



Foreign Trade Effect on Selected Commodities Post Covid-19

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ABSTRACT:

The covid-19 pandemic took a severe impact economically and socially, and it has impacted production and global trade. This pandemic has to divest implications on the economy to curb the extent of the pandemic, which had disrupted India's foreign exchange that had been fallen in the lockdown period. The study's primary purpose is to analyze the difference between selected export and import commodities before and after covid-19. The result of the two-sample paired t-test indicates significant differences in exports and imports due to covid-19. Data have been collected from 2015 to 2021 to depict the impact on selected exports and imports of India's foreign trade commodities. Trade surplus/ (deficit) and growth rate have also been shown to observe India's foreign trade.

KEYWORDS: Covid-19, Export, Import, Pandemic, Trade surplus/ deficit, Growth Rate.

I. INTRODUCTION

COVID-19 pandemic has brought along with it severe repercussions economically, socially, psychologically, and psychosocial on the people (Patnaik and Maji, 2020). The earlier crisis had not been much affected by economic activities, but this pandemic has drastically impacted economic activities, shut down business enterprises, and disrupted global connectivity.

The covid-19 pandemic took a severe impact economically and socially, and it has impacted production and global trade that is why the economic shutdown in India. The pandemic is outspreading in the universal economy, so trying to decline the disease by testing, using the existing drugs, quarantining those who doubt by contact tracing, and complete or partial lockdown (Chakraborty and Maity, 2020). The worldwide and entire human population, but it is



mainly infected on migration and movability of people. So control of the outbreak Government has decided to close all transportation and economic activities and services (Brief, 2020). Many people lost their job, productive hours wastage, psychological instability, and financial problems during the pandemic, showing socio-economic differences besides interconnecting ethnic and native-migrant lines. (Hu, 2020).

Almost 220 countries and union territories had exaggerated through the covid-19 pandemic, and more than two crore cases have been reported in India after the completion of May 2021, and many people have lost their life (Worldometer, 2020). On 4th June 2021, the figure of confirmed cases was 28,574,350 with 340,702 death, and at the end of May 2021, vaccine doses have been administered 218,358,591 (www.mohfw.gov.in). The supply chain has disrupted over the nation during the lockdown period as the Government of India has announced the lockdown to falling the epidemic, and import and export commodities have been banned across the country except for some entities. These activities affect the manufacturing sector and the supply chain (Agrawal, et al. 2020).

India export has led their percentage of GDP 19.74% and import has a percentage of GDP 23.64% World Bank (2019). The value of global operate have returned down along 4.5 percent in Q₃ 2020, and it is lower than Q₂ (about 19 percent YoY) (UNCTAD, 2020). The study divided the economic uncertainty into three major sectors, and these uncertainties had induced a destructive force on the economy and the economy's growth (Baker, et al. 2020). India's had contributed to overall export and import in commodities from 1.7 % to 2.6% at the end of 2018 (WTO, 2019). Overseas operate, acting an essential function in the expansion of the Indian economy.



II. LITERATURE REVIEW:

Lin & Zhang (2020) noted that agriculture exports business has reduced because of the covid-19 pandemic especially the mushroom and related products. Data has been collected through a unique firm-level survey to know farming sell overseas. Covid-19 has badly impacted agricultural development but on the other side grain and oil exports still, increase.

Gupta (2020) examined the exports and imports of commodities collected through India's foreign trade that had fallen in the lockdown period. Data had collected through to the quarters ending of June 2019, March 2020, and June 2020. This pandemic has to divest impact on human health as well as the economy. This study has been based on two samples paired t-test. Foreign trade of whole countries has been stopped because of the epidemic.

Dhinakaran & Kesavan (2020) revealed that export and import are necessary segments to fulfill the requirement of the world and financial system, and it had been stopped because of the pandemic. The government and RBI must take action to reduce the mistakes seeing that it was increased due to covid-19 natural disaster. We found that the consumer price index has hovered between 3.5 percent to 4.2 percent.

Barichello (2020) in their research paper, concludes that the negative impact on the entire operating level was 13% - 32% that happens due to falling prices. We found that livestock, pulses, and horticultural had declined because of the imposition of trade, domestic producers were facing higher prices, tightened SPS and food safety regulation, and many more things.

Sutradhar, et al. (2020) in research explained that the covid-19 epidemic had been depressing for foreign trade, but trade balance had shown a positive impact because import is lesser than export. It has happened for the first time after liberalization. Data has been collected through secondary sources, as some government websites are mentioned. The study is analytical and descriptive in nature.

Nataraj (2020) concluded that pandemic had affected disruption to the whole economy and international trade also. The government should have to change the trade policy and boost the



exports after the pandemic stabilizes. India requires to focus on the MSME sector, which has been faced during the lockdown period.

Fiorini, et al. (2020) noted that the government had faced medical supplies during the lockdown period, as it has imposed export control and requisitioned domestic suppliers. The study found that the government should have to work with industry to know the supply-chain blockages that influence the construction and necessary apparatus.

Gruszczynski (2020) examined that the Indian economy has changed economically, socially, and politically after the lockdown period and its impact. This study found that international trade will also be usual when the situation is expected because the business will start again. Data has been collected through secondary sources. This pandemic has changed the structure of the economy, and it impacted the growth rate.

Prasad & Prasad (2018) investigated India's foreign trade movement through the after and before liberalization phase. The researcher found that foreign trade has been increased through the post and pre liberalization but tremendous expansion in post-liberalization as compared to pre liberalization. Data has been collected through secondary sources, and several statistical techniques have been used like ANOVA, multiple regression method, and Durbin Weston autocorrelation test. During this period imports are higher than exports, showing a trade deficit in the balance of payment.

Faleye (2018) study highlighted that to know the effects of international trade during the plague from 1924 to 1931. Data has been collected throughout secondary sources approximating newspaper, sanitary and medical records, and colonial administrator. The study concludes that economic policy has determined colonial public health intervention.

Khan & Kotishwar (2010) concluded that the growth rate has been most substantial in the globalization age, but due to financial crises economy has demonstrated an overall slowdown in the world economy. Also, Indian exports were reduced in 2008. This study is based on knowing the behavior of exports and imports before and after financial crises. They found that imports of commercial services have been reached US\$ 52.5 billion during 2007-08, which is showing



enlargement reasonable to 18.5% in 2007-08. This study examined that India's merchandise and service trade performance during pre and post-financial crises and to know those factors had contributed to financial problems.

OBJECTIVES :

To look over the contact of international practices on selected commodities and the following research objectives have been identified:

- To examine the tendency of India's foreign trade before and after the covid-19 epidemic.
- To evaluate foreign trade growth throughout the pandemic-affected era with the parallel period of the previous year.
- To estimate the effect of lockdown on export and import of selected commodities.
- To determine India's trade surplus/deficit in the current situation concerning selected commodities.

RESEARCH HYPOTHESIS:

The following research hypothesis has been originated found on the research objectives:

- H_{01} : There is no impact on the export of selected commodities.
- H_{02} : There is no impact on the import of selected commodities.

III. RESEARCH METHODOLOGY:

The present study is empirical and descriptive in nature, and data collected from secondary sources relating to export from and imports to India. The essential secondary data have been collected from IMF, WTO, UNCTAD, and World Bank official website, and last six years data have been collected on selected export and import commodities from the Ministry of Commerce and Industry. Data were also collected from various websites, news articles, and published and unpublished papers. Two samples paired t-test has been used to know the differences of exports and imports of selected commodities, and charts have also been used to see the growth and trade surplus and deficit before and after covid-19.



Table:1 Export of selected commodities (Rs. In Crores)

SL NO	Commodities	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
1	Animal or vegetable fats and oil their cleavage products, pre. Edible fats, animal or vegetable waxex	574,180	598,357	814,691	766,270	825,068	1,063,701
2	Beverages, spirits and vinegar	209,762	209,218	223,412	227,758	180,551	242,240
3	Coffee, tea, mate and spices	1,932,656	2,134,448	2,134,378	2,233,600	2,337,909	2,559,590
4	Cotton	4,798,352	4,439,176	4,54,151	5,502,070	4,071,481	4,026,486
5	Edible fruit and nuts, peel or citrus fruit or melons	1,040,376	1,160,056	1,197,293	1,129,227	1,060,475	820,585
6	Fish and crustaceans, molluscs and other aquatic invertabrates	2,937,897	3,689,789	4,417,576	4,383,219	4,362,695	3,528,508
7	Pharmaceutical products	8,448,106	8,670,548	8,544,730	10,323,993	11,547,303	13,058,898
8	Salt, sulphur, earths and stone, plastering materials, lime and cement	1,213,032	1,292,055	1,431,324	1,559,348	1,416,011	1,229,998
9	Toys, games and sports requisites, parts and accessories thereof	189,410	197,763	197,093	292,427	285,966	270,547
10	Zinc and articles thereof	343,457	409,675	616,800	418,999	403,729	502,494

SOURCE: <https://tradestat.commerce.gov.in/eidb/default.asp>

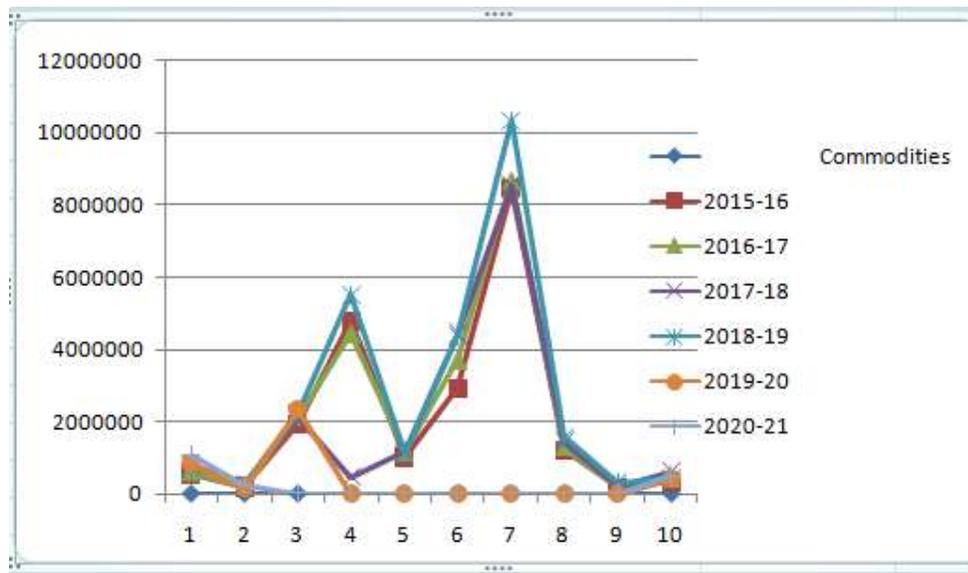
DATA ANALYSIS AND DISCUSSION:

T-Test: Paired Two Sample for Means

	Before Covid-19 (2019-20)	After Covid-19 (2020-21)
Mean	2649118.8	2730304.7
Variance	12036176666879	1498952548
Observations	10.000	10.000
Pearson Correlation	0.993	
Hypothesized Mean Difference	0.000	
df	9.000	
t Stat	-0.435	
P(T<=t) one-tail	0.336	
t Critical one-tail	1.833	
P(T<=t) two-tail	0.673	
t Critical two-tail	2.262	

The above table 1 exhibits descriptive statistics of export of selected commodities in which the total number of commodities are 10. It has been observed that stat ($=-0.435$) < t critical one tail (1.833), with a P-value of 0.336 ($P < 0.05$ & $P < 0.01$), which is very significant because the p-

value is higher 5% level of significance. Hence, the null hypothesis would be rejected, and there is an impact on the export of selected commodities between before and after covid-19. The mean export value relating to before covid-19, 2019-20(=2649118.8) < mean export value relating to after covid-19, 2020-21(= 2730304.7).



SOURCE: Computed through Microsoft Excel 2007

In the graph as mentioned above, data of the past six years have continuously fluctuated in the export of the selected commodities. From the mentioned graph, we can conclude some of the commodities have increased but on the other side, it has decreased because of the pandemic. The year 2020-21 has shown more impact on export commodities as compared to earlier years.



Table:2 Import of Selected Commodities (Rs. In Crores)

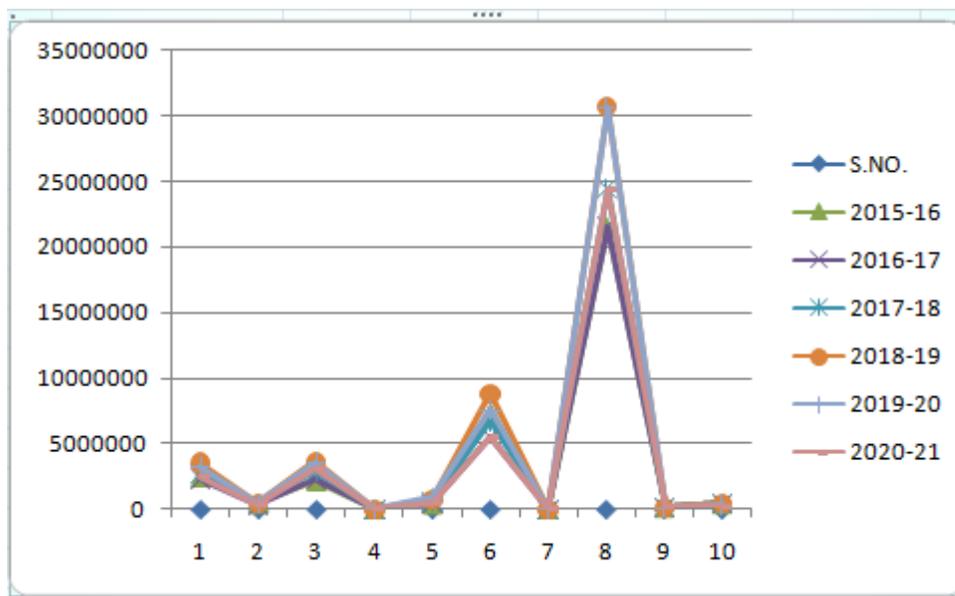
So. No.	Commodities	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
1	Articles of iron and steel	2,451,978	2,326,054	2,710,008	3,565,784	3,294,476	2,485,179
2	Ceramic products	464,943	312,885	397,221	418,531	426,142	360,528
3	Copper and articles thereof	2,150,854	2,270,896	2,905,824	3,687,262	3,610,182	3,005,910
4	Dairy produce, birds eggs, natural honey, edible prod. Of animal origin, not elsewhere spec. or included	34,045	24,382	30,288	22,867	26,663	23,408
5	Essential oils and resinoids, perfumery, cosmetic or toilet preparations	422,722	457,676	558,210	805,549	866,175	455,285
6	Iron and steel	7,355,789	5,527,754	6,723,542	8,798,896	7,585,484	5,480,780
7	Live trees and other plants, bulbs, roots and the like, cut flowers and ornamental foliage	11,440	13,381	13,646	17,409	22,964	13,120
8	Nuclear reactions, boilers, machinery and mechanical appliances, parts thereof	21,542,902	21,522,965	24,381,593	30,636,841	30,706,725	24,393,651
9	Photographic or cinematographic goods	153,917	129,025	135,770	145,923	141,583	91,992
10	Raw hides and skins (other than furskins) and leather	431,117	408,529	396,771	406,558	389,257	213,159

SOURCE: <https://tradestat.commerce.gov.in/eidb/default.asp>

DATA ANALYSIS AND DISCUSSION:

T-Test: Paired Two Sample for Means		
	Before Covid (2019-20)	After Covid (2020-21)
Mean	4706965.1	3652301.2
Variance	89319885617221	56366623531038
Observations	10.000	10.000
Pearson Correlation	0.999	
Hypothesized Mean Difference	0.000	
df	9.000	
t Stat	1.706	
P(T<=t) one-tail	0.061	
t Critical one-tail	1.833	
P(T<=t) two-tail	0.122	
t Critical two-tail	2.262	

The above table 2 exhibits descriptive statistics of import of selected commodities in which the total number of commodities are 10. It has been observed that $stat (=1.706) < t$ critical one tail (1.833), with a P-value of 0.061 ($P < 0.05$ & $P < 0.01$), which is very significant because the p-value is higher 5% level of significance. Hence, the null hypothesis would be rejected, and there is an impact on import of selected commodities between before and after covid-19. The mean export value relating to before covid-19, 2019-20 (=4706965.1) < mean export value relating to after covid-19, 2020-21(=3652301.2).



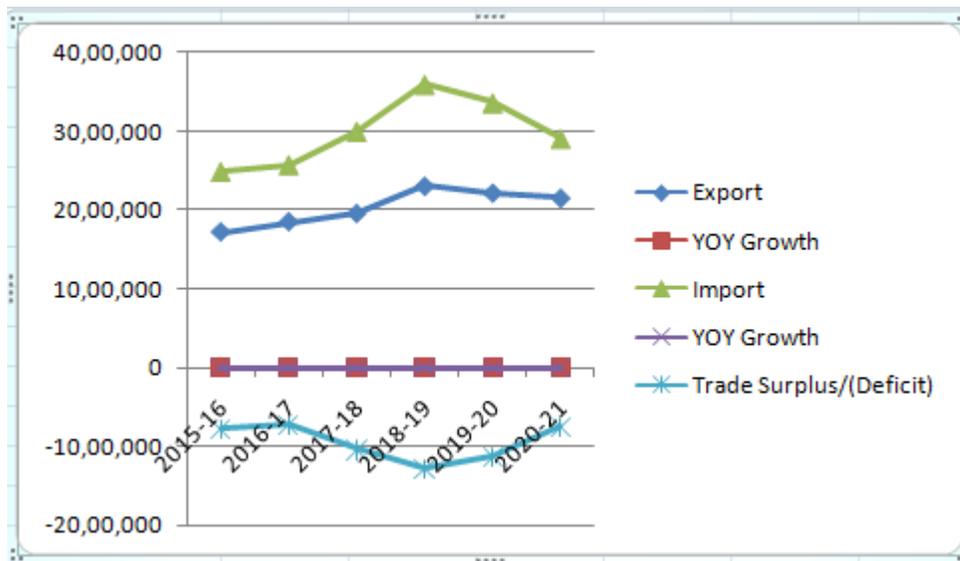
Source: Computed through Microsoft Excel 2007

In the graph as mentioned above, the past six years' data have constantly fluctuated in import of the selected commodities. The following graph represents the continuous decrease in import of the selected commodities in the year 2020-21 compared with just the preceding year because of the covid-19 pandemic as Government has banned some selected import commodities.



Yearly	Export	YOY Growth	Import	YOY Growth	Trade Surplus/(Deficit)
2015-16	1,716,384	-9.49%	2,490,306	-9.02%	(773,921)
2016-17	1,849,434	7.75%	2,577,675	3.51%	(728,242)
2017-18	1,956,515	5.79%	3,001,033	16.42%	(1,044,519)
2018-19	2,307,726	17.95%	3,594,675	19.78%	(1,286,948)
2019-20	2,219,854	-3.81%	3,360,954	-6.50%	(1,141,100)
2020-21	2,153,918	-2.97%	2,909,855	-13.42%	(755,937)

SOURCE: <https://dashboard.commerce.gov.in/commercedashboard.aspx>



Source: Computed through Microsoft Excel 2007

The graph mentioned above shows a trade deficit, exports and imports, and its growth for all the six years from 2015-16 to 2020-21. Both imports and exports have been decreased from the year 2015-16 to 2020-21. Overall, imports and export have fallen during the pandemic compared to



previous years, and growth has also declined. But in the year 2015-16 export and import were the lowest as compared to other years.

CONCLUSION:

The statistical result indicated that there is a significant decrease between exports and imports during the lockdown period. As before covid-19, all trade activities were going on, but during covid-19, all trade activities have restricted, which is why trade activities have been gradually decreased. We have taken data from 2015 to 2021, trade deficit concerning selected commodities which is a negative impact on Indian economy and growth gradually decreases. Opening industries will not enhance economic growth but assist in employability which was worst by this disaster (Bhardwaj & Yadav, 2020). Economic growth had fallen because of enhancing the unemployment rate, reducing income, or shutting down all economic activities (Ivakhnyuk, 2020).

LIMITATION AND FUTURE RESEARCH SCOPE:

The present study is based on secondary data relating to selected export and import of commodities. Balance of payment and import and export services has not been considered. Trade surplus could be shown if we collected data on a monthly or quarterly basis of covid-19. These are the potential scope of research below this theme with additional components.

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