

# The Future of Mega Project & Supply Chain Industry: **Life after the Pandemic**

▲ By Abdulrahman Alkhathami

## **Abstract**

This paper captures several issues related to the COVID-19 pandemic along with their impact on supply chain activities related to Saudi Arabia from a global perspective, as well as the impact on mega projects. The paper seeks to provide a strategy for the process of risk mitigation as well as influencing the supply chain issues due to the COVID-19 pandemic. The paper provides innovative measures that will ensure the effective development of the supply chain and business continuity through sustainability in executing mega projects in Saudi Arabia.

## **Assessing the impact of COVID-19 on the supply chain**

The overall supply chain, from a global perspective, has been vulnerable as it is not able to effectively make adaptations according to the environmental dynamics leading to issues such as trade competition. COVID-19 was one such environmental dynamic that impacted this vulnerability. The impact of COVID-19 on the global activities of the supply chain, as well as economic and industrial sectors, has resulted in loss of production as well as restrictions to the movement of individuals and goods due to the closure of borders leading to logistics complexity slowing down the overall trade and the activities of

businesses. One of the primary reasons that the supply chain was significantly impacted was China, which was reported to have introduced the first case of the COVID-19 pandemic. China is a vast supplier of products globally that are of high-quality and are offered in both finished and unfinished condition. Within the last decade, China has emerged as one of the largest exporters with about \$2.3 trillion worth of goods that are exported annually. This is about 16% of the total global exports. When combined, the three largest exporters, China, the United States and Germany, provide nearly 30% of the total global exports.

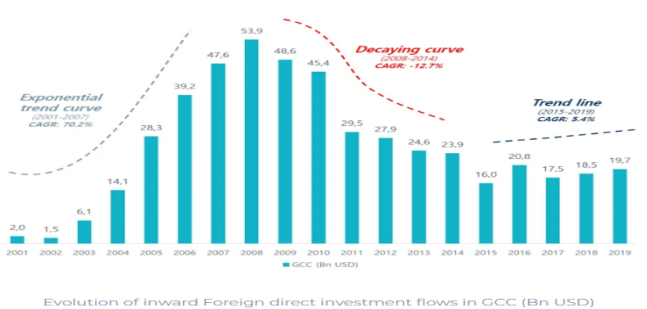
## **Assessing the impact of COVID-19 on the Saudi economy:**

According to Ho (2020), industry, in terms of logistics and tourism within Saudi Arabia, was significantly impacted by the COVID-19 pandemic and effort toward attaining the Kingdom's Vision 2030 goals. These aim to reduce the dependence of the country on oil through diversifying its economy and developing its infrastructure, recreation and tourism. The pandemic also impacted the Kingdom's private sector, which is facing greater risk related to new investments being impacted by increased uncertainty and reduced demand based on investors not being keen to undertake significant investments that allow for development of mega projects.

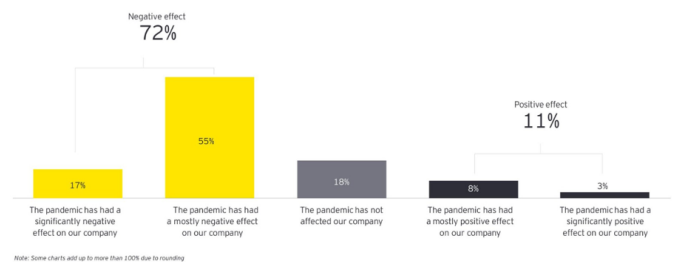
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In Saudi Arabia, there was an emphasis on these impacts leading to the evaluation of its 2020 and 2021 spending plans ensuring the Kingdom avoided a budget deficit through an increasing taxes. Projects, including those under construction, were put on hold during the pandemic, and there was a huge short-fall in financing related to infrastructure as well as other investments.



According to Harapko (2021), Saudi Arabia, similarly to other countries, was impacted by the COVID-19 pandemic in a significant manner. As its trade, finance, health, and educational systems were influenced negatively, there is no surprise that only 2% of the organizations that responded to a survey said that they were prepared for the pandemic. Some 72% of respondents said their business was negatively impacted by the pandemic. Of these, 55% said the pandemic had some negative impact, while 17% said the pandemic had a significant negative impact.



## Assessing the impact of COVID-19 on mega projects:

The overall construction cost in Saudi dropped by 3% due to COVID-19 as there was a significant increase in the overall level of competition within the construction industry due to a lack of resources as well as increased prices for components, such as wood and concrete, and as much as a 3% increase for building materials, which had significantly increased in value. Project contractors faced a decline in project work for the rest of the year due to the pandemic according to Maceda (2020). During the pandemic, a few projects were launched in Gulf Cooperation Council (GCC) countries. Contractors faced a higher level of competition and lack of new projects, which increased the pressure to influence the pricing for new tenders. By the end of 2020 it had been predicted the overall revenue generated from projects would not be comparable to the revenue generated during the fourth quarter of 2019. This was largely due to construction costs having increased by more than 3% due to the diminishing pipeline of work and increasing competition.

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## **Evaluate the mega project and supply chain risk management processes:**

Supply chain risk management is a procedure for identifying, assessing and mitigating the risk that any organization can face in its supply chain. In the context of the present scenario, it is highly important for every organization across different nations to implement some global supply chain risk management strategies, which can help organizations work at a more efficient level by reducing costs and delivering a delightful experience to the customer through enhanced customer service. It is considered highly important to understand different aspects of governance in relation to the mega projects that are closely related to supply chain management in order to determine various types of associated risks (Jangand and et. al., 2017). There are different risks in supply chain management for mega projects because it involves various parties and involves long-duration engagements. For the purpose of evaluating risk in the supply chain management of mega projects in Saudi Arabia, the key aspects that must be considered include the following:

- The vendor selection process must be executed efficiently so that poor vendor selection does not become a root cause of increments in cost and time for mega projects.
- Poor coordination in supply chain management in mega projects contributes toward lower productivity and higher performance issues.

For this purpose, multi-criteria vendor selection should be proposed at the procurement stage to remove all the complexities.

- There is a high requirement to make the entire process of supply chain management and mega Projects to be more flexible so that it can deal with the agility and dynamic attribute of the changing environment in the post-COVID-19 phase rapidly.

## **Supply-chain resilience holds key to mega project recovery:**

The COVID-19 pandemic has disrupted the entire global supply chain and related inventory management to a great extent. Based on a study, it was revealed that the operations associated with supply chain management resilience were affected from moderate to higher levels during the pandemic phase. It can be considered that half of the organizations in Saudi Arabia reported that they have a considerable amount of resilience measures that have contributed toward developing a reasonable resilient supply chain process (Amani Aljami, 2021). All these measures have helped minimize the root cause of different disruptions from mega projects, which have been created by the COVID-19 pandemic. Therefore, it can be considered that resilience is the key component to enhance the efficiency of the operations associated with the supply chain because it helps strengthen the level of inventory is of raw material, work in progress, and finished products. It also contributes toward improvement of manufacturing

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capability to a greater extent; specifically, for mega projects.

### Sustainable and emerging recommendations:

There are different solutions that can be recommended for the purpose of rapid recovery of mega projects in Saudi Arabia. These solutions will help tackle problems that have resulted in the creation of various barriers and hindrances for the success of mega projects. A fully integrated supply chain increases the overall level of flexibility needed for adapting to dynamic changes within the market and its conditions, customer demands, and rival activity. Additionally, it helps minimize prices and eliminate waste. Further improvements can be ensured through collaborations that will help enhance organizations' operations while improving response time. They will allow for increased visibility within the overall process and components to attain their respective goals because of the integration of supply chain functions (YCPS, 2021).

In the present scenario, Saudi Arabia is considered to be highly proactive in addressing the issues that are associated with accelerated digitalization. To overcome various types of challenges that have affected the supply chain and logistics procedures of mega projects in Saudi Arabia, advanced technology deployment, along with digitizing the process of the supply chain, has helped in coping up with the transformation.

For this purpose, the Saudi Arabian government is also providing its constant support so that the nation can transform strategically with the help of economic and social reform by accelerating technological development to attain a higher level of growth. Actions have been taken through the In-Kingdom Total Value Add (iktva) program to stimulate domestic value creation to support a rapidly shifting economic environment and promote future prosperity. Focus has been placed on capturing and enhancing value through collaboration with suppliers, which results in long-term, concrete benefits like excellent employment for Saudi Arabia's expanding population, industry innovation and diversification, and improved global competitiveness (Aramco Iktva, 2022).



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## Conclusion:

It can be concluded from the above discussion that there are different issues, challenges and implications that have significantly affected the supply chain activities in Saudi Arabia in the post-COVID-19 pandemic scenario. With the help of the implementation of different strategies to enhance the performance and adaptability of the supply chain operations in context to make projects in Saudi Arabia, disruptions can be dealt even more effectively. This will help in building a stronger level of supply chain resilience as well as integration and digitization of the supply chain.

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