previous several decades have been characterized by this element, which has not only enabled them to profit from the recent high growth momentum but has also persisted during that time. This strength has also helped them diminish their economic crisis better than many more developed economies. These huge domestic markets help differentiate the pentad from other emerging economies since a successful business model can be recreated many times domestically.

In view of the importance that the BRICS economies have in the world, it is important to study these economies in detail. This study takes up a segment, namely FDI (outward and inward) amongst these economies with an emphasis on India. This study is divided into several sections, the first section of the study highlights the historical emergence of Outward Foreign Direct Investment (OFDI) in BRICS countries. The second section deals with the

theoretical discussion on policy frameworks with special reference to FDI in India. The third section deals with the design of the study. The fourth section shows the relationship of OFDI of India with BRICS countries, whereas, the fifth section shows the relationship of IFDI of India with BRICS countries in terms of economic development, with the help of econometric tests namely Ordinary Least Square (OLS) and Vector Auto regression (VAR) and Granger causality test. The last section consists of a summary of conclusions, findings, and suggestions for the study.

## **1.2 Introduction to the Surfacing of OFDI in BRICS Economies**

When compared to MNCs from China, Russia, and South Africa, Indian and Brazilian companies led the way in foreign investments. The first documented instance of Indian investment overseas dates back to 1955, when Birla established a textile business in Ethiopia (Saikia, 2012). The second OFDI from India, according to Lall (1983), took place in 1962 when Jay Engineering Works established a sewing machine assembly line in Sri Lanka. Indian companies made some astounding foreign investments in the 1960s, but they were only able to establish modest joint ventures (JVs) in developing nations like Kenya, Uganda, Nigeria, Malaysia, Thailand, and Sri Lanka because of India's tight OFDI alignment. The early 1990s saw the liberalization of OFDI policy, which encouraged Indian businesses to make foreign investments subject to strict government regulations. Developing joint ventures as opposed to wholly owned subsidiaries was one of the main goals of the new approach. The government perceived Indian foreign direct investment (FDI) as a means of promoting exports in the equipment products sector. Due to this, the market sought out OFDI mostly in adjacent host nations, such as the Middle East and a few African nations, with an emphasis on those where a sizable portion of the local population is of Indian descent. It was noted that the Indian BRICS MNCs have benefited from a first-mover advantage in comparison to the

other MNCs. In the 1970s, Brazilian businesses began making foreign investments. The primary causes cited by Brazilian entrepreneurs to illustrate the first wave of Brazilian OFDI were the country's internal recession in the late 1970s and the crisis of the 1980s. This acted as a catalyst for Brazilian businesses to go worldwide. Financial institutions, engineering consultancies, and Petrobras—the petroleum company from Brazil—extended their operations into neighboring nations. from 1975 to 1980. There were already twelve MNCs in Brazil (Andreff, 1982). According to figures from the Brazilian Central Bank, the financial services sector accounted for 54% of all FDI outflows in 1980. The rise of Brazilian companies' exports was deliberately supported by a significant presence of banking investments abroad. In addition, the first multinational corporations (MNCs) in Brazil operated in the building and engineering sectors, the agro-food business, and oil exploration and production. Africa, the Middle East, and Latin America were Brazil's top OFDI destinations. A list of the biggest non-financial investors overseas in the 1980s may be found in Villela (1983). The 1990s marked the beginning of a new phase in the globalization process for big Brazilian corporations (Cyrino et al., 2010). Due to trade liberalization, privatization, and deregulation that came after Brazil's newfound focus on exporting its economy, outward foreign direct investment (OFDI) flows skyrocketed. Over the course of the 1990s, there was a noticeable increase in the internationalization of Brazilian businesses as a result of institutional and economic reforms. The strategy of expanding into foreign markets, known as OFDI, was sparked by the country's recovery from the 2001 crisis and occurred primarily after 2002 (Amal and Tomio, 2012). Chinese multinational corporations (MNCs) possessed a first-mover advantage over MNCs from all other transition economies, including those from Russia and Central Eastern European countries (CEECs), although trailing behind the rise of Indian and Brazilian MNCs. As early as 1979, they started forming subsidiaries overseas, mostly in order to access new export markets (Ye Gang, 1992). Since then, their foreign

investment has outpaced that of Russian businesses: the amount of foreign direct investment (OFDI) from China in 1992 (\$7,401 million) was roughly equal to the amount from Russia in 1998 (\$7,385 million). Similar to Indian MNCs, the Linkage, Leverage, Learning (LLL) strategy and prior technology transfers from foreign MNCs that resulted in productivity spillovers to domestic Chinese enterprises have driven the growth of MNCs in mainland China. According to Lian and Ma (2011), China's OFDI is anticipated to direct similar transfers and spillovers from China to developing nations in the future phase. Chinese MNCs ought to be more welcome in this kind of host nation as a result.

The former USSR opened up to inbound FDI somewhat later, in 1987, and because of Russia's unfavorable domestic investment climate in the 1990s, the LLL process was not in place. (Andreff, 1999a). The infamous "red multinationals" of the Soviet Union (Hamilton, 1986) disappeared almost instantly after the USSR broke up and the ensuing transformational recession. USSR OFDI shares dropped from \$699 million in 1990 to nearly nothing in 1992 and 1993. Contrarily, a large number of Russian businesses suddenly became multinational corporations (MNCs) just by virtue of their locations throughout many former Soviet republics. A single firm situated in two or more former Soviet republics—often under central planning—became an instantaneous so-called "born multinational" company because these republics attained the status of new sovereign states by the end of 1991 or in 1992 (Liuhto, 2001).

In South Africa, foreign direct investment has a lengthy and intricate history. Since early in the 19th century, when Britain established a colony, foreign corporations have been present. Large capital-intensive operations were necessary for the effective exploitation of the resources, and direct and portfolio investment flows from Europe, especially London, made this possible. This helped Johannesburg's domestic stock exchange get off the ground in its

early years. Beginning at the turn of the 20th century, the expansion of the domestic economy and the reinvested mining profits fueled the growth of manufacturing. Throughout the five decades starting in the 1920s and continuing through the 1950s and 1960s, direct investment from the US, Europe, and the UK was crucial to the development and expansion of new industrial sectors.

Whilst mining received some FDI during this time, manufacturing and services received the majority of it. By the early 1970s, manufacturing accounted for 40% of foreign direct investment (FDI) stock, followed by financial and business services at 25% and mining at 15%.

Businesses in South Africa have grown to be important foreign investors. The big mining companies have sold off non-core domestic assets and made large international mineral investments, retreating from the conglomerate structure that came with operating in a comparatively closed economy. Furthermore, since 1994, sub-Saharan Africa has become more accessible to South African businesses. Between 1995 and 2001, the value of South African direct investment holdings in Africa increased by 18% annually (SA Reserve Bank 2001, 2003).

Indian and Brazilian firms were ahead in terms of investments abroad in comparison to the Chinese, Russian, and South African MNCs. India's history of Investment abroad can be traced back to the one which was the establishment of a textile mill in Ethiopia by Birla in 1955 (Saikia, 2012). According to Lall (1983), the second OFDI from India occurred in 1962 with Jay Engineering Works setting up an assembly line for sewing machines in Sri Lanka. Indian firms began astonishing investments abroad in the 1960s, but India's restrictive OFDI alignment limited them to small joint ventures (JVs) in developing countries such as Kenya, Uganda, Nigeria, Malaysia Thailand, and Sri Lanka. Liberalization of OFDI policy during the

early 1990's pushed up Indian firms to invest abroad under rigid conditions fixed by the state. A major objective of the new policy was to develop JVs rather than fully-owned subsidiaries. Indian OFDI was felt – by the government – as a tool for export promotion in the equipment goods industry. This drove market seeks OFDI primarily in neighbouring host countries, such as in the Middle East and a few African countries, with a focus on countries having a significant number of people with Indian origins as local residents. It was observed that compared to other BRICS MNCs, the Indian ones have been benefiting from a first-mover advantage.

Brazilian companies started investing abroad in the 1970s. The domestic recession of the late 1970s and the 1980s crisis were the main reasons mentioned by Brazilian entrepreneurs to demonstrate the first wave of Brazilian OFDI. This played a push factor for Brazilian firms to expand globally. Banks, engineering service firms, and Petrobras, a Brazilian petroleum Industry expanded their activities to bordering countries between 1975 and 1980. A dozen Brazilian MNCs had already appeared (Andreff, 1982). The Brazilian Central Bank data show that 54% of FDI outflows were concentrated in financial services in 1980. A strong presence of banking investments overseas was strategically targeted to support the expansion of Brazilian firms' exports. Besides, the first Brazilian MNCs were involved in industries such as oil exploration and production, construction and engineering, and a few manufacturing namely in the agro-food industry. The main destinations of Brazil's OFDI were Latin America, Africa, and the Middle East. Villela (1983) provides a list of the largest non-financial investors abroad in the 1980s.

In the 1990s, large Brazilian companies entered a new stage in their internationalization process (Cyrino et al., 2010). OFDI flows soared as a consequence of deregulation, privatization, and trade liberalization followed by new Brazil's outward economic

orientation. By the late 1990s, due to economic and institutional reforms, a growing internationalization of Brazilian firms was registered; OFDI was triggered by a strategy of expanding business in foreign markets which has particularly developed after 2002, corresponding to a recovery of the Brazilian economy from the 2001 crisis (Amal and Tomio, 2012).

Though lagging behind the emergence of Indian and Brazilian MNCs, Chinese MNCs held a first-mover advantage compared to MNCs from all other transition economies, including those from Russia and Central Eastern European countries (CEECs). They have begun establishing subsidiaries abroad as early as 1979, primarily to open new export markets (Ye Gang, 1992). Since then, they were ahead of Russian companies in investing abroad: OFDI from China in 1992 (\$7,401 million) was of about the same magnitude as the one from Russia in 1998 (\$7,385 million). Just like Indian MNCs, the growth of mainland China's MNCs has been led by the Linkage, leverage, learning (LLL) approach and past technology transfers from foreign MNCs resulting in productivity spill-overs to domestic Chinese firms. In the future phase, it is expected that China's OFDI will channel comparable transfers and spill-overs from China to developing countries (Lian and Ma, 2011). This should make Chinese MNCs more acceptable in this sort of host country.

The former USSR opened up to inward FDI comparatively later, in 1987, and the LLL process did not operate in the 1990s given the bad domestic investment climate in Russia (Andreff, 1999a). So-called Soviet "red multinationals" (Hamilton, 1986) vanished nearly overnight in the wake of the USSR's breakup and subsequent transformational recession. OFDI stock from the USSR fell from \$699 million in 1990 down close to nil in 1992 and 1993. In contradiction, the number of Russian firms spontaneously transformed into MNCs overnight simply because they were located in more than one former Soviet republic. Since

these republics obtained the status of new independent states by end of 1991 or in 1992, a same company located in two or more former Soviet republics – it was often so under central planning - became all at once a so-called “born multinational” company (Liuhto, 2001).

Foreign direct investment has a long and complex history in South Africa. Foreign corporations have been present since Britain established a colony early in the 19th century. Effective exploitation of the resources required large capital-intensive operations, and was made possible by both direct and portfolio investment flows from Europe, particularly London. This contributed to the early development of a domestic stock exchange in Johannesburg. Domestic economic growth and the re-investment of mining profits stimulated manufacturing development from the turn of the 20th century. Direct investment from the UK, the US, and Europe was important in the establishment and growth of new industrial sectors during the five decades from the 1920s. Domestic manufacturing development was accelerated by exchange rate depreciation after the Gold Standard collapsed in 1933, by demand growth and import difficulties during World War II, and by import substitution policies commonly found in developing countries during the 1950s and 1960s. Although some FDI continued to flow into mining, during this period it went mainly to manufacturing and services. By the early 1970s, 40 % of the FDI stock was in manufacturing and 25% in financial and business services, with only 15 percent in mining.

South African firms have become significant foreign investors themselves. The large mining houses have retreated from the conglomerate structure that was tied to operating in a relatively closed economy, selling off domestic non-core assets and making significant mineral investments internationally. In addition, sub-Saharan Africa has opened up to South African firms since 1994. The stock of South African direct investment assets in Africa grew 18 percent per annum between 1995 and 2001 (SA Reserve Bank 2001, 2003). Investment in



Africa is concentrated in resource extraction and market-seeking activities, notably mining, finance, retail, and infrastructure (EDGE Institute, African Investment Database, 2003).

According to UNCTAD data Among BRICS countries, South Africa shows the largest share of intra-BRICS investment. In 2011, one-fifth of the outward investment stock of South Africa was concentrated in other BRICS countries, mainly China.

### **1.3 Relationship of OFDI in India with BRICS Countries**

Andreff, W. (2016) in his paper stated that Indian and Brazilian firms are known to have started investing abroad earlier than Chinese and Russian MNCs, the latter respectively in 1979 and 1994. Indian OFDI first surfaced as early as in the late 1950s while Brazilian OFDI dates back to the 1970s. In a pioneering paper, Lecraw (1977) checked that nine Indian firms had already invested in Thailand.

Analogizing to other BRICs' MNCs, the Indian ones were benefiting from a first-mover advantage. Some were partially or fully state-owned but most were owned by Indian family capital though often in association with public financial institutions. The size of their OFDI was still rather satisfactory. With the advent of liberalization of the Indian economy in the 1990s, targeting inward and outward FDI since 1994, the number of Indian firms investing abroad grew up in particular in the pharmaceutical (Bruschieri, 2008) and automotive industries. Faced with a downturn in the Indian economy between 1998 and 2002, Indian firms internationalized operations not only for their survival but with specific strategies for sustained growth (Kant, 2008). A classical presentation of India's OFDI from a historical perspective can be segregated into three phases (Hansen, 2010). The first phase (the 1970s-1980s) was mainly led by moderate investments made in JVs in Asia and Africa and was shaped by political and regulatory restrictive government policies. Second was a start-up phase (1990s-early 2000s) which was largely an outcome of a more liberal government

stance on Foreign Direct Investment(FDI). The third was a take-off phase (from the early 2000s on) when Indian OFDI exhibited a totally different trend as compared to the previous two phases in terms of growth, industrial composition, and geographical orientation.

**Table 1.1 Chronological Orders for Reforms of Overseas Trade In India**

<b>Date</b>	<b>Major Events</b>
March 2003	India allowed overseas investment of up to USD 100 mn to corporate with proven track records to invest in JV or wholly owned subsidiaries. The core activities were allowed to be different. Besides investment, up to 100 percent of the net worth is allowed in these ventures.
January 2004	No monetary ceiling for eligible Indian entities to invest in JVs and Subsidiaries up to 100 percent of their net worth.
May 2005	Indian entities were allowed to invest 200 percent of their net worth and the ceiling was not abdicable if investments were made out of the balance of EEFC accounts and all the procedures of GDRs and ADRs are followed.
March 2006	All Indian entities were allowed to disinvest without prior approval of RBI through an Automatic route subjected to the condition of a good track record in export and some other conditions. They were also allowed to set up JVs and wholly owned companies without the prior permission of RBI.
July 2006	Ceiling on overseas investment was increased to USD 2 mn from USD 1 mn in aggregate.
April 2007	Equity-related investment in VCF is permitted for off-shore capital buildings with an overall limit of USD 500mn.
June 2007	The automatic route for all investment overseas increased from to 300 percent from the earlier 300 percent.
September 2007	The limit under the automatic route increased to 400 percent from 300 percent. Mutual funds are allowed to invest up to 5 billion USD. The limit of portfolio investment is enhanced from 35 percent to 50 percent.
April 2008	The aggregate investment ceiling for Mutual funds increased from USD 5 billion to USD 7 billion.
June 2008	Companies of Indian origin were allowed to invest in excess of 400 percent of their net worth as of their last date of audited balance sheet.
August 2008	With prior approval of RBI, registered trusts and societies in education were allowed to invest in JVs and Ventures overseas.
May 2011	WOS with Indian promoters were allowed to write of capital to the extent of 51 percent on overseas joint ventures and wholly owned subsidiaries.
June 2011	Disinvestment without prior permission from RBI was allowed where the amount repatriated is less than the amount of original investment with few conditions.
April 2015 (Industry Policy 2015-20)	The New Trade Policy was announced announces more incentives for exporters to help tide over the effect of a likely demand slump e-commerce export of handloom products encouraged

Source: RBI Press Release

#### **1.4 Relationship of IFDI In India with BRICS Countries**

According to Veni, L. K. (2020) India being a Lower Middle-Income country recorded a noteworthy annual growth of GDP by 6.81% in the year 2018. 2nd place has been occupied by the Upper Middle-Income country China (6.57%) among BRICS. India, Brazil, and South Africa have shown a current account deficit, whereas the remaining countries of BRICS have shown a surplus. The rate of inflation is more than 4% in India and South Africa but rest of the countries, it is around 2% only. In both highly populous countries like China and India, the labour force has shown high figures. The rate of unemployment is very high in South Africa (28.18%) and Brazil (12.07) among the BRICS countries in 2019. China maintained its predominance among the BRICS in terms of the value of goods and services of imports and exports also. It is clear that except for India, the rest of the BRICS countries are deriving more than 50% of the GDP from the service sector only in 2018, however, South Africa and Brazil occupied the first and second places with more than 60% contribution to GDP. China (40.65%) and Russian Federation (32.15%) have contributed a significant share of the industrial sector. In the manufacturing sector, China is the only country that contributed 29.41% to GDP in 2018. Compared to other countries of BRICS. India is the only country that contributes more to GDP with 14.6% in the agriculture sector. The findings of the study conclude that China has recorded the highest growth in terms of the inflow of FDI among the BRICS during the study period. Brazil, India, the Russian Federation, and South Africa have recorded the values of the coefficients (growth rates) in ascending order during the study period. But. Russian Federation and Brazil have recorded the highest growth rates in terms of the outflow of FDIs from BRICS during the study period. Brazil. China remained in second and third places whereas South Africa maintained the fourth position for all years from 2019 to 2023 as per the projections. India remained in the least position since it has focussed only on the inflow of FDIs and boosting domestic investments. Based on the regression coefficient

values, projections of the inflow and outflow of FDIs are also made in this study, however, the projections will be accurate only when the other things remain the same.

### **1.5 Rationale of the Study**

Despite the fact that the BRICS economies are not among the leading FDI inflows or outflows of India it is being considered in the study as BRICS economies are quite promising and were originally projected to be the fastest-growing market economies by Jim O'Neill of Goldman Sachs (2001). It has been postulated that by 2050 these economies would be wealthier than most of the current major economic powers. The BRIC initialization expanded to include South Africa as the fifth nation in 2010. Many companies also cite BRIC nations as a source of foreign expansion or Foreign Direct Investment (FDI) opportunities. Foreign business expansion happens in countries with promising economies in which to invest. *BRICs and Beyond (2007)* focused on BRIC growth potential, along with the environmental impact of these growing economies and the sustainability of their rise. The report considered the Next 11, (N-11), a term for 11 emerging economies, in relation to the BRIC nations. The study also looked at the overall ascendancy of new global markets. The grouping has gone through a reasonably productive journey. It strove to serve as a bridge between the Global North and Global South. The future of BRICS depends on the adjustment of the internal and external issues of India, China, and Russia. Mutual communication between India, China, and Russia is important for moving ahead.

The below table (Table 1.2) highlights the FDI inflows and outflows of the BRICS economies. The last 5 years have been taken into consideration.

**Table 1.2: FDI Inflows (in US\$ Billion)**

Years	Brazil	Russia	India	China	South Africa	Total
2015	64.738 (18.00)	6.853 (1.91)	44.009 (12.24)	242.489 (67.43)	1.521 (0.42)	359.61 100.00
2016	74.30 (22.63)	32.54 (9.91)	44.46 (13.54)	174.75 (53.24)	2.22 (0.67)	328.26 100.00
2017	68.89 (22.54)	28.56 (9.35)	39.97 (13.08)	166.08 (54.36)	2.06 (0.67)	305.55 100.00
2018	78.16 (21.11)	8.79 (2.37)	42.12 (11.37)	235.67 (63.64)	5.57 (1.50)	370.30 100.00
2019	69.17 (20.11)	31.98 (9.29)	50.61 (14.71)	187.17 (54.40)	5.12 (1.49)	344.05 100.00
2020	NA	NA	NA	NA	NA	NA

Source: Computed from World Bank Data

**Table 1.3: FDI Outflows (in US\$ Billion)**

Years	Brazil	Russia	India	China	South Africa	Total
2015	3.14 (1.47)	22.08 (10.38)	7.51 (3.53)	174.45 (82.02)	5.51 (2.59)	212.69 100.00
2016	14.69 (5.59)	22.32 (8.49)	5.05 (1.92)	216.46 (82.30)	4.49 (1.71)	263.01 100.00
2017	21.34 (9.93)	36.75 (17.11)	11.08 (5.16)	138.24 (64.34)	7.45 (3.47)	214.87 100.00
2018	2.03 (1.06)	31.37 (16.35)	11.43 (5.96)	142.98 (74.53)	4.03 (2.10)	191.83 100.00
2019	22.82 (11.53)	21.91 (11.07)	13.15 (6.64)	136.95 (69.18)	3.14 (1.59)	197.97 100.00
2020	-16.42 (-15.13)	5.29 (4.88)	11.57 (10.66)	109.98 (101.39)	-1.96 (-1.81)	108.47 100.00

Note: values in parenthesis indicate the percentage of the individual economy with the total of BRICS economies

Source: World Bank Data

Table 1.3 shows the percentage of OFDI of India to the other BRCS economies and the data has been compared to OFDI of India to Singapore as it is the Top OFDI destination of India

and gives a ground to establish the contributions of the other BRICS economies. The BRICS economies have been selected for the study as they show a significant contribution to the outward flows of direct investments and are quite promising in the future.

**Table 1.4: Comparison of OFDI of India to BRICS with Singapore (2000 to 2021) (In US\$ Million)**

Countries	OFDI (US\$ million)	% of total OFDI	% Of individual BRCS As compared to Singapore
Brazil	571.06	0.02%	0.1
RUSSIA	7,459.64	3.00%	15
CHINA	866.95	0.30%	1.5
SOUTH AFRICA	939.43	0.04%	0.2
SINGAPORE	49883.54	20%	100

Source: Department of Economic Affairs Article

## 1.5 Chapter Plan for the Study

This thesis will broadly be divided into two sections. Section A will deal with the introductory part of the study and Section B will deal with the computation, analysis, interpretation, conclusion, and suggestions.

### Section A

Chapter 1: Introduction to a study of India's Outward FDI(OFDI) and Inward FDI(IFDI) with emphasis on BRICS economies destination

Chapter 2: Review of Literature

Chapter 3: Research Design

Chapter 4: Theoretical Framework on the FDI, Policy on FDI, BRICS economies trade and economic capital flow processes.

## **Section B**

Chapter 5 IFDI of India and its Relation to BRICS Economies Destination

Chapter 6: OFDI of India and its Relation to BRICS Economies Destination

Chapter 7: Summary of Conclusions, Findings, and Suggestions

## **2. Review of Literature**

### **2.1 Introduction**

OFDI, IFDI of BRICS economies has long been a subject of great interest in the field of international development and has resulted in a huge number of studies focusing on both developed and developing countries. Studies have analyzed that the impact of FDI on the host country depends on the size and structure of the FDI flows. A few studies that are pertinent to the study are discussed below.

**Jim O'Neill of Goldman Sachs (2001)** BRICS economies are quite promising and were originally projected to be the fastest-growing market economies by. It has been postulated that by 2050 these economies would be wealthier than most of the current major economic powers. The BRIC initialization expanded to include South Africa as the fifth nation in 2010. Many companies also cite BRICS nations as a source of foreign expansion or Foreign Direct Investment (FDI) opportunities. Foreign business expansion happens in countries with promising economies in which to invest. **BRICs and Beyond (2007)** focused on BRICS

growth potential, along with the environmental impact of these growing economies and the sustainability of their rise.

**Arestis, P et al (2001)**, In their study, show that the contribution of stock markets on economic growth may have been exaggerated by studies that utilize cross-country growth. Although banks and stock markets may be able to promote economic growth, the effects of banks are more powerful. They used the Time series variant method using investigation in vector auto regression, unit root test, co integration analysis, and recursive estimation.

**Apergis, N. (2009)**, In his study, has proved that Outward FDI has a significant long-run relationship with inward FDI. A bi-directional causality was found when the sample was split into developed and developing economies. FDI outward is found to be the key factor for enhancing the growth prospect of an economy through the attraction of FDI plans that will in turn move the economy into higher growth levels. They have used Panel Integration analysis, T-bar test, panel co integration analysis, panel causality, and dynamic OLS in their study.

**Rizvi, S. Z. A., & Nishat, M. (2009)**, in their study, highlighted the key aspect of this study is that the policy implication and whatever other benefits may accrue from FDI should not be expected to create employment opportunities in any of the three countries directly and FDI enhancement policies must be supplemented by the other measure to stimulate employment growth. The estimation of the impulse response shows that the growth elasticity of employment on average in the three countries is extremely low and employment-enhancing policies must be priorities. The tools used by the authors are secondary data, E -views 6.0 used for empirical work, Unit roots by Im-Persaran-Shin Pedroni (1999) test of co-integration, pooled regression, and impulse response function.



**Bhaumik, S. K., Driffield, N., & Pal, S. (2010)**, showed that the world has witnessed what is arguably a new wave of globalization, by way of outward FDI from emerging markets. Two overlapping but distinct ownership characteristics high degrees of family control and concentrated ownership - are seen as being optimal responses to the weak institutions of the home country, but ones that nevertheless foster different strategic decision-making processes from firms in the West. The analysis is based on firm-level data; panel to bit model employed, correlation matrix, and regression models.

**Nistor, P. (2015)**, this paper aims to analyze the FDI flow of the BRICS economy. The impact of FDI on the host country depends on the size and structure of these flows. Analyzing the evolution of FDI in the BRICS economies I noticed the large volume of these flows in terms of annual flows and FDI stock. The increase of FDI in the five largest emerging economies in the period 2004- 2008, shows the rapid pace with which they grow. In the current financial crisis, the data shows that emerging economies started to grow in 2010, unlike most developed economies, which continue to decline. In the BRICS economies, FDI seems to have a positive impact by contributing to the economic development of these countries to reach developed economies.

**Andreff, W. (2016)**, This paper elaborates on a comprehensive comparative study of outward foreign direct investment (OFDI) from BRIC countries and strategies conducted by transnational corporations or multinational companies (MNCs) whose parent headquarters are based in the BRICs. Analysing MNCs' investment strategies from each BRIC country has become a fashionable avenue for research, and the literature has been growing at a skyrocketing pace during the past decade, though overall comparative studies are still in the cradle.

**Kakoti, D. (2019)**, in this study, highlighted real interest rate has a negative and insignificant impact on India's outward FDI flows. GDP and Inward FDI have a positive impact on Outward FDI flow. Real Effective Exchange Rate has a positive and highly significant relationship with India's outward investment over the selected time. Theoretical implications of the study advocate the fact that Indian OFDI flows do not follow the traditional theories of FDI. He used secondary data, data converted into a natural log, unit root test, Augmented - Dickey -Filler (ADF) test, Phillips Perron (PP) test, and Autoregressive Distributive lag are a few of the statistical tools utilized.

**Sultana, M., Kagdiyal, et al(2019)**, in their study, show that the FDI had partially impacted the economic parameters of India. The input variable of FDI includes the foreign exchange reserve, exchange rates export, and import. Foreign exchange reserves (FER) are important to stabilize the Indian rupee. The present research depicts that FER is positively significant to HDI and population while insignificance to inflation and negatively significant to the Sensex index but insignificant to Gross Domestic Product (GDP) which reveals that exchange reserves are used in stabilizing the INR. The study tries to evaluate empirically, the relationship between foreign direct investment (FDI) and economic growth in India by using yearly data for a decade from 2006-07 to 2016-17. The study identified the major factor influencing the inflow of FDI to India, which is comprised of various variables collected under FDI and the Indian economy.

**Bhatarai, K., & Negi, V. (2020)**, in their article, showcased that FDI has played a significant role in raising sales, profits, wages, and employment among firms in India. Such a positive role comes with advanced technology and skill in management practices that come with the FDI. Empirically it has been found positive impacts of FDI on the performance of

firms in India and on their growth. The authors have used Dynamic optimization and production function, Regression model, and Pseudo panel data to conduct their study.

**Veni, L. K. (2020)**, The results of this study highlight some interesting facts with important distinctions in some of the macroeconomic variables of BRICS. GDP is the most important macroeconomic barometer of economic growth, China, India Russian Federation, Brazil, and South Africa have occupied the rank between 1st to 5th positions among BRICS in 2018. India being a Lower Middle-Income country recorded significant annual growth of GDP with 6.81% in the year 2018. 2nd place has been occupied by the Upper Middle-Income country China (6.57%) among BRICS. India, Brazil, and South Africa have shown a current account deficit, whereas the remaining countries of BRICS have shown a surplus.

**De Conti, B., & Diegues, A. C. (2022)**, In their paper This study examines foreign direct investment (FDI) in the BRICS nations following the group's formal formation in 2009, providing some perspectives on how economically integrated these nations are both with the rest of the globe and with one another. The initial finding is that Intra-BRICS FDI remains negligible (relatively speaking) and wholly asymmetrical. Data from CDIS/IMF show that China is the origin of 75% of intra-BRICS FDI in 2018 and that this percentage is expected to rise going forward. They contend that it is critical for the BRICS nations to improve their FDI cooperation, both in terms of the amounts involved and the modalities of investments. By examining how their economies complement one another and the needy regions in each of the five nations, the five countries could specify priority sectors in more detail. The New Development Bank can be strengthened during this process as a strategic resource provider, particularly for initiatives related to the green economy.

**Saikia, M., Das, K. C., & Borbora, S. (2020)**, In 2006, the outward FDI (OFDI) boom impacted the Indian economy. The study intends to investigate the variables that fuel the

surge in Indian company OFDI. the empirical data from the study has various ramifications for how international company management is done. The study first suggests an integrative framework to explain the forces behind the globalization of newly formed multinational corporations. The study shows that a key source of competitive advantage is prior knowledge. Managers must therefore recognize its importance to facilitate their global expansion. Second, developing multinationals can get a competitive edge from the distinct institutional environment and, more specifically, from their enterprises' membership in a business association. Third, the institutional context of the target nations may also have a big impact on internationalization. Managers must recognize the significance of these intangible elements if the business is to continue to expand internationally.

**Maryam, J., & Mittal, A. (2020)**In the context of the BRICS countries, this study empirically investigates the role of specific macroeconomic variables in affecting FDI inflows. For the annual dataset covering the years 1994–2015, the study used the Pooled Mean Group (PMG) Auto-Regressive Distributive Lag (ARDL) approach. To maximize their economic progress, the BRICS nations must figure out how to maintain their current share and trend in FDI inflows. This study sought to pinpoint the elements that contributed to FDI inflows into the BRICS nations between 1994 and 2018. According to PMG ARDL's results, there is evidence of a long-term relationship between foreign direct investment (FDI) inflows, economic development (GDP), the accessibility of infrastructural facilities (INFRA), and exchange rates.

**Mathur and Singh (2007)** this study finds that whether an economy would attract foreign direct investment depends in large part on corruption. Low-ranking developing countries in the Corruption Perception Index (CPI) attract less foreign direct investment than higher-ranking countries. The amount of money going to developing countries is also affected by

corruption. There is less demand for foreign goods and services when corruption levels are high. As a result, less money leaves the country because corrupt governments restrict business operations. The degree of economic development in a particular country is another element that influences FDI flows. A country's growth rate is probably going to be slower than it would be if it were ranked higher if it has a low CPI. Businesses are also prohibited from operating freely when

**Rizvi, S. Z. A., & Nishat, M. (2009)** In their path-breaking study, show in their study that policy implication and the benefits arising thereafter accrued from FDI should not be expected to generate employment and there should be policies to supplant the economic growth along with the FDI flows.

**Bhaumiket al (2010)** show that a new wave of globalization in the world has been observed as the OFDI from developing countries increases in the world market. The ownership characteristics such as high family control and concentrated ownership overlapping each other- seem to have a great impact on fostering different strategies for FDI at the firm level.

**Kakoti, D. (2019)** shows that the real interest rate has a higher impact on both IFDI and OFDI and further notes that there is a negative impact of the real interest rate on the OFDI of India. Further, they show that the real effective exchange rate has a positive impact on the OFDI of India and is significant too. However, the theoretical exposition does not support that traditional theories do not support Indian OFDI.

**Sultana et al (2019)** in their study show that FDI has partly affected the Indian economy. In fact, the foreign exchange reserves have been improved due to FDI and stabilized Indian Rupee to a large extent. It has been further observed in this study that FDI positively affects inflation and HDI as the GDP improves.

**Bhattacharai, K., & Negi, V. (2020)**, exhibited that FDI has significantly helped in improving firm-level indicators such as sales, wages, and employment to name a few. The study uses pseudo-panel regression and a dynamic organization model to show the positive impact of FDI on the firm's performance in India.

**Saikia et al (2022)** This study looks at how Indian enterprises' FDI at the intense country margin is affected by the quality of their institutions. The state legal system, the administrative structure, and the preservation of property rights are considered to be representative of the host nation's institutional quality in this study. The primary goal of the research is to determine how institutional quality affects FDI while accounting for firm-level variation. The findings demonstrate that FDI at the intensive country margin is significantly impacted by institutional quality. According to the findings, FDI from Indian companies increases on average by  $[\exp(0.498)-1]*100 = 60.5\%$  when institutional quality rises, ceteris paribus. The findings show a positive correlation between FDI from big businesses and the host nation's institutional calibre.

**Deol (2017)** observed that the OFDI shows an increasing flow to developed countries.. OFDI has taken the route of Merger and Acquisition, while the IFDI had been largely through IFDI. Indian OFDI had been guided by efficient governance and growth of the GDP of the host countries However, it is interesting to note that the inflation of host countries has no effect on the choice of the OFDI from India. Fung & Herrero (2012) examines the Chinese and Indian OFDI by using an augmented gravity model and observes that Indian firms target smaller destination but richer destination in the world. Their study shows that Indian investment gravitated to less corrupt economies and Chinese OFDI gravitated to more corrupt economies. Fuel and Food industries are the main targets of Indian firms as against technology and financial business by Chinese counterparts.

**Pradhan & Sauvart (2010)** show that in the period from the early 1960s to the end of the 1980s Indian OFDI went to developing countries and thereafter shifted to the more developed countries to the extent of 62 percent.

**Nunnenkamp et al(2012)**use the gravity model and show that Indian OFDI is not fuelled by the search for resources and superior technologies. It is rather guided by the market-related factors where the Indian Diaspora in the host countries acts as the key agent for attracting OFDI from India.

**Govindarajan & Ramamurti (2010)** note that Indian Firms with deep pockets and capabilities in design, product, and marketing skills garner OFDI by providing goods at very low cost.

**Rashmi Banga (2006)** studies 13 developing countries and shows that OFDI from developing countries is determined by trade flows.

**Ali J. Ai-Sadig (2013)** uses data from transitional economies from the period 1990-2011 and finds a robust negative relationship between outward FDI from developing countries and the rate of domestic investments.

**Paswan, 2013**The robust flows of direct investment reflect the increasing integration of an industry with the rest of the world. By ensuring that industries are integrated with other markets, Foreign Direct Investment (FDIs) act as a driving force for globalization and are a key identifier and defining element of the contemporary world economy. Outward FDI showcases countries' ability to venture beyond their own borders. Inward FDI brings in money and creates jobs at home. Outward FDI brings in capital and knowledge and leads to job creation abroad. Foreign Direct Investment (FDI) has a multi-faceted role in supporting the overall economic development of host economies. FDI provides opportunities for firms to

gain access to advanced technology and management expertise. In return, FDI also brings along with additional benefits, including managerial skills and technological know-how. Foreign investors prefer developing countries because they offer them an opportunity to invest at lower costs and higher efficiency than in developed markets. FDI acts as a channel for the flow of foreign funds to developing countries. It helps developing countries increase their share in international trade and finance, which enhances their export competitiveness.

**Grohand and Wich (2015)** conducted a study to examine the effects of economic growth, income inequality, and education levels on FDI inflows. Their results indicated that there was a positive correlation between higher income inequality and lower FDI inflows. However, when they controlled for other variables, the relationship disappeared.

**Bhatia et al., (2012)** using panel unit root tests revealed a significant long-run relationship between FDI and GDP per capita in India. However, there were no significant relationships in the short run. The study also concluded that the causal link between FDI and economic development in India is not unidirectional. There is evidence showing that economic growth leads to increased foreign direct investment in India. In addition, the impact of inward FDI on economic growth is greater than its impact on outward FDI. According to a study by **Jadhava (2012)**, traditional economic factors are more important than institutional and political ones in determining FDI flows into BRICS countries.

**Agarwal (2015)**, proved there exists a positive long-run relationship between FDI and GDP growth, and also a bi-directional causative link between the two. Bose and Kohlie (2018) also found an increasing trend in FDI inflows into BRICS during 2010–2016. While examining the trends and patterns in FDI inflows, they found that BRICS accounted for a large portion of global FDI inflows in 2016, and India had the highest share of FDI outflows. In today's globalized world, there is a great deal of pressure to attract foreign direct investment (FDI)



flows, especially in countries like China, India, and Brazil. These three countries have become the largest recipients of FDI inflows globally, accounting for nearly 40% of all FDI inflows worldwide. At the same time, many economists argue that while free trade leads to growth and prosperity, protectionism brings stagnation and poverty. So, it is very important for these countries to keep opening up their markets to attract more foreign investments. However, protectionist measures implemented by these countries may lead to a decline in their economic growth and development. Therefore, these countries should not just focus on the attraction of foreign investments but also pay attention to protecting domestic interests. Prior to 2000, the economies of the BRICS nations were weak. However, they began to draw a substantial flow of foreign direct investment around 2000. Brazil's economy got 22 billion dollars in foreign direct investment in 2001. This one was ten times the size of the Russian economy. During the same time period, the Indian and Chinese economies each received less than one billion dollars.

**UNCTAD (2014)** Throughout 2002 and 2007, FDI inflows to BRIC countries increased from 77 billion to 281 billion dollars. China as well as the Russian Federation benefited the most from this growth. Between 2003 and 2008, FDI inflows to the BRICs surged from 2.7 percent to 12.4% of total global FDI. China and the Russian Federation contributed for 60 percent of the overall of all FDI inflows to developing markets by 2010.

**Veni, L. K. (2020).** India, a Lower Middle-Income nation, had its GDP rise by an impressive 6.81% annually in 2018. China, one of the BRICS nations with an upper middle-income status, came in second position (6.57%). The remaining BRICS nations have surpluses in their current accounts, as opposed to India, Brazil, and South Africa, which have deficits. India and South Africa both have an inflation rate of over 4%, whereas the rest of the world only has an inflation rate of about 2%. Both China and India, which have large populations,

have high labour force participation rates. Among the BRICS nations, South Africa (28.18%) and Brazil (12.07) have the highest unemployment rates in 2019. In terms of the value of products and services imported and exported, China continued to dominate the BRICS. In 2018, the remainder of the BRICS nations—aside from India—clearly derived more than 50% of their GDP from the service sector; nonetheless, South Africa and Brazil held the top two spots, contributing more than 60% to GDP. A sizeable portion of the industrial sector has been given by China (40.6%) and the Russian Federation (32.15%). China was the only nation to contribute 29.41% of GDP in the manufacturing sector in 2018. compared to the other BRICS nations. With a 14.6% GDP contribution from the agricultural sector, India is the only nation that contributes higher. According to the forecasts, China held onto the second and third spots, while South Africa held onto the fourth spot for every year from 2019 to 2023. India maintained its lowest ranking as a result of its singular focus on encouraging FDI inflow and local investment growth. In this study, estimates of FDI influx and outflow are also created based on regression coefficient values, however, the projections will only be correct if all other factors stay the same.

**Burdekin & Langdana, 2015**, The Caribbean and Latin America were the significant beneficiaries of FDI until the centre of the 1980s. Since the last part of the 1980s, notwithstanding, the present circumstance has moved, with Pacific and Asian nations benefiting. Emerging economies frequently fall far short of producing adequate funding for their people's political and economic advancement and its well. Foreign Direct Investments (FDIs) could be one of the options for filling the gap.

**Soumaré and Tchana, 2015**, According to academic studies, foreign direct investments (FDIs) can contribute significantly to a country's economic development by promoting economic development. To acquire multinationals, developing nations establish a policy

agenda for modernizing investment regulations in order to create a competitive and successful business environment that attracts foreign investors.

**Rodrik (2012)** stated that effective governance is important and emphasizes the development of institutions and organizations at all times. As a result, pro-business and pro-investment governmental strategy mechanisms help the quality state of numerous macro variables, such as regulatory frameworks, corruption, courts and judges, legislative basis, labour formalities, power generation, public transit, as well as telecommunications, among others, which are essentially desired by multinational companies.

**White, Chizema, Canabal, & Perry, 2015.** Foreign direct investment is the transfer of funds or resources from such an investment's home nation into a foreign country in the form of a purchase or merger with an enterprise. UNCTAD (2002) defined FDI as a long-term connection in which a foreign citizen invests in a firm in a country where the citizen's economy is not the same as his or her own. Furthermore, the World Bank (1992) defined FDI as an investment made in order to achieve long-term management benefits (usually at least 10% of stock) in a business operating in a nation other than the investors.

**Anupam (2014)** In his analysis, the author shows that India's outward foreign direct investment (OFDI) flows and stocks have expanded significantly over the past few years, even though the massive flow of OFDI from poor nations on a global scale is a relatively recent occurrence. This study examines how FDI outflows affect the GDP of the BRICS nations. The regression model used by the authors explains why there is no discernible effect of FDI from abroad on GDP. These nations are working hard to raise their GDP and FDI, but due to several obstacles, they are falling short of their goals.

**Nandita, D. (2014)** attempts to scientifically investigate the evidence of the macroeconomic relationship between levels of domestic capital formation in the BRIC nations and levels of outward foreign direct investment (OFDI). According to the study's findings, domestic investment in the BRIC countries is significantly impacted by OFDI since it has both short- and long-term positive causal relationships with domestic investment. Therefore, it is essential that the BRIC nations make a special effort to promote their OFDI through the development of sound OFDI policies that would support their domestic investment and future economic growth.

**Vijayalakshmi, R., et al (2019)** In their analysis, the authors noted that FDI is now a crucial component of national development plans for almost all countries worldwide. India's FDI has recently made a significant contribution to the country's economy as a whole. Finding the variables influencing foreign direct investment in India is the study's main goal. Most of the data was derived from secondary data. The acquired data were examined utilizing trend analysis and the top 10 Indian industries' growth rates. This study also discovered that FDI in India has made a significant recent contribution to the expansion of the economy as a whole. India can thus prosper without or with very little FDI and indeed grew without it. Developing nations like India require significant foreign investment is needed to make the necessary investments to hasten economic development and prosperity.

**Ramar, Prabakaran, et al (2019)** explain in their analysis how important FDI is to improving both national GDP and international trade. This study compiles evidence showing that actual FDI to India during the 2017–18 fiscal years fell short of its potential amount. This article makes an effort to learn about the FDI equity inflows from various nations to India. Through this article, the researcher tries to examine how FDI contributes to economic growth. The

ideas and recommendations are based on the methodology, and statistical methods including one-way ANOVA and the K-S test were utilized for the analysis.

**Sinha, M. K, et al** OFDI from India has drawn attention because of its growing significance in the global economy. In order to acquire a better understanding of the direction of OFDI from 2008 to 2019, the goal of this research is to examine the trends of foreign direct investment from India. This analysis is anticipated to follow a new trend toward multilateral capital flows in the form of FDI, which is anticipated to result in an effective worldwide distribution of resources. First-level research on global FDI trends uses growth indices, percentage shares of global FDI, and OFDI from developing and developed nations, the BRICS countries, and India.

While India's OFDI in developed countries has grown over time, it is still less than its FDI in underdeveloped ones. It will also be necessary to have strategic assets and technologies that developed nations have in order to compete on a global scale. As a result, the Indian government has to promote MNEs that make investments in developed nations. China is the second-largest economy in the world and one of the most globally integrated, but India's offshore financial inflows into China are negligible. In order for Indian overseas investors to gain from investing in China, the Indian government should develop policies and deepen its ties with China.

**Skare, M., & Cvek, D. (2020)** Using data from 2002 to 2017, this study examined how foreign investments affected Croatia's competitiveness concerning macroeconomic stability circumstances. In this research, we examine the relationship that exists between foreign direct investments (FDI) as a growth and competitiveness driving factor and crucial macroeconomic indices. Time series techniques are employed to investigate how FDI affects Croatia's competitiveness levels. Economic competitiveness requires macroeconomic stability, but it is

not adequate in and of itself. The competitiveness of the economy can rise with foreign direct investment (FDI), albeit the overall impact is contingent on the type of FDI (greenfield versus brownfield). FDI inflows decreased during the recession, according to Granger causality and the vector auto-regression (VAR) model.

**Bi, Y., Ren, Z., & Bao, K. (2020)**At the sub-national level, multinational corporations (MNEs) base their investment decisions on distance issues. This study used three ideas of distance and estimated using the gravity model utilizing province foreign direct investment (FDI) data from 2000 to 2012. Our empirical findings show that whereas economic distance has a considerable positive influence on FDI flow, geographic and cultural distances have significant negative effects. It implies that foreign direct investment (FDI) is more likely to be located in areas that are close to home both geographically and culturally, but further away economically. This suggests that vertical FDI dominates FDI in China. According to our research, Chinese province governments should prioritize luring foreign direct investment (FDI) from nations with similar cultures and offer institutional support to foster and advance horizontal FDI.

## **2.2 Gap in Research**

The studies that had been surveyed are focused on economic growth and FDI. There are very few studies on FDI, especially OFDI, and IFDI of India, and its effect and relation to the BRICS economy's destination. Hence, it is felt that a study to find the Indian OFDI and IFDI's effect and causation on the BRICS economies will be in place, especially to study using the Vector autoregressive and correction method.

## **3. Conclusion, Findings, and Suggestions**

### **3.1 Introduction**

This chapter offers a summary of the study as a whole, a description of the conclusions, and potential recommendations based on the analysis and noteworthy conclusions. Moreover, this chapter also discusses the study's limitations, the results of the hypothesis, and the potential for additional research. International development professionals have long been very interested in the OFDI, and IFDI of the BRICS economies, which has led to a huge number of studies that have both developed and developing countries as their primary emphasis. According to studies, the volume and composition of FDI flows determine how the FDI affects the host nation. In this study, several econometrics approaches were employed to answer no to the research questions. One of the most used methods in multivariate analysis for estimating the coefficients of linear regression, which explains the connection between one or more independent variables and a dependent variable, the ordinary least square (OLS) is used in the study. The stationarity of the data is tested using the Augmented Dickey-Fuller method. The study also employs Vector Auto regression (VAR) to forecast how two variables will interact over time. The Granger causality test is additionally employed to confirm the existence of any bi-directional relationships between the variables. The BRICS nations have the power to alter the balance of global economic power. Based on earnings calculated at official exchange rates, there are multiple frameworks for the relative size of major economies until 2050. It predicts a sharp growth in China's and maybe India's income share of the global economy, making them key participants in the decades to come. Asian nations' growth rates have accelerated when compared to those of other nations. China invests to profit from raw material sources, but India invests to benefit from technology and other attributes of international enterprises. The study also examined the general ascent of new international marketplaces. Due to their growing accessibility to FDI, the BRICS (Brazil, Russia, India, China, and South Africa) have become popular investment destinations. These nations draw investors because of their distinctive qualities. For instance, Brazil has the

largest domestic market and huge natural resources; on the other hand, Russia has stable political conditions, an abundance of resources, and a skilled labour force. BRICS nations have seen a surge in FDI inflows as a result of their unique qualities that draw overseas investors.

### **3.2 Summary of the Chapters**

To give a general picture of the study, this section summarizes the chapters that were included. They are covered below:

It helps in setting a prelude to the study. This chapter outlays the FDI patterns in India and its linkages to BRICS nations. The chapter also tries to set up the arguments for choosing the BRICS economic group for the study. The study which is set up in the backdrop of BRICS has been laid out in the chapter to conduct the discussion later. The introductory chapter will provide a plan of the study for ease of understanding.

The empirical literature suggests that FDI raises national welfare by increasing the volume and efficiency of investment through improved competitiveness, technological diffusion, accelerated spill over effects, and the accumulation of human capital (Borensztein et al. 1998; Chakrabati, 2001; Asicdu, 2002; Durham, 2004). Overall, the flow of FDI to developing countries contributes to growth through two mechanisms, i.e., increasing total investment in the host country and increasing productivity through technology and management spill over (Mellow, 1999). The BRICS group offers foreign investors a number of benefits such as a young labour force, cheap labour force, natural resources, and big markets. In these emerging economies FDI seems to have a positive impact by contributing to their development.



The study incorporated econometric models to answer the research questions and establish a relationship between OFDI and IFDI of India with other BRICS nations. The methodologies utilized to support the study are covered in this chapter. In this study, several econometrics approaches were employed to answer the research questions. One of the most used methods in multivariate analysis for estimating the coefficients of linear regression, which explains the connection between one or more independent variables and a dependent variable, is ordinary least square (OLS). The stationarity of the data is tested using the Augmented Dickey-Fuller method. The study also employs Vector Auto regression (VAR) to forecast how two variables will interact over time. The Granger causality test is additionally employed to confirm the existence of any bi-directional relationships between the variables

The BRICS economies are highly promising and were initially predicted by Jim O'Neill of Goldman Sachs (2001) to be the fastest-growing market economies. These economies are predicted to be wealthier than the majority of the existing major economic powers by 2050. In 2010, South Africa was added as the fifth country to the original BRIC group. Many businesses point to the BRICS countries as a source of chances for international growth or Foreign Direct Investment (FDI). Countries with promising economies are where foreign company expansion occurs. BRICs and Beyond (2007) concentrated on the BRICS development potential as well as the effects of these developing nations' growth on the environment and the sustainability of that growth.

The purpose of this chapter was to analyze the relationship of IFDI of India with the other BRICS economies with the help of macroeconomic factors namely, real growth rate and inflation rate, Economic distance, Trade openness, and government effectiveness. Based on the empirical results shows that in the case of Russia and China, the first 12 lags of IFDI have a negative impact on the current period's IFDI. Whereas in the case of South Africa and

Brazil, the first four lags of IFDI show a negative impact on the current period's IFDI. Lag values of economic distance between China and India have shown a positive impact on the real growth rate of India and a negative impact on the inflation rate of India. In the case of Brazil, it was seen that the lagged values of economic distance between Brazil and India have a positive impact on the inflation rate. The first few lagged values of economic distance between Russia and India have shown a positive impact on the IFDI of India from Russia, whereas, the last few values of economic distance between Russia and India have shown a positive impact on the inflation rate of India. The lagged values of South Africa's economic distance from India have a negative impact on the inflation rate of India. The lagged values of the inflation rate of India have a significant impact on the economic distance, real growth rate, and inflation of the current. Lagged values of real growth rate have shown a significant negative impact on current the real growth rate of India.

To conclude, one can say that the chosen macroeconomic variables have shown a significant positive and negative impact on the IFDI of India from other BRICS economies. Furthermore, the study established a spill over effect of the chosen macroeconomic variables on the IFDI of India from the other BRICS economies. Since trade is bilateral and multilateral in nature India needs to look into the strategic relationship. India needs to strike a balance in its interactions with China and Russia, whom the West is increasingly viewing as strategic adversaries.

India's security and interests are significantly threatened and challenged by China's rise, particularly in areas like border disputes, maritime security, trade imbalance, technology competition, and human rights.

The potential for intra-BRICS investments looks bright in the future. To make investment a primary driver of economic cooperation among the BRICS, however, to provide additional

advantages for sustainable and inclusive economic development in the bloc more cooperation will be needed. The BRICS economies kept moving in the general direction of a more open and welcoming investment policy environment to address the difficult global investment environment as well as the need to harness foreign investment for sustainable development.

The purpose of this study was to analyze the relationship of OFDI from India to the other BRICS economies with the help of macroeconomic factors namely, real growth rate and inflation rate, Economic distance, Trade openness, and government effectiveness. Based on the empirical results shows that in the case of Russia, the first 11 lags of OFDI have a negative impact on the current period's OFDI from India to Russia. Whereas in the case of China and Brazil, the first three lags and first four lags respectively of OFDI from India show a negative impact on the current period's OFDI. The first six and the eleventh lagged values of OFDI to South Africa show a negative impact on the current period OFDI of India to South Africa. Lagged values of OFDI to China from India show a positive impact on the current period inflation rate of India, whereas the lagged values of OFDI of South Africa from India show a negative impact on the Economic Distance between India and South Africa. The lagged values OFDI of Russia from India show a positive impact on the current value of the Economic distance between Russia and India and the real growth rate of India. The lagged values of the inflation rate in South Africa show both positive and negative impacts on the current period OFDI of South Africa from India, the Economic Distance between South Africa and India, the current period Inflation rate, and the real growth rate of South Africa. The lagged values of the inflation rate of Russia also have a negative impact on the current period Economic distance between Russia and India and the current period Inflation rate of Russia. Whereas it shows a positive impact on the current period's Real growth rate in Russia. The lagged values of the inflation rate in China have a negative impact on the current period's Inflation rate in China. The lagged values of Brazil's inflation show a

negative impact on the current period's inflation rate and the OFDI from India and a positive impact on the Economic Distance between Brazil and India. The lagged value of the Economic distance between South Africa and India has a negative impact on the current period's economic distance and Brazil's inflation rate and a positive impact on the current period's real growth rate in Brazil. The lagged values of Economic Distance between Russia and India have a positive impact on the current period's economic distance and the real growth rate of Russia. The lagged values of the real growth rate of almost all the BRICS nations except for India are showing a negative impact on the current period's real growth rate of the respective economies.

How to maintain their current trend in FDI inflows and outflows with the other BRICS nations in order to maximize economic development is one of the biggest challenges for India. It is important for the BRICS countries to enhance their cooperation on FDI, both in terms of the amounts involved and the modalities of investments. More specifically, the five countries could define priority sectors by exploring the complementarities of their economies, as well as the needy areas in each country. During this process, the New Development Bank can be strengthened as a strategic provider of resources, notably for investments related to the green economy.

India must pursue a morally upright and practical foreign policy that advances its ideals and interests as a nation. Concerns about the fairness of economic engagement have been highlighted by India's ongoing trade deficit with China. India's overall economic stability and BRICS-related economic objectives may be hampered by this trade imbalance. BRICS encompasses both rising and developed economies, such as South Africa, India, and China, respectively. It remains a huge challenge to close the development gap among the participating nations so that everyone benefits equally from cooperation.

### **3.4 Major Findings**

The focus of the study, FDI is viewed as a dynamic force, a key resource for market adaptation, and a source of competitive advantages, representing emerging economies as a crucial component of economic development. The study concentrates on the policy frameworks of FDI of India which has a bearing on its FDI with the BRICS economies destination. It suggests the policy incentives to be taken with respect to the FDI from India to strengthen these relations with the BRICS nations.

To sum up, it can be said that the selected macroeconomic factors have had a considerable positive and negative impact on India's IFDI from other BRICS economies. The study also demonstrated the impact of the selected macroeconomic variables on India's IFDI from the other BRICS economies. Given the bilateral and international character of commerce, India needs to consider its strategic alliances. India must maintain balance in its interactions with China and Russia, whom the West sees as strategic rivals.

One of the key difficulties for India is how to continue its current trend in FDI inflows and outflows with the other BRICS countries in order to maximize economic development. It is important for the BRICS countries to enhance their cooperation on FDI, both in terms of the amounts involved and the modalities of investments. More specifically, the five countries could define priority sectors by exploring the complementarities of their economies, as well as the needy areas in each country. During this process, the New Development Bank can be strengthened as a strategic provider of resources, notably for investments related to the green economy.

The study shows India's IFDI compared to those of the other BRICS nations by using macroeconomic variables such as real growth rate, inflation rate, economic distance, trade openness, and government efficiency. According to empirical findings, the first 12 lags of IFDI in China and Russia have a negative effect on IFDI in the current era. In contrast, the

first four lags of IFDI in South Africa and Brazil indicate a negative effect on IFDI in the current era. India's real growth rate has been found to be positively impacted by China's economic lag values, but India's inflation rate has been negatively impacted.

The IFDI from Russia has been positively impacted by the first few lagged values of the economic distance between Russia and India, whereas the inflation rate in India has been positively impacted by the last few lagged values of the economic distance between Russia and India. The lagged values of India's inflation rate are negatively impacted by South Africa's economic distance from that country. The economic distance, real growth rate, and current inflation are all significantly impacted by the lagged values of India's inflation rate. Lagged real growth rate numbers have had a severe detrimental impact on India's present real growth rate.

Based on the empirical results shows that in the case of Russia, the first 11 lags of OFDI have a negative impact on the current period's OFDI from India to Russia. Whereas in the case of China and Brazil, the first three lags and first four lags respectively of OFDI from India show a negative impact on the current period's OFDI. The first six and the eleventh lagged values of OFDI to South Africa show a negative impact on the current period OFDI of India to South Africa. Lagged values of OFDI to China from India show a positive impact on the current period inflation rate of India, whereas the lagged values of OFDI of South Africa from India show a negative impact on the Economic Distance between India and South Africa. The lagged values OFDI of Russia from India show a positive impact on the current value of the Economic distance between Russia and India and the real growth rate of India. The lagged values of the inflation rate in South Africa show both positive and negative impacts on the current period OFDI of South Africa from India, the Economic Distance between South Africa and India, the current period Inflation rate, and the real growth rate of South Africa. The lagged values of the inflation rate of Russia also have a negative impact on

the current period Economic distance between Russia and India and the current period Inflation rate of Russia. Whereas it shows a positive impact on the current period's Real growth rate in Russia. The lagged values of the inflation rate in China have a negative impact on the current period's Inflation rate in China. The lagged values of Brazil's inflation show a negative impact on the current period's inflation rate and the OFDI from India and a positive impact on the Economic Distance between Brazil and India. The lagged value of the Economic distance between South Africa and India has a negative impact on the current period's economic distance and Brazil's inflation rate and a positive impact on the current period's real growth rate in Brazil. The lagged values of Economic Distance between Russia and India have a positive impact on the current period's economic distance and the real growth rate of Russia. The lagged values of the real growth rate of almost all the BRICS nations except for India are showing a negative impact on the current period's real growth rate of the respective economies.

### **3.5 Suggestions**

According to the findings of the analysis using the empirical model based on the BRICS economies as emerging economies and the foreign direct investments they receive; the following are the suggestions:

India must pursue a morally upright and practical foreign policy that advances its ideals and interests as a nation. Concerns about the fairness of economic engagement have been highlighted by India's ongoing trade deficit with China. India's overall economic stability and BRICS-related economic objectives may be hampered by this trade imbalance. BRICS encompasses both rising and developed economies, such as South Africa, India, and China, respectively. It remains a huge challenge to close the development gap among the participating nations so that everyone benefits equally from cooperation.

India's relationships with the BRICS are impacted by unresolved border conflicts and geopolitical rivalry with China and Pakistan. India and Russia hold opposing viewpoints on matters including Afghanistan, Iran, and the Indo-Pacific. India must handle these bilateral disagreements while pursuing international BRICS collaboration.

India needs to strike a balance in its interactions with China and Russia, whom the West is increasingly viewing as strategic adversaries.

India's security and interests are significantly threatened and challenged by China's rise, particularly in areas like border disputes, maritime security, trade imbalance, technology competition, and human rights.

Russia's role in the conflict in Ukraine and its allegiance to China has also caused India to have doubts about the dependability and credibility of its long time ally.

China's primacy within BRICS must be reduced in order to achieve a better internal balance, which is furthered by the pressing need for diversification.

Each of the BRICS members must examine the prospects and inherent constraints realistically if the group is to remain relevant over the coming decades.

The group will also investigate the 'BRICS plus' cooperation on more levels and in a wider context. As a result, the BRICS nations will have a stronger impact and presence globally and contribute more to peace and development.

Numerous global issues are starting to emerge. Coordination of international efforts is required to address these difficulties. It is crucial to protect the international system while ensuring that everyone participates in international affairs, develops international rules, and benefits from development.



To strengthen unity and collaboration with emerging markets and developing nations and to give them more voice in global governance, BRICS should adopt a global governance concept that emphasizes wide consultation, collaborative participation, and shared benefits.

### **3.6 Limitations of the Study and Scope for Future Research**

The study is confined to the BRICS economies. Other regional blocs such as SAARC, EU, ASEAN, NAFTA, etc. can be considered for future study.

The study is limited to the period of 10 years only from 2011-2021. A longer period would have been considered to obtain a better outcome of the study. Thus, it leaves scope for future study with a longer time frame.

The macroeconomic factors namely, real growth rate and inflation rate, Economic distance, Trade openness, and government effectiveness have been used for the study. Other macroeconomic variables such as exchange rate political stability, human capital, market size tax rate, purchasing power parity, etc. can be used for further research.

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