

Impacts of Covid-19 on Developing Countries: A Comparative Study on Foreign Trade Between China and Egypt

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Abstract

Purpose: Foreign trade faces occasionally many changes and challenges. The latest of these challenges is the Covid-19 pandemic, which has negatively affected the flow of goods. Covid-19's led to a slowdown in global trade affecting imports and exports of commodities. Foreign trade is mainly tied to the maritime transport as approximately 80% of goods are seaborne. Besides, China is considered as home to seven of the world's 10 busiest ports. Moreover, Egypt is a major player in international trade due to its position and location as it connects the three continents Africa, Europe, and Asia through Suez-canal, Red and Mediterranean Sea. Thus, the purpose of this research is to study the impact of Covid-19 on foreign trade goods statistics through conducting a comparative study of the effects on Egypt and China.

Design/methodology/approach: The study combined the qualitative and quantitative approaches. The quantitative data were collected using a survey whereas the qualitative aspects were done through conducting interviews and analyzing the literature.

Findings: This study has found that effect of Covid-19 on cargo traffic in the Chinese and Egyptian markets has led to a significant decline in imports and exports growth rate.

Research limitations: This study has found some limitations related to studying the effect of Covid-19 on inland transport of cargo in both countries.

Originality: The value of this cross-national research is to highlight the impact of the Covid-19 pandemic on the imported and exported goods using a comparative approach between China and Egypt.

Keywords: Foreign trade, Covid-19, Maritime, Air, Egypt, China

Category: Applied Paper

1. Introduction

The foreign trade goes through different stages, some of which are characterized by expansion and increase of growth rates or other stages that may have some of contractions and slowdowns in growth rates. An expected economic effect of Covid-19 on the international sector for logistics is 6.1% reduction in the logistics industry's gross profit. The global freight forwarding industry is predicted to decline at the worst in 2020 by 7.5% relative to 2019 (Mazareanu, 2020) influence an economy's response to these shocks of uncertainty (Bloom, 2014), and when slow growth becomes a cause of economic recession, will negatively affects unemployment rates, high countries' debt, and low investments due to investor fear of weakness long-term investment options (Joseph, 2020). Since, the first cases of infection in China, specifically in Wuhan in late December 2019, where the virus has spread very quickly to the rest of the world. World Health Organization (WHO) has launched the term global epidemic on the virus as a result of its spread in most countries of the world in a relatively short time. Thus, many countries have to allocate billions of dollars to face this epidemic. In addition to, other consequences have appeared like some restrictions that have affected the movement of goods on global and domestic sides. This have appeared in global lockdowns and curfews, like closing international sea-ports, air ports, and setting restrictions on road transport as well (WHO, 2020).

Dealing with epidemics require a rapid response from countries to control and minimize risks, which is reflected in the supply chains, logistics and freight movement, whose primary goal is to respond to the growing and unexpected market demands. However, because of the global lockdowns, logistics and supply chain entities are at the forefront of sectors that have been negatively affected by the current crisis. Thus, freight movement (exported and/or imported goods) was under a tremendous pressure, as well as health and medical supplies used to cope with the mentioned crisis (Petrillo, 2020). The mentioned drawbacks have also affected the maritime transport industry negatively and led to demobilization and shortage or prevention of freight movement. These restrictions were set by governments to avoid the spread of the epidemic via seaports. In addition, to a ban has also been imposed by different countries on the entry of containers and vessels that are being operated between different international ports, especially those that are transported from/to China. Moreover, the advent of Covid-19 has brought additional restrictions to shipping operations and management, such as port security protocols. As a results, vessels were exposed to extra waiting time for berthing operations, inland seaport container shipping operations, inland logistics operations, etc., (Yazir *et al.*, 2020).

Therefore, this research paper will discuss the impact of Covid-19 pandemic on many sectors within the supply chain. This study will precisely focus on the foreign trade (imports and exports), through a comparative study between China and Egypt. This is because the said epidemic has led to a sharp decrease in the movement of transport sector (maritime and air).

This paper has been prorated in a total of five sections. Section 1 of the paper is the introductory phase, which shed the lights on effect of the pandemic on foreign trade in China and Egypt. Section 2 literature review on impacts of Covid-19 globally on freight movement, economics, and imports and exports. Section 3 is explaining the methodology of data collection using mixed approaches and showing the analysis techniques. Section 4 the discussion and findings are presented. Finally, the study concludes with a summary of further research work.

2. Literature Review

The epidemic has impacted almost every aspect of economic life and individuals worldwide since early 2020. As a result of the Covid-19 outbreak, significant supply chains were hampered in logistics and transportation industries, albeit differently across the sea, air and freight sectors (Mazareanu, 2020).

For the transportation sector, a distinction must be made between transportation services for individuals and cargo transportation services. As the first relates to supply chains and the movement of goods that take place in the sea, land and airports, as the movement of cargo transport has been affected significantly, and this is according to a study conducted by Dubai Future Corporation. Also, the transportation sector has affected as a result of the damage to international intraregional trade and due to the controls and procedures imposed at the border, which lead to a decrease in trade between countries and push some countries to resort to their local markets to meet their needs in the short term.

Whereas, the other transport services related to transporting people, especially air transport, the air transport industry was affected by many losses that the transport sector did not witness, due to the spread of this epidemic and the controls imposed by the governments of countries to deal with this global crisis, which negatively affected the transport sector (Berti, 2020).

In industrial production, the distribution of dips is diversified across countries and changes from positive values to losses of more than 50%. Many countries around the world have an economic effect when measuring the data from April 2020 to March 2019. Most of countries have witnessed a fall in manufacturing productivity of more than 20% (Detrixhe, 2020). In addition to the United Nations Conference on Trade and Development (2020) has reported that, the global maritime transport will decrease by 4.1% in 2020 due to the pandemic waves. Moreover, the pandemic has strengthened the usage of digitization and eliminating paperwork in the shipping industry, including in ports, reports, bill of lading, etc. Furthermore, this report has highlighted that iron-ore transportation has fallen for the first time in 20 years by 1.5% (UNCTD, 2021).

According to a recent report by the African Development Bank, African countries were predicted to an economic recession by 1.7% in 2020. However, Covid-19 has led to an economic recession by 5.6% (Cantore *et al.*, 2020). As well as, Egypt as an African country, has faced many economic issues like high inflation rates, and high debt-to GDP ratios (The World Bank, 2020).

The rapid spread of coronavirus has had a major effect on the global shipping industry, with reduced demand for Chinese goods impacting all the freight vessels to oil tankers (Berti, 2020). In China, Covid-19 has damaged the world economy and foreign investment. Although the number of Chinese and global coronavirus disease increased slowly during the first quarter of 2020, new export orders for goods and services have declined by 50% during this period (WTO, 2020). Chinese exports received the first blow, dropping by 17% in January and February 2020 opposed to the previous year, and was still depressed throughout the first half of 2020 as global infections spread (Zhuang *et al.*, 2020).

According to Zhang *et al.*, (2020), international air transport has contributed in the spread of Covid-19 globally quickly. For this reason, China has set some flight restrictions (ban) since late March to control the imported case risk, which has seen to be quite effective. Moreover, flights restrictions and lockdowns have helped to slow-down the virus spread by 3-5 days in China. Furthermore, this study has found that air transport is associated with the pandemic spread than any other mode.

Zhang *et al.*, (2021) have conducted a survey with transport experts, to investigate the impact of Covid-19 on the logistics and transport sector related to China and other countries. It was found that air transport has helped in spreading the virus quickly to Europe and USA. Moreover, experts think that the intervention of governments to transport and logistics sector will increase after Covid-19, in addition to significant changes may occur in the near future like the increase of freight rate and safety requirements to prepare for future health threats. As shown in Table 1, a review of previous studies related to the main determinants of the pandemic spread, impact on shipping freight and supply chain have been clarified.

Table 1: Summary of literature review

#	Paper focus	Title	Description	Author(s)
1.	Spread of coronavirus	Coronavirus: impact on the transportation and logistics industry	This study focused on the main determinants of the spread of coronavirus	Mazareanu, (2020)
2.	Impact of coronavirus on the transport sector	The impact of Covid-19 on global shipping	Impact of coronavirus on shipping: investment in freight technologies	Berti, (2020)
3.	Effect of corona Virus on industrial sector	The economic impact of coronavirus in five charts	Impact of Corona-virus in different sectors in supply chain	Detrixhe, (2020)
4.	Effect of the virus on supply chain	Impact of the coronavirus on global supply chain	The paper mentioned the entities in supply chain that impressed by this virus	Zhuang <i>et al.</i> , (2020)
5.	The impact of Covid-19 on the global air transport	Measuring imported case risk of covid-19 from inbound international flights :a case study on china	The paper studied the role of international air transport in spreading Covid-19	Zhang <i>et al.</i> , (2020)
6.	The impact of Covid-19 on the transport and logistics service	Covid-19 and transport: findings from a world-wide expert survey	The paper focused on the industry expert point of view on the consequences on the transport industry after Covid-19	Zhang <i>et al.</i> , (2021)

It was conducted throughout the literature that the said pandemic has many negative impacts on foreign trade, transport and logistics industry specially cargo movement by maritime and air transport. Thus, this study discusses the effect of the coronavirus on the exports and imports of countries, as Egypt was chosen as one of the largest developing African countries that depend most of its imports on Chinese products and vice versa, as China was chosen as one of the largest Asian countries exporting many of its products, which the economy of most countries depends on

Chinese product imports.

3. Methodology

This research paper is classified as cross-national research, and so the study applied the comparative approach as a research methodology to conduct a comparison between two different countries. To conduct this comparison, the researchers selected two developing countries; one of which is an importing country (Egypt) while (China) is an exporting country, and they are geographically located in different locations (two different continents) and they have different cultures as well.

The study applied mixed methods approach of both qualitative and quantitative data. The quantitative data were used to analyze and compare the Chinese and Egyptian responses to the Covid-19 outbreak and its impacts on the foreign trade using the cross-sectional survey developed by the International Transport Services Division of the Chamber of Commerce. The survey has included questions about the impacts of Covid-19 on the workflow and the operational challenges and problems that have faced the companies. It also studied the effect of Covid-19 on the transport of goods by sea and air. In addition to investigating the products whose import and export were affected by the spread of the virus and the products that were not affected. Regarding China, the survey has already been conducted and the findings were published by the International Transport Services Division of the Chamber of Commerce. As for Egypt, the researchers used the same survey and published it online to facilitate data collection from selected respondents from the Egyptian import and export sector and the results were largely similar.

On the other hand, the qualitative aspects have adopted to understand the impacts of the Covid-19 on the transportation sector in Egypt and China to analyze and investigate the similarities and differences in the Egyptian and Chinese handling of the Covid-19 pandemic and its consequences. Regarding Egypt, the qualitative data were collected through conducted separate semi-structured interviews with the academic and industry experts in maritime, air transportation and logistics sectors via Zoom meetings and Telephones. The reasons behind using this method were due to insufficient published and documented literature about Egypt, as well as the circumstances of the epidemic that impeded the conduct of face-to-face interviews. Whereas the qualitative data for China were gathered from rich and extensive literature such as research journal articles and conference papers, in addition to the reports and documents from the local and international bodies like WTO, WHO, World Bank, UNIDO, UNCTAD.

4. Findings and Discussion

The epidemic had many negative effects that reaped the fruits of the countries in many crises in importing and exporting goods between countries and the weakness of the navigational fleet, the decline in growth rates, the impact on the local product, the weak investments, the closure of many companies and factories, the lack of food and medical stocks to many countries. With the recent emergence of new and more contagious strains of the virus, the situation has been exacerbated and become more complicated (Sobieralski, 2020). This section discusses the impacts of the epidemic on foreign trade of both Egypt and China and compares their responses and dealings with the epidemic.

4.1. China's response to the Covid-19

Although China was the first place to be struck by Covid-19, it was in good standing to tackle the virus. The quick response of China has been the crucial and pivotal factor. The Chinese moved

very swiftly to stop transmission and the people were very alert for what can happen in the event of an outbreak of the coronavirus. Since the earliest cases of the disease appeared, the Chinese government has begun to enact a set of strict and comprehensive response measures to combat the spread of Covid-19 and has achieved very positive results. Within few weeks, the country had managed to control the spread of the virus. The compliance and commitment were very high compared to other countries. Compared to other countries that have delayed their response and thus lost control of the virus, although they have much more time to prepare for its arrival. However, this does not firmly mean that China's response to the epidemic is generalizable, because the measures applied in one country may not be simply replicated by another (Burki, 2020; Liu *et al.*, 2020).

4.2. China maritime trade

The reason the coronavirus has had particularly horrific impacts on the shipping sector is its relationship with China. The boom in the shipping industry has always been closely associated with China, a major trading partner for many countries and a pioneer in shipbuilding. The pandemic has affected the demand for goods from China and consequently affected the Chinese maritime industry due to the closure ensures ships are not permitted to reach or depart Chinese ports. Although China was the first country to be hit by the Covid-19 virus, it was able to be the first with a recovering economy and the population re-emerge (Berti, 2020).

According to the World Shipping Council, China includes seven of the world's top ten container ports. Despite being the first country to be hit by the epidemic, the initial impacts on Chinese port connectivity levels were largely moderate by the continuation of sea shipments during the first quarter of 2020. But the impacts doubled in volume during the second quarter due to the slump in demand of consuming and importing countries with growing closures and other restrictions on economic activities and movement of goods and people. Compared to Europe and the US, they have witnessed significant negative trends in liner shipping connectivity levels. In which, the forced lockdowns in major economies had major impacts on all continental ports in Europe. Ports in Latin America showed signs of strength as their shipping connectivity levels remained stable, and in some cases increased during the early days of the epidemic. African ports were also performed comparatively well, while the picture was mixed in North America (González, 2020; UNCTAD, 2020).

4.3. China air freight

It was estimated that the number of outbound Chinese travel in different countries would increase during the holidays of Chinese New Year. However, the capacity of airlines between China and other regions of the world in March and April witnessed drastic declines compared to the same period in 2019 due to travel restrictions imposed by the Chinese government in early February after the spread of the coronavirus. As the virus spread rapidly across the globe, the trend of global traffic has been steadily declining as the crisis continues. Thus, the world's air and travel industry has been decimated by Covid-19. Except for China, which entered and emerged from Covid-19 first and succeeded to make a remarkable recovery. In which some initial signs of the air traffic recovery began to emerge in May, supported by strong demand from vacationers and travelers with spawning a new post-lockdown trend called "revenge travel". Across China, aircraft and hotels were relatively full, and much-needed travel revenues are flowing again. Hence, China's domestic aviation industry and air freight became very close to 2019 levels and entered positive

levels year-on-year before the end of 2020 (Sadubin, 2020; Wong, 2020).

4.4. Chinese imports and exports

Import and export are considered an essential part of China's national economy, where, imports and exports account for almost 35% of the national economy, which is an organic part of Chinese economic growth (Su *et al.*, 2020). During 2019, the country's exports grew year-on-year by 18.1% to \$281.93 billion in December. As for 2020, the exports gained 3.6% to \$2.59 trillion, supported mainly by demand for electronics products for working from home and medical supplies. Besides, when the manufacturing industry was stalled globally, the Chinese manufacturing industry figured out, which enabled overseas orders to flow back to China after the third quarter and enabled foreign trade in China to achieve good outcomes in 2020. So, the annual growth in Chinese exports was much better than initially expected (Trading-Economics, 2020). Meanwhile, the imports to China increased about 6.5% to a high record of \$203.75 billion in December 2020, propped by improving domestic demand and higher commodity prices. However, considering the whole 2020, inbound shipments edged down by 1.1% to \$2.06 trillion. This growth in trade was due to the effective prevention and containment of the pandemic in China, which made the country the only silver lining in global supply chains torn apart by viruses, a trend that will not disappear in 2021. Thus, China's exports are proving to be a strength of its economy and the country has become the only major economy in the world to achieve positive growth in commodity trade in 2020 (Trading-Economics, 2020).

4.5. Coronavirus pandemic in Egypt

The Egyptian government has set several transportation restrictions to avoid the spread of the pandemic. These restrictions like curfew and lockdown have put some drawbacks and restrictions on the transportation and logistics sector in Egypt, which appeared in a late delivery especially for perishables products like fruits, vegetables, meat, etc., moreover, the lockdown restrictions have led to the slowdown in agriculture services, marketing, and accumulation of production. Blockage of transportation has resulted in an increased rate of perishables loss by 35% during the curfew period (from March to June 2020) because of production decline, and lower incentives to produce the affected commodities. To deal minimize the mentioned loss, the government has exempted perishable commodities from moving restrictions. However, air transport suspension has slowdown the Egyptian perishables commodities supply chains and as well as exports (UNIDO, 2020).

4.6. Egypt maritime trade

Egypt has 15 ports along the Mediterranean Sea and 33 on the Red Sea that signifies Egypt as a major player in international trade. Moreover, Egypt is a crossroads to Asia, Europe, Gulf area, and Africa. In addition, the Suez Canal is considered as a key source of foreign currency with about 2% to FY 2018/19 GDP (about USD 5.8 billion). Currently, 13% of vessels and 20% of container vessels passes through the Suez Canal, since it is the shortest shipping route between Asia and Europe. Besides, the American Chamber of Commerce has reported that more than 18,400 vessels carrying 1.2 billion tons have passed through the Suez Canal during 2018/19 (AmCham-Egypt, 2020).

Egypt's maritime shipping has taken a sudden demand blows from the beginning of March because of the Covid-19 pandemic. According to the American Chamber of commerce, 90% of the Egyptian international trade is performed through its 48 ports has mainly been impacted by

imported cargo reduction. Ports have been closed due to quarantine in order to ensure employees safety. The only working ports during March lock-down were Alexandria port for only accepting vessels to discharge cargo, and the port of Damietta is restricted to container vessels activities only. Moreover, the spreading of Covid-19 has led to the decline in imports and exports especially for perishable goods that had to wait 14 days before entering the country. Furthermore, the added restrictions of quarantine periods have led to further decline in demand and transportation delays (AmCham-Egypt, 2020).

The American Chamber of Commerce has reported that, the number of container vessels passing through the Suez Canal has fallen by 7.3%, number of passenger and cargo vessels has fallen by 22.5% during 2020.

4.7. Egypt air freight

Based on the International Air Transport Association (IATA), air transport has suffered the biggest decline in passengers and cargo transportation during February 2020. As well as the Egyptian air transportation has suffered from the consequences of the pandemic. This has appeared in the freight movement of exported and imported goods, as international freight movements have fell by 49% (during March 2020). Besides, the hardest drops in suspension of passenger's transportation. However, air freight was mainly engaged in transporting medical supplies, factory spare parts, raw materials and other essential imports (AmCham-Egypt, 2020).

4.8. Egyptian imports and exports

The country's imports in US dollars falls during February till May by \$4200 billion. For all of 2020, exports gained \$2300 trillion during September 2020, Imports increased to reach \$5500 billion in June 2020 (Trading-Economics, 2020).

As Figure 1 and 2 indicate, Egypt's exports and imports have fluctuated during the second quarter of 2020. Moreover, exports have suffered from a sudden incline as well as imports till May 2020. At the beginning of June 2020, the projection of Egyptian imports increased by \$5600 million. Besides, exports have slightly increased. On the other hand, the Chinese imports have gradually increased at the end of the second quarter till the end of 2020. The Chinese exports have quickly recovered by the end of February 2020 till the end of 2020. Meanwhile, when the entire world was struggling to control Covid-19, China has successfully managed to control the pandemic rapidly and effectively. Due to the early isolation and the compliance of people, the country succeeded to recover and returned to normal life and achieved "pre-coronavirus" volumes. China followed two strategies simultaneously. First, the manufacturers were encouraged to expand their capacity or switch to producing other items that were in dire need. Second, the country curbed any arbitrary price hike through strict and firm regulations. Hence, Chinese producers were quickly able to meet domestic demand and supply to other countries. Compare that to other countries, when the virus was escalating, people were still gathering and refusing to wear masks (Burki, 2020; Cyranoski, 2020).

These figures illustrate that although the Egyptian imports and exports have slightly recovered, however, the projections are also subjected to fall-down risks. This is because the current situation still remains fragile with high uncertainty rate of the pandemic. To sum up, Table 2 summarizes the aspects that affect the foreign trade between the two countries.

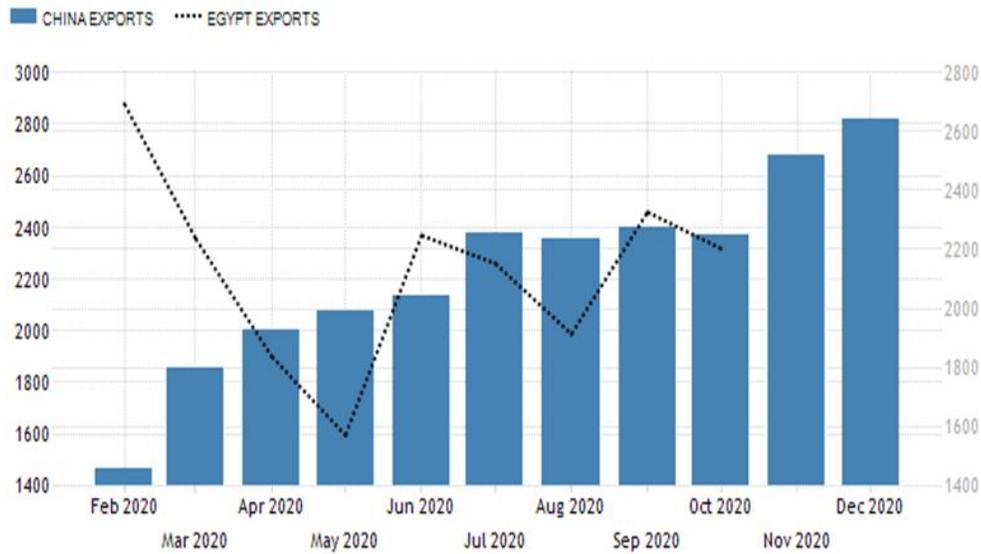


Figure 1: Chinese and Egyptian exports during 2020
Source: Trading-Economics, (2020)

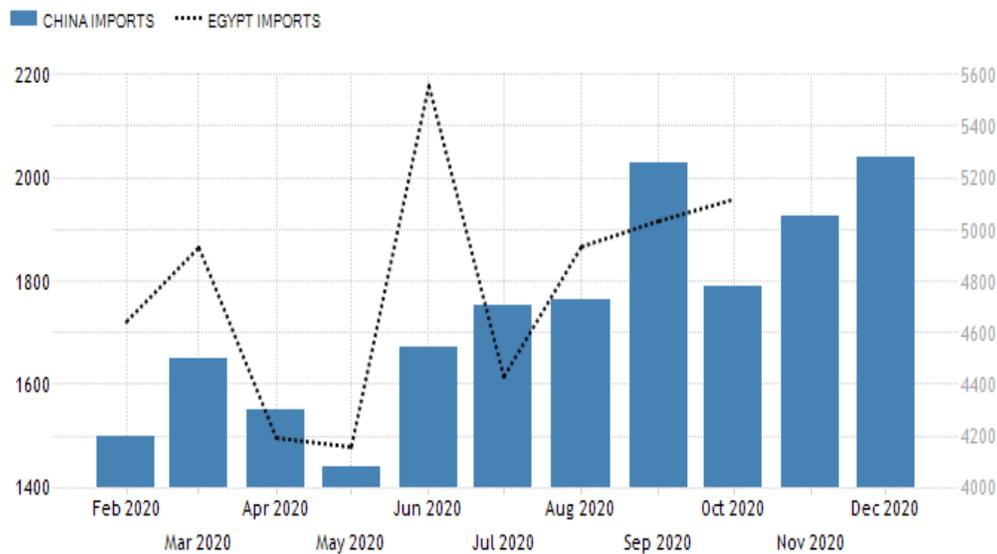


Figure 2: Chinese and Egyptian imports during 2020
Source: Trading-Economics, (2020)

After analyzing the results of the questionnaire and interviews which were conducted with Egyptian industry experts, several effects were identified and summarized as follows:

- The negative effect of the virus on the work processes of companies.
- The negative impact of Covid-19 on air and maritime transportation.
- The pandemic has caused many logistical problems such as increasing the freight rate and economic fluctuation.
- The shortage in commercial commodities flow.

Table 2: Comparison between China and Egypt in different aspects

Aspect	China	Egypt
Response to the Covid-19	Quick response, strict procedures and compliance	Moderate procedures
The impact of the Covid-19 on the country's economy	Quick economy recovery	Remarkable effect
Flights during the pandemic	Reduced flights	Reduced flights
Exports levels	Relatively declined	Declined
Imports levels	Merely effected	Fluctuated

5. Conclusion

This research paper has developed a comparative study between two developing countries, China and Egypt. The said study has shown the differences between the two countries in dealing with crises and emergencies which guarantees during the first periods of crisis outbreaks. Besides, highlighting the governmental role in dealing with crises, and a way for countries to improve living standards in the future, they are the guarantee of a better future for the region. Moreover, this study has shown the effect of the pandemic on the transportation sectors in both countries, which includes air and maritime transport. Furthermore, this research paper has illustrated clearly the fluctuations of the mentioned pandemic on the imported and exported commodities during the lockdown periods till the end of December 2020. Through findings of this study using the mixed approach (qualitative and quantitative approaches), it was shown a decline in exports and imports of goods, which had a negative impact on local producers, commodities, and freight movement as well. Further research would be recommended to investigate the drivers and barriers of the pandemic on-road transportation in developed or developing countries. In addition to investigate freight transportation via land, sea and airports taking into account the safety standards followed globally that eliminates the spread of the pandemic. Moreover, to the extent the use of electronic applications and online communication platforms in the business environment, particularly in financial transactions, to reduce congestion and the risk of infection. Furthermore, to adopt green transportation to protect the environment against any negative impacts. Finally, to investigate the impact of international agreements related to foreign trade, customers, rules of trade in severely affected countries, and quarantine of goods.

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