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The Impact of COVID-19 on International Trade: Differences Between Importing and Exporting Countries

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Abstract: During the pandemic period, import and export trade has been affected seriously. This study investigates the different implications on importing and exporting countries of international trade under the COVID-19 pandemic. The data in this article include the top five net exporters and top five net importers in 2019 ranked by their account balance. After the comparison, there are four findings have been found. First, the epidemic has had a severe negative impact on international trade for both importing and exporting countries. Second, the impacts of the pandemic on exporting countries are relatively deeper and consist longer than the importing countries. Third, unlike international trade on a global scale, intra-Asian trade has fewer negative impacts on exporting countries. Fourth, the negative impact of the COVID-19 burden on exporters is more pronounced in developing country exports rather than developed countries

Keywords: international trade, COVID-19, importing country, exporting country.

1. Introduction

As the COVID-19 pandemic spread around the world, many countries have published serval bans on people and trade to provide a further spread of the epidemic. Inside each country, lockdown rules are widely promoted. Social distance is mandatory and during some special periods, people are also forced to stay at home and work remotely. The logistics industry be harmfully damaged as a result which will break the supply chain system. Many businesses and factories are hard to survive under the lockdown policy, a rapid rise in the unemployment rate and fall in GDP is commonly seen in many countries after the first wave of the pandemic.

Although the epidemic has had a severe negative impact on international trade for both importing and exporting countries, the ways are affected for importing and exporting countries are different. For importing countries, reducing people’s earnings and the number of shopping offline will lead to the decline of aggregate demand. For exporting counties, the lower production scale and capacity is the main reason for decreasing exports, especially for developing countries where the technical support for remote working is relatively weaker than in developed countries. Thus, the negative impact of the COVID-19 burden on exporters is more pronounced in developing country exports rather than developed countries.

Internationally, the pandemic went from a transmissible disease to a trigger that changed the pattern of world trade, the equilibrium between economics has been destroyed harmfully. Many countries haven’t fully recovered to pre-pandemic international trade levels yet by 2021. However,

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some countries have imposed trade restrictions and input within domestic suppliers only. For instance, since the outbreak of the COVID-19 pandemic, there are over 20 countries have implemented export bans for agriculture products. This policy shows no positive effects on the recovery of the global supply chain system and may once again break the balance of the agricultural industry. Therefore, the banned policy on some industries could lead to an extra effect for the specific importers and exporters. Moreover, unlike international trade on a global scale, intra-Asian trade has fewer negative impacts on exporting countries. The result could be because some Asian countries allow the machinery industry to continue to operate while factory closure orders take effect, or that Asian manufacturers can mitigate negative supply chain shocks by adjusting existing stocks of finished goods.

To find the different international trade implications on importing and exporting countries under the COVID-19 pandemic, this study analyzes the data of the top five net exporters and the top five net importers ranked by their account balance, and the intracontinental trade is also included. Meanwhile, there are eight developed countries and eight developing countries were selected to make a comparison. This study aims to help the policymakers to make fitful trade policies and to recover the economy efficiently under the pandemic.

2. Related Works

The equilibrium between economics has been destroyed harmfully due to the unprecedented pandemic. Based on the evidence from the first shock of COVID-19, it claims that COVID-19 has a significant negative impact on international trade for both importing and exporting countries [1].

COVID-19 pandemic has changed the global trade networks. For most of the economics, there will be an extreme decline for the trade and connectivity among countries, thus a new trade pattern of the network will be built [2]. The resilience of international trade also influences how long it will take to repair the economy inside the country. When factors such as income level, economic globalization, and so on work together will make either a positive or negative influence on resilience [3]. Although the pandemic had a huge influence on most industries, textile, footwear, and plastics industries were particularly significant. Moreover, the demands of imports from developing countries fluctuated more than the developed countries before and after the pandemic [4]. Using the standard global computable general equilibrium model, the potential loss could be simulated that the GDP of developing counties will decrease more than the standard and industrial countries will decrease less compared to the standard simulation [5]. The empirical findings indicate that when an exporting country trades with an importing country that is more affected by COVID-19 will lead to a decrease for the final goods. Both output effect and supply chain effect make a huge influence on international trade [6]. Furthermore, non-essential goods take the majority percentage of the world production and trade. Demand for non-essential goods will further decrease which will cause lower prices [7]. And many countries often import a particular product within one country only [8]. Therefore, these countries are highly dependent on the related exporting countries and more easily to be influenced by price fluctuation.

This study will focus on the different economic implications for importing countries and exporting countries under the COVID-19 pandemic by comparing the ratio changes of net export and net import of GDP. Meanwhile, it will also figure out the probable potential influence of different variables on the exporters such as the degree of national development and the internal trade of each continent.

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3. Methods

3.1. Theoretical Background

The importing countries and exporting countries play different roles in international trade. The importers are demanders who have the demand need, and the exporters are suppliers who control the supply chain and provide supplies. The main impact of the COVID-19 pandemic affecting the import trade is caused by decreasing the demand need and increasing the production cost for the exporters. Thus, the total international flow decreased.

On the one hand, for the exporting countries, some workers especially the logistics workers quit the labor force due to the deaths of COVID-19 and the remote policy which creates a shortage in the labor market. Meanwhile, many small and mediumsized enterprises and processing plants had to leave the supply market because of the negative net profit under the lockdown policy and trade bans. The scale and capacity of supplies are rapidly decreased which led to a supply crunch in the exporting countries and cause a reduction in net export. On the other hand, for the importing countries, the pandemic causes the job-finding rate to go down and the job separation rate goes up, thus the unemployment rate shows a rapidly increasing trend. Some people lose financial resources, and a huge percent of workers earn lower earnings than before, the domestic power of consumption is reduced. Also, people reduce the times of shopping in the local supermarket to avoid infection. Thus, the total demand of the importing counties decreases, and the net import decrease as a result.

3.2. Experiment Framework

The experiment chose the data from the top five net exporters and top five net importers in 2019. The net exporters are Germany, Japan, China, Russia, and South Korea. The net importers are the United States, United Kingdom, Brazil, Canada, and India. Figure 1 shows their account balance in 2019, and the account balance here is equal to the external balance plus net earnings and net transfer payments. It shows that in 2019, Germany is the biggest exporting country that has the largest positive account balance, and the United States is the first top importer who has nearly five hundred billion dollars debt for the current account.

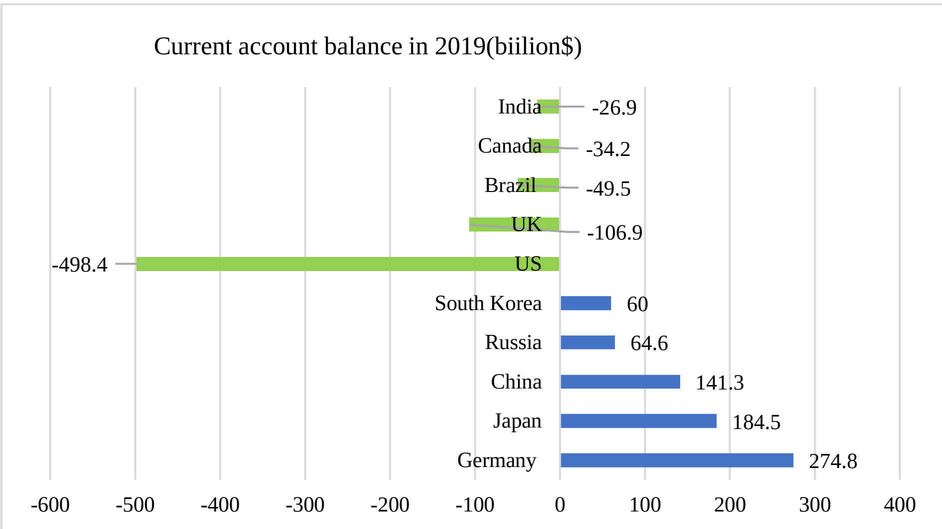

Figure 1: Current account balance in 2019 in billion U.S. dollars. (Source: World Bank).

In Figure 2 and Figure 3, the graphs show the annual growth rate of exports and imports of goods and services in 2020 respectively. The growth rate for export and import declined sharply during

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2020, for example, the import demand in the UK was almost dropped 20% and Japan decreased by nearly 12% export supply. Thus, the COVID-19 pandemic brought a serious economic shock for both importing and exporting countries. Although the pandemic affects the economy seriously, the degree is slightly different between the net exporters and net importers.

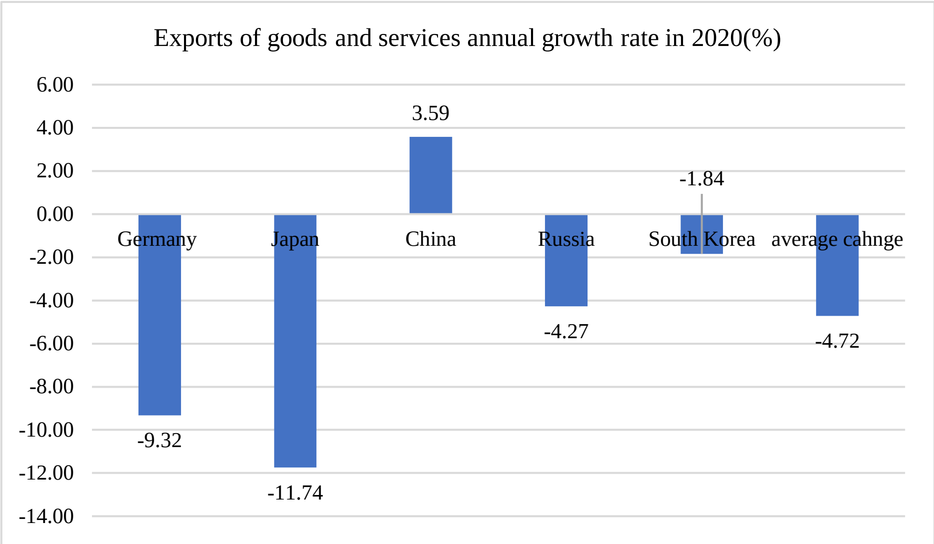

Figure 2: The exports of goods and services annual growth rate in 2020. (Source: World Bank)

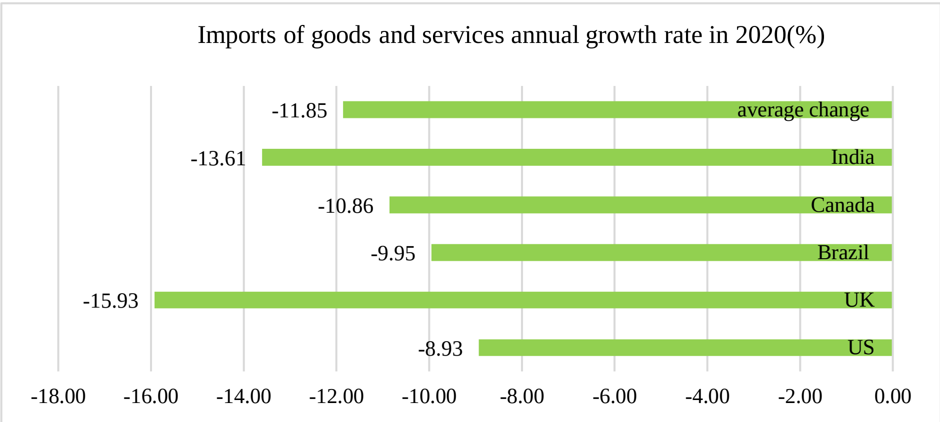

Figure 3: The imports of goods and services annual growth rate in 2020. (Source: World Bank).

In Figure 4, it compares the change in the ratio of exports/imports of goods and services to GDP in 2020. It could be found that, for the net exporters, the average ratio change is around -3.86%, which is 2.27% lower than the net importers. Among the ten countries, there are four of them that the ratio of exports/imports of goods and services to GDP in 2020 has dropped more than three percent, three are exporters. In the year 2020, most of the countries own a lower GDP than the previous years. Under this condition, the international exporting trade for the net exporters contributed less to the GDP recovery due to the smaller export to GDP ratios. Thus, the net exporting countries will need a longer period to back to the original level than the net importers since the demand gap is relatively smaller than the supply gap.

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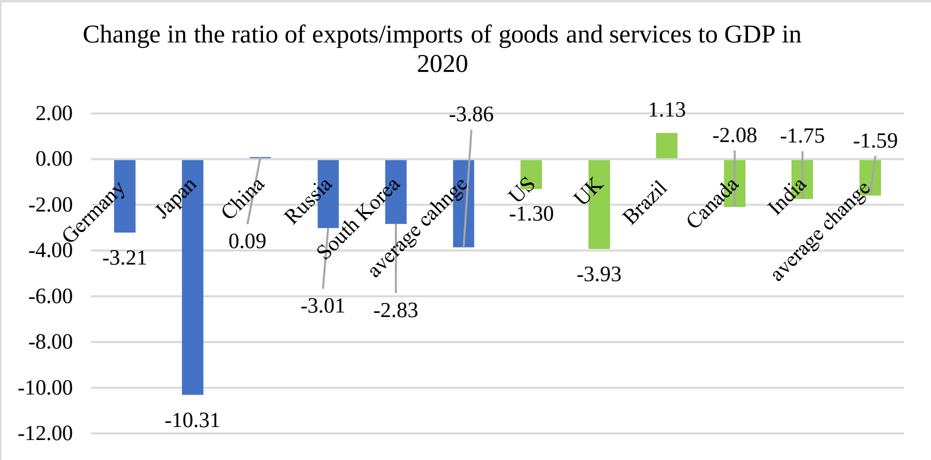

Figure 4: Change in the ratio of exports/imports of goods and services to GDP in 2020. (Source: World Bank).

In addition to the impact of the pandemic on exporting countries and importing counties, the pandemic implications on trade also vary within the continental. In Table I, the experiment compared the exports of goods and services in 2020 relative to 2019 during the first eight months within each continent. The eight months are separated into two periods. Period one contains January to April, which is the early stage of the pandemic, and period two contains May to August when the COVID-19 pandemic has spread across the world. For period one, export trade in intra-Asia maintains 97% trade amount of 2019 which is the highest among the four continents and almost 20% higher than the African continent. For period two, the Asian continent keeps the top first rank and the American continent owns the lowest percentage. During both periods, intra-Asia has a higher proportion than the other three continents, and it is the only continent that lost less than ten percent of export trade after the first eight months in 2020. For the first eight months in the year 2020, the African continent and American continent have the same relative exports of goods and services compared with 2019 which is 79%. Therefore, it could be inferred that COVID-19 led to a less negative effect on the exporting counties in the intra-Asia area.

Table 1: Intracontiental Export Trade.

Exports in 2020 relative to exports in 2019 within eight months	**Intracontinental Trade**			
	Africa	***Asia***	***American***	***Pacific***
1-4	0.77	0.97	0.87	0.87
5-8	0.8	0.9	0.73	0.9
In total	0.79	0.93	0.79	0.89

As the pandemic has already changed the way people live and work, working remotely must be considered and applied for production. However, it is highly related to the scientific and technological levels. Most of the developed countries could deal with it easily or have been already produced remotely. For many developing countries, typically for the export products that require a lot of labor, if workers must work remotely, it is going to have a huge impact on production if they cannot provide adequate technical support. Because of that, the negative impact of the COVID-19 burden on exporters is more pronounced in developing countries rather than developed countries.

Table II compared the average export annual growth rate in 2020 based on the chosen countries. The experiment data includes serval developed countries and developing countries from each

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continent. There are eight developed countries be selected: Australia, America, Sweden, Canada, Germany, Japan, Singapore, and the United Kingdom. And eight developing countries are selected as well, which are Brazil, Nigeria, Kenya, Malaysia, Mexico, South Africa, Russia, and Thailand. The average export annual growth rate in 2020 is -8.40% and -11.19% for developed countries and developing countries respectively. Therefore, the developing countries have a lower export annual growth rate than the developed countries, especially for the developing countries on the African continent. The export annual growth rate for the United Kingdom is the lowest among developed countries which fall nearly 14% compared with the year 2019. It may also relate to the UK's Brexit policy. The UK's Brexit policy sharply decline the exports of goods and services for the United Kingdom to other European Union (EU) member states, and the March pandemic also caused a further drop in the export trade for the UK. The double whammy of policy and the pandemic has caused the UK's import and export trade to plummet.

Table 2: The exports of goods and services annual growth rate of developed countries and developing countries.

Developed countries		**Developing countries**	
Developed country	Export annual Growth rate (%)	Developing countries	Export annual Growth rate (%)
Australia	-1.74	Brazil	-1.76
America	-13.56	Nigeria	-27.0
Sweden	-4.60	Kenya	-8.20
Canada	-8.69	Malaysia	-8.90
Germany	-9.32	Mexico	-7.30
Japan	-11.74	South Africa	-11.95
Singapore	-4.32	Russia	-4.27
UK	-13.94	Thailand	-19.43
Average	-8.40	Average	-11.19

4. Discussion

Based on the previous data, it could get the first finding that the COVID-19 pandemic led to an economic shock on both importing countries and exporting countries and harmed international trade flow, which is similar to that proposed by K. Hayakawa's and H. Mukunoki's [1].

Although many importing countries also own a large negative import annual growth rate in 2020, the change in net imports of goods and services as a share of GDP in importing countries is much lower than the change in net export as a share of GDP in exporting countries. In another word, the international trade for most exporters is suffered deeper than the importers. The decline of the overall economy has less impact on importers, and they will take a shorter period to recover the trade gap than the exporters when the economy rebounds. That is the second finding for this study: the impacts of the pandemic on exporting countries are relatively deeper and consist longer than the importing countries.

Based on Table I, the third finding could be found that the intra-Asia export trade is less affected by the pandemic than the other three continents. This result may be due to the fact that some Asian countries allow the machinery industry to continue operations in the event that a plant closure order takes effect, or because Asian manufacturing companies can mitigate negative supply chain shocks by adjusting existing finished goods inventories [6].

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Because of the relatively cheaper labor, developing countries are the major exporters of the necessary products. The feature of producing these goods is that it is highly dependent on a larger number of laborers, the remote mode of production will have a great impact on the final export in developing countries. Thus, the last finding could be found: the negative impact of the COVID-19 burden on exporters is more pronounced in developing country exports rather than developed countries.

For example, the exports of goods and services of Nigeria in 2020 had dropped around 27% than the year 2019. Nigeria's limited medical capacity and the inability of many patients to receive treatment, coupled with the relative lack of technological development, caused the local manufacturing industry to shrink for almost four months [9]. In addition, oil is the main export commodity for Nigeria. The drop in international oil prices and demand during the pandemic led to a serious impact on local exports and the country's economy. But for the UK, which officially left the EU on January 3, 2020, its export decline was about 10% less than Nigeria, despite the impact of the pandemic.

5. Conclusion

This study analyzes the impact of the pandemic on the economics of importing countries and exporting countries by comparing the ratio of import and export to GDP separately, which is a new attempt for the articles in this area. Meanwhile, it figured out the probable potential influence of different variables on the exporting countries such as the development degree of remotely technology, degree of national development, and the internal trade of each continent. However, some countries have imposed trade restrictions and trade bans to avoid the export outflow to in-crease the domestic supply and gain a faster recovery for their economies. These policies could exacerbate the imbalance between the supply and demand side, which will instead lead to a longer period to restore stability in international trade for the exporting countries. This paper could help policymakers have a comprehensive understanding of the impact of the pandemic on international trade and understand more fully the differences between the import and export trade impacts and help them to better formulate economic recovery policies.

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