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## **An analytical study on the effect of COVID-19 on FDI in India**

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### **Abstract**

This paper assesses the effect of the COVID-19 pandemic on remittance inflows to India. The flow of remittances has been markedly diminished due to this outbreak. Situational research was done to assess the short-, medium-, and long-term impacts of COVID-19 on the Indian economy, using remittance data from 2019 to 2020. This data was used to analyse the remittance influx. Currently, the nations that provide financial aid are all closed, resulting in widespread unemployment. Our study indicates that COVID-19 adversely impacted GDP, FDI, and unemployment via its influence on remittance influx. Emerging countries are particularly affected, since this tendency is most evident in the primary and manufacturing sectors, which receive the majority of foreign direct investment.

Foreign direct investment (FDI), a crucial element in economic growth, may assist countries in enduring challenges and emerging more robustly than before. Approximately 75% of foreign direct investment (FDI) inflows to the country from October 2019 to June 2020 were concentrated in four Indian states: Maharashtra (28%), Karnataka (19%), Delhi (16%), and Gujarat (10%). This underscores prospective prospects for additional Indian states in the future. Over the last 19 years, low-skilled manufacturing has garnered just 11% of total foreign direct investment (FDI), despite India's significant potential to attract substantial FDI in this sector.

**Keywords:** COVID-19, unemployment, economic growth, challenges

### **Introduction**

The worldwide proliferation of the COVID-19 pandemic has compelled several countries to reassess their economic strategies. This is a comparable phase for India's economy, and foreign direct investment (FDI) is expected to play a significant role, since it serves as an effective means to finance expansion without incurring debt. Throughout the years, the government has undertaken deliberate measures to establish a foreign direct investment (FDI) policy that is both facilitative and favourable to investors. Total FDI inflows grew by 55%, rising from US\$ 231.4 billion during 2008-2014 to US\$ 358.3 billion in 2014-2020, demonstrating the efficacy of the FDI reforms. In summary, foreign direct investment (FDI) had a more significant decline in 2020 compared to global GDP or trade. Potentially adverse implications include a reduction in investment capital attributable to the severity of COVID-19 in the home country. Investors may lack the funds for international investments owing to increasing domestic firm constraints and the need to mitigate losses in home operations.

This results in a diminished pool of investors. The Indian government has consistently prioritized reforms to attract investments and enhance manufacturing. The last several months have been tumultuous. The dynamics of international trade have been transformed by trade wars and the ensuing impact of COVID-19. Numerous corporations have been reassessing their risks and exploring new investment opportunities due to the current economic situation. The CII EY Survey was conceived to gather insights from key individuals at multinational companies (MNCs) contemplating asset relocation to India or the establishment of new ventures due to the nation's favourable investment environment. We want to ascertain the measures India may use to enhance its performance in this regard.

This report encompasses the survey's results and insights from notable EY and industry leaders. From a global perspective, the respondents exhibited an optimistic attitude on future investments. More than 80% of them want to invest in the next two to three years. India is seen as one of the top three investment locations over the next two to three years, according to the respondents.

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The primary reasons individuals choose India as a holiday destination are its stable government, extensive pool of skilled labour, and significant market potential.

### Review of literature

This part will evaluate relevant and related research to have a better understanding of the chosen issue, which is GDP, FDI, unemployment, and digital banking services, since these are the main points of the paper.

Chami *et al.* (2005) <sup>[16]</sup> found that remittances hinder GDP development across 113 nations. The researchers discovered that an increase in remittances had a dampening effect on economic expansion. They saw the function of remittances as philanthropic and not motivated by financial gain. Using System GMM panel data analysis,

Rao and Hassan (2011) <sup>[5]</sup> examined 40 nations with high levels of remittance recipients. The specific result conveys both the direct and indirect impacts of remittances on development, as well as the mechanisms by which remittances could influence growth when treated as a conditioning variable. The research shows that remittances boost the ratio of M2 to GDP, which in turn helps the economy thrive.

Azam (2015) <sup>[1]</sup> looked into how remittances helped the economies of four countries: Sri Lanka, Bangladesh, India, and Pakistan, and they all came out ahead. Additionally, using the panel dataset of eighty-four nations spanning 1970-2004.

Barajas *et al.* (2009) <sup>[2]</sup> found that remittances sent home by employees had little effect on GDP development in poor nations.

Meyer and Shera (2017) <sup>[4]</sup> investigated the several effects of remittances on the GDP growth of six nations that receive large amounts of these funds: Albania, Bosnia Herzegovina, Bulgaria, Romania, Macedonia, and Moldova. The chosen six nations' GDPs have been positively and significantly boosted by remittances, according to the regression findings.

Comes *et al.* (2018) <sup>[17]</sup> elucidated the relationship between remittances, FDI, and GDP growth. For all of the states that were considered, the empirical results demonstrate that remittances and FDI contribute positively to economic development.

### Objectives of study

- To understand the conceptual framework of COVID-19
- To study the impact of COVID-19 on FDI inflow

### Trends in outward FDI- Asian economies

Overseas investment flows from developing economies especially Asian economies have been increasing since the last two decades. The explanation of trans-border production by national firms is explained by numerous theories: a) the industrial organization theory (Hymer, 1960; Caves, 1971) <sup>[12, 8]</sup>, which asserts that a country invests abroad due to firm specific advantages such as ownership of technology not known to the rivals, product differentiation, management know-how and marketing and selling capabilities; b) theory of Ownership, location and internalization (O-L-I) advantages for the home country of investing abroad (Dunning, 1977; 1981) <sup>[9, 10]</sup>. Resource seeking, strategic asset seeking, market seeking and efficiency seeking have been highlighted as the main motives behind a country's reasons for investing overseas (Dunning and Lundan, 2008) <sup>[11]</sup>. In case of emerging

economies, an increasing share of OFDI, has become knowledge sourcing with the motive to explore and tap the foreign knowledge sources and gain access to newer and better technologies, distribution channels and even brand names. Overseas investment flows from developing countries have been increasing since 1990's. From 13 billion USD in 1990 they increased to 414 billion USD in 2018. Though, 2019 reported a drop to 374 billion USD. The period from early 2000's witnessed a major upsurge in outward foreign direct investment from developing economies (Figure 1). Share of developing economies in world's OFDI increased from a mere 8 percent in 2000 to 26 percent in 2010. It reached the highest of 42 percent in 2018 before dipping to 28 percent in 2019. Within developing economies, Asia has been the leading region with highest average share of outward investment flows of around 86 percent for the period 1990-2019, followed by Latin America and the Caribbean, with an average share of 11 percent. Contribution of African economies in outward FDI flows from developing economies is around 3 percent for the same period, whereas average share of Oceanic countries has been negligible.

Within the Asian countries, although the FDI flows have been predominantly driven by East and South-East Asian countries, West Asia and South Asia have recorded a steady growth in % share of FDI outflows from Asia over the last three decades. Table 1 shows the share of FDI outflows for Asian Sub-Regions as a percentage of FDI outflows from Asia. West-Asian countries recorded a positive 10.8 percent share in 2019 as compared to a negative percentage share of 8.8 in 1990. South-Asian economies recorded the percentage share in FDI outflows from 0.6 percent in 1990 to 5.6 percent in 2010. It fell to 3.7 percent in 2019. FDI outflows from Asian economies have been dominated by China from East and South-East Asia, India from South-Asia and UAE from West Asia indicating the fact that the fastest growing economies in the world have been aggressively looking overseas to expand their asset and knowledge base. Figure 3 reports the top 10 Asian economies that have invested abroad in 2019, based on percentage share of FDI outflows from Asia.

### Trends of outward FDI from India

Outward investment from India began in the 1960's-mainly to developing countries like Sri-Lanka and few African countries- with a few business conglomerates including the Tata, Birla and the Kirloskar investing overseas. Following the economic reforms in 1991, which made significant domestic and foreign policy shifts, India's outward investment increased in the 1990's and surged in the consecutive decades (Figure 5). It recorded the highest value of 21 billion USD in 2008. It is among the top 10 Asian economies in terms of outward investment flows, and one of the few economies to report an increase in OFDI in 2019, when the Asian economies largely witnessed a fall in their overseas investment flows. India's share in global FDI outflows increased from 0.0 percent in 1990 to 0.92 in 2019, while its share in developing countries' outflows was up from 0.05 percent to 3.2 percent and from 0.5 percent to 3.69 percent in the Asian countries for the same period. Its share in South-Asian countries' OFDI rose from a mere 9.18 percent in 1990 to a whopping 98.53 percent in 2019. India's Outward flows as a percentage share of GDP also rose from 0.0 percent in 1990 to 0.46 percent in 2019 (Table 2).

The increasing share of overseas investment from India in the last two decades clearly indicate the fact that India is emerging as a strong global player with the primary aim of acquiring assets and technology and augmenting its research and development (Pradhan and Singh, 2009) <sup>[15]</sup>.

Trend analysis for the Indian OFDI is done in the next section. Data for outward FDI flows is taken from the RBI database on overseas investment obtained from [www.rbi.org.in](http://www.rbi.org.in) for India. It provides destination specific, sector-wise monthly disaggregated data for FDI outflows from July 2007 onwards. For the trend analysis, the monthly data was aggregated into yearly data for the period 2007-2019. As revealed by figure 5, the cumulative total of OFDI originating from the services sector is the highest followed by the two sectors - manufacturing sector and agriculture & mining. The cumulative flows OFDI flows accounted for 152 billion USD from the services sector whereas from the manufacturing sector the OFDI flows were around 95 billion USD. (Figure 5). Services sector has been a globally competitive and the leading sector for India' economic growth. Thus, the cause of it's increasing presence overseas can be related to the motive of expanding its market base and improving its competitiveness globally. Manufacturing sector has also been a large player in the global market investing overseas, possibly with the aim of exploring newer markets and also deriving efficiency gains by taking location specific advantages of the host countries. Noteworthy here, is the emerging primary sector (agriculture and mining), which hardly had any presence in overseas investment from India in the 1980's and 1990's. Though its share in absolute terms is small as compared to the services and manufacturing sectors, it's growth in the last two decades has been quite remarkable. This may be attributed to its motive of acquiring natural resources such as oil and gas. India's economic growth and its dependence on for energy imports, mainly petroleum, have probably led this sector to explore opportunities in oil and gas extraction overseas.

### Key measures to attract FDI in India

India is set to become a top investment destination on a worldwide scale because to a number of structural reforms implemented by the government. These changes have targeted the land, labour, liquidity, and law sectors. Over twenty lakh crores of rupees have been pumped into the economy since the epidemic began. Power, manufacturing, defence, land, education, mining, and minerals are all included in the covered sectors.

The following are examples of significant changes that have taken place:

- Eliminating the Dividend Distribution Tax for corporations • Setting the corporate tax rate for new manufacturing facilities at 15% to bring it in line with ASEAN nations.
- A phased and graded tariff system to encourage domestic production of both intermediate and final items, such as electric vehicles.
- Thirteen industries would get production-linked incentives totalling Rs. 197,000 crores. Compensation for disabled workers in India's industrial sector in the

form of monetary incentives based on incremental sales for five years. First priorities will include healthcare-related commodities and high-import items (cell phones).

- A rise from 49% to 74% in the foreign direct investment cap for military manufacturing via the automated route. To promote the expansion of micro, small, and medium-sized enterprises (MSMEs), we have:
- Streamlined more than 100 labour rules into 4 codes, making retrenchment exemptions more generous and reducing registration requirements The following are some of the recent developments in India:
- The opening of commercial coal mining and an integrated licensing regime for minerals mining • The Airport Authority of India (AAI) has awarded three airports out of six bids for
- Operation and Maintenance on Public Private Partnership (PPP) Basis
- The implementation of a GIS system to provide information on industrial land, including plot-level information
- The decriminalization of companies' law, the facilitation of netting of qualified financial contracts
- The implementation of faceless e-assessment for taxes, the opening of commercial coal mining, and the establishment of an integrated licensing regime for minerals mining.
- It is proposed to privatize the power departments and utilities in the union territories. As a result, Distribution's operations and finances will become more efficient, and other utilities throughout the nation will be able to follow suit.
- A new policy favouring public sector firms in some areas and the openness of all sectors to private sector. The industry and international agencies have long demanded changes pertaining to coal and mining, labour, agriculture, PLI & PMP, MSME, and corporate tax savings. Not only will these changes help the economy become more efficient with the resources it has, but they will also boost its productive capability.

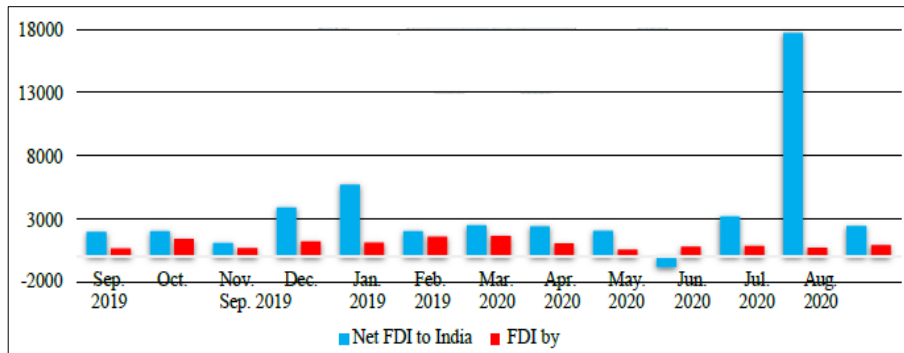
### Data analysis

In the first three months of fiscal year 2020, foreign direct investment (FDI) equity inflows declined 62%, which contributed significantly to a 59% decline in Net FDI. Although stock inflows were down in the first quarter, they surged by 16% in the second quarter, attracting \$20 Bn in equity FDI. This surge was driven mostly by tech investments from companies like Google, Facebook, Amazon, and others. While other capital flows decreased significantly from March to September (June being the only exception), reinvested profits hardly changed at all throughout that time.

**Table 1:** Impact of FDI Inflow

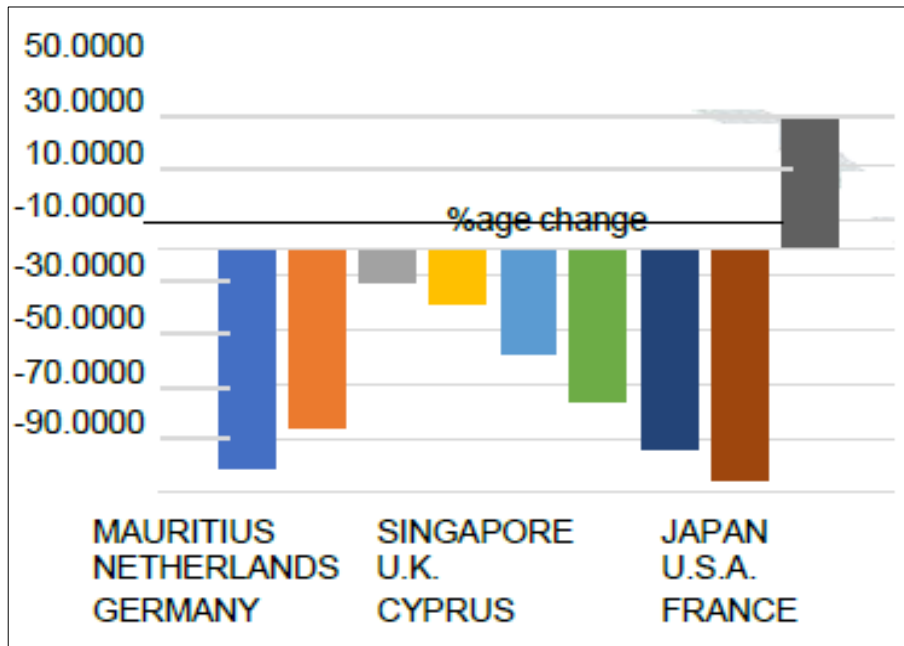
Year	2015	2016	2017	2018	2019	2020
FDI Inflow	55559	60220	60974	62001	74390	67542

Source: RBI 2020, WORLD BANK 2020



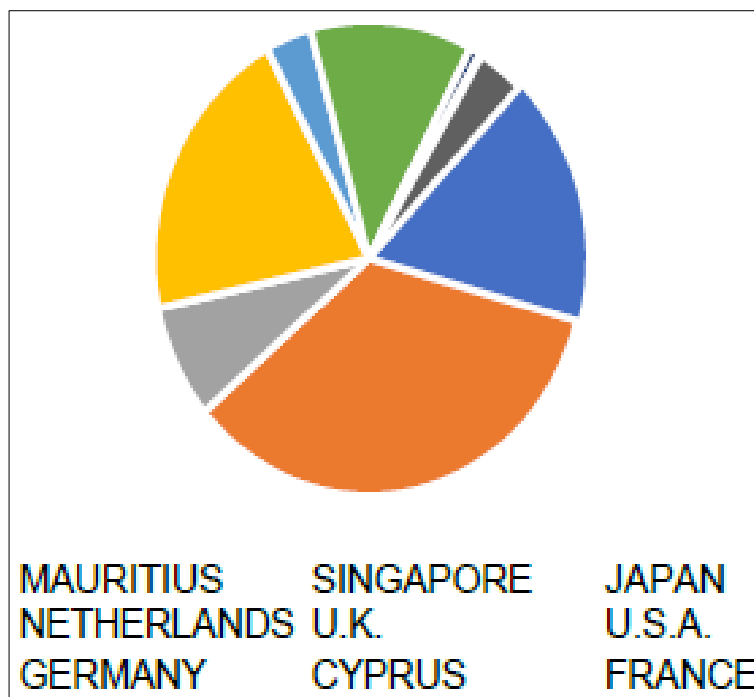
Source: RBI 2020, WORLD BANK 2020

Fig 1: FDI Inflows vs. Outflows (in USD mn.)



Source: RBI 2020, WORLD BANK 2020

Fig 2: Percentage change of Inflows during Covid-19

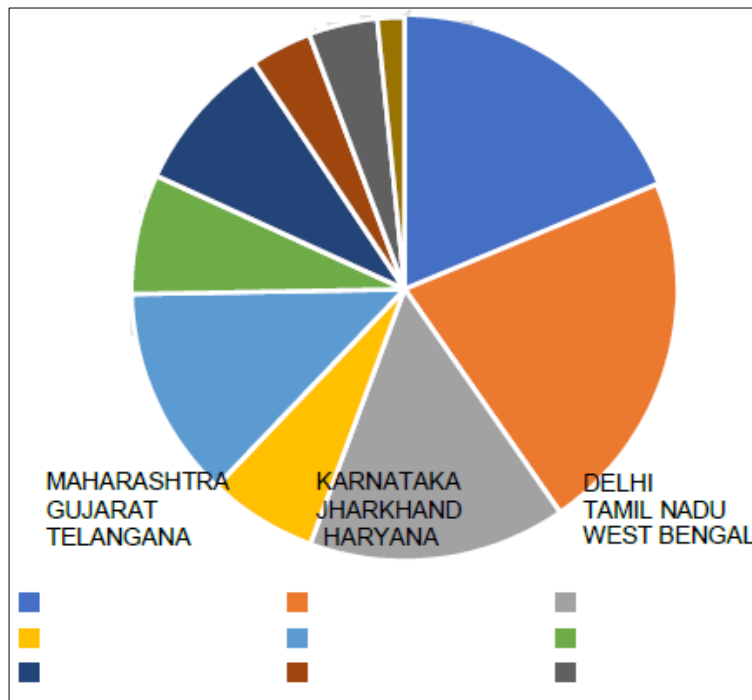


Source: RBI 2020, WORLD BANK 2020

Fig 3: Contribution by country

For the first quarter of FY-20 most countries saw a major decline in their contributions towards equity inflows with Mauritius and Singapore falling by 80.7% and 65.8%, with only one exception France, which saw a growth in its

contribution by 48.7%. Singapore emerged as the largest contributor of FDI bringing in \$1.82 Billion followed by the Netherlands, Mauritius, the US, and Japan.



Source: RBI 2020, WORLD BANK 2020

Fig 4: FDI Equity inflows by State 2020-21

Table 2: Regression analysis

Regression Statistics	
Multiple R	0.9909476
R Square	0.9819771
Adjusted R Square	0.8668609
Standard Error	575.94169
Observations	12

ANOVA					
Source	DF	SS	MS	F	Significance F
Regression	3	162658208.5	54219403.3	163.4548	1.62355E-07
Residual	9	2985379.461	331708.8		
Total	12	165645388			

Coefficients								
Variable	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Equity	1.8147622	0.241502822	7.514456	3.64E-05	1.268444898	2.3610795	1.268444898	2.36107957
Reinvested earnings	-1.8149139	0.565259573	-3.21079	0.010645	-3.09363794	-0.5362256	-3.09363794	-0.5362256
Other capital	-1.0896933	0.564072058	-1.93183	0.085421	-2.36571293	0.1863264	-2.36571293	0.1863264

During the first quarter of FY-20, the states which attracted the most FDI include Karnataka, followed by Maharashtra, Delhi, Jharkhand, and Gujarat. The states which saw the largest decline in FDI inflows include Delhi, Karnataka, Tamil Nadu, Gujarat and Andhra Pradesh.

Regression is a statistical method used to determine the dependence of a dependent variable on a group of

independent variables. For our analysis we'll choose the variables as follows:

Y = dependent variable = Net FDI

X = independent variable = Equity, Reinvested Earnings and Other Capital After

running regression, we get the following results:

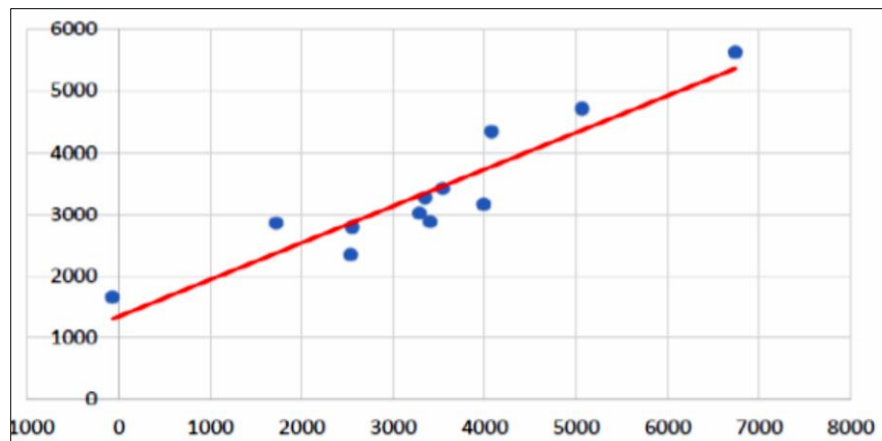


Fig 5: Line of best fit

### Findings

R-Squared value is 0.9819 or 98.19%, which is a very good fit. This means that 98.19% of the of the variation in Net FDI can be explained by the chosen independent variables which are Equity, Reinvested Earnings and Other Capital.

**F and P-values:** Significance F is very small which means our result is statistically significant because the value is less than 0.05. P-value for Equity is very small which means Equity is a good fit (almost 100%) for Net FDI. For Reinvested Earnings, the P-value is 0.010645, which means we can say with 99% confidence that Reinvested Earnings is a good fit. For Other Capital P-value is 0.08542 which means this isn't significant as it is greater than 0.05

**Coefficients:** Regression line is:  $Y = 1.8147*(Earnings) - 1.81*(Reinvested Earnings)$ . From this equation we can say that for 1 unit increase in Equity, Net FDI increases by 1.814 units and for each unit increase in Reinvested Earnings Net FDI decreases by 1.8 units. From this equation we can also estimate any variable if we know the other two variables.

**Line of best fit:** This line of best fit expresses the relationship between the actual values and the estimated values. As the line obtained in our case is linear, we can say that the dependent variable varies linearly with the independent variable.

### Conclusion

Greenfield foreign direct investment and cross-border mergers and acquisitions were significantly impacted by the detrimental effects of COVID-19 on the host nation's industrial sector. Only Greenfield Foreign Direct Investment was adversely impacted by the host nation's COVID-19 repercussions in the service sector. Furthermore, Greenfield FDI in manufacturing was favourably influenced by the adverse effects of COVID-19 in the host nation. Moreover, we see that greenfield foreign direct investment remained unimpacted by the adverse effects of COVID-19 on the host country, but mergers and acquisitions in the service and industrial sectors saw severe repercussions.

Moreover, the immediate effects of COVID-19 on FDI flows are evident when examining stated FDI flows, which may be retracted and subsequently unacknowledged. Consequently, foreign direct investment (FDI) flows have been hindered by the adverse effects of COVID-19. This

aligns with prior research on the complex relationship between trade and foreign direct investment (FDI), which has emphasized their complimentary and substitutive characteristics, respectively.

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