



Libyan International Medical University Faculty of Business Administration



Department of Project Management
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The Impact of Covid-19 on Construction Projects Management

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Abstract

The coronavirus COVID-19 pandemic is the defining global health crisis of our century, and by far the most difficult challenge we have faced since World War Two. The spread of COVID-19 has had a significant impact on the construction industry, which is sensitive to economic changes. On the bright side, construction management has the potential to drive recovery by employment creation in turn, recovery measures may help the sector is development to sustainability and digitalization. Multiple collaboration and social discussion, along with international labor regulations, are essential to promoting a human-centered recovery of the construction industry from the crisis. All the papers reviewed are in a direct relation to the impact of construction projects' management

Keywords: Constructions, project management, covid-19



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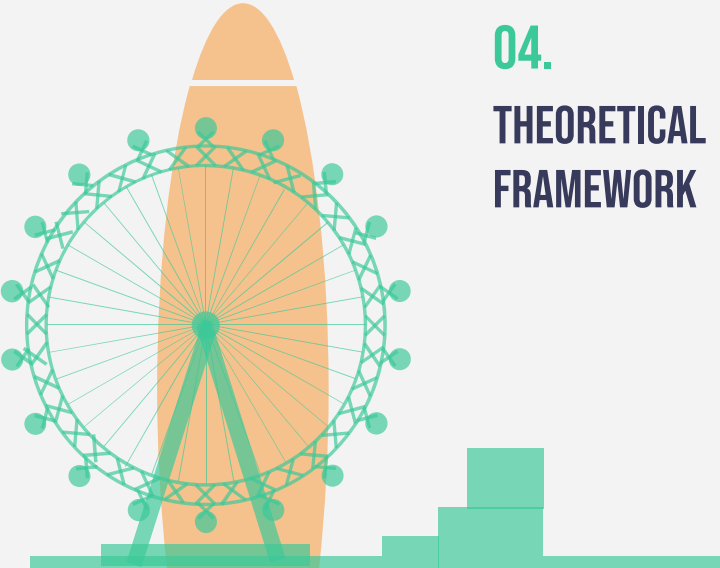
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01.

INTRODUCTION



Introduction

“The Covid-19 crisis brought all sectors, including the construction industry to a halt, leading to the closure of construction sites across the global, At the time of revising this manuscript (30/01/2021), there have been reports of over 102,672,283 covid-19 cases, over 2,217,333 deaths, and over 74,390,967 recovered across the world”. (Ebekozen and Aigbavboa, 2021, pg. 2)

As a society and as an industry, we will not be the same when this is over. We're adapting to working differently quite. (Hamma, 2020)



Introduction

“The construction industry, like many other industries, has been affected by the COVID19 pandemic in many different aspects of its operations. A shortage of specialized labor and key-personnel on construction projects due to the spread of COVID-19 and the dynamic changes of the construction work environment are just some examples of current challenges that the industry is facing”. (Raoufi and Fayek, 2021, pg. 1).

“Many construction organizations are currently struggling to cope with the economic impacts of this pandemic, such as market disruption and reduced investment and government spending on construction because of the uncertainty created by the pandemic”. (Raoufi and Fayek, 2021, pg. 1).

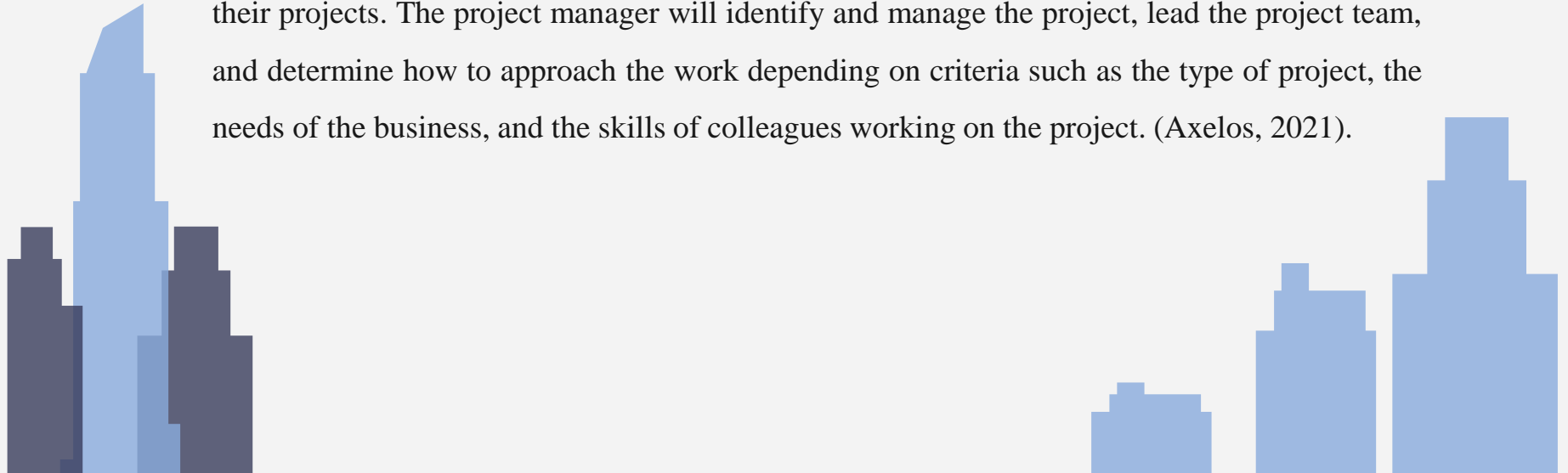
02.

DEFINITIONS



Project management

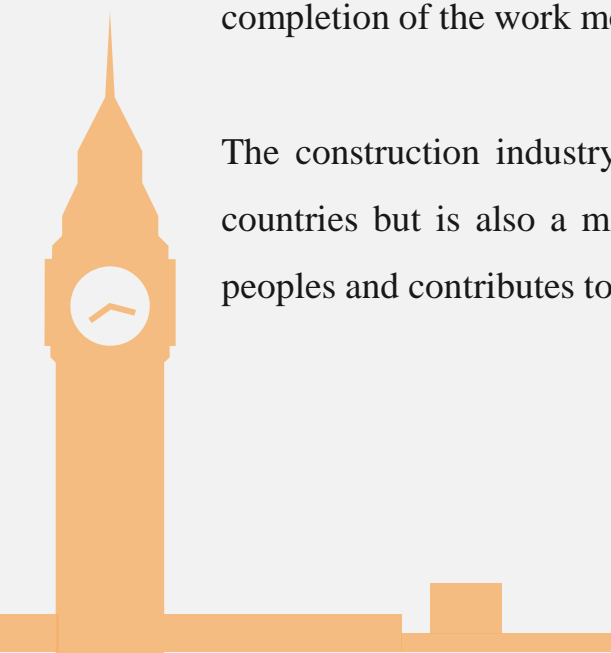
Project management is recognized as a unique business function within a company, and project managers play a defined role and have certain obligations for achieving the goals of their projects. The project manager will identify and manage the project, lead the project team, and determine how to approach the work depending on criteria such as the type of project, the needs of the business, and the skills of colleagues working on the project. (Axelos, 2021).



Construction industry

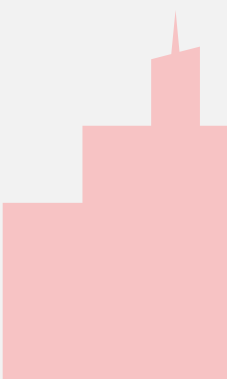
“Construction is the process that sets up a portable plant, bring material to the site, and on completion of the work moves the plant away, leaving its output standing”. Hyari, 2005, pg. 1).

The construction industry is not only contributing to the social and economic development of countries but is also a major industry around the world which provides jobs to the millions of peoples and contributes to countries and world economy. (Umar, 2022).



Construction management

Construction management is the act of managing the construction process. Hence, it manages the basic resources of construction such as workers and subcontractors, equipment and construction plant, materials, money including income, expenditure, cash flows, and time of project. (Hyari, 2005).



The background of the slide features a low-angle, upward-looking perspective of several skyscrapers. On the left, a prominent building has a reddish-pink facade with a grid-like window pattern. On the right, a dark brown building is visible. At the bottom, a grey brick building and a green-tinted building are partially seen. The sky is a pale, clear blue.

03. VALUE OF STUDY

The research insights provided in this study are useful for practitioners in guiding them to recognize the impact of COVID-19 on construction project management as a whole. In addition, the value of this study is to understand how the pandemic affected the industry and how the management of projects were facing several problems such as operational and financial obstacles which caused reduction in nation is economy, gross domestic product, and shortages of new / ongoing construction projects.

04.

THEORETICAL FRAMEWORK



Problems caused by COVID-19

Figure 1 summarizes the themes and subthemes of problems the construction management faces by COVID-19. From 20 companies, six categories which are: “Project timeline,” “Reduced labor,” “Logistics,” “Late payment,” “Increased project cost,” and “Reduced no of projects” are identified to be the subthemes. The six categories can be grouped into two themes: “Operational” and “Financial.” The details of themes and subthemes are discussed in the subsequent subsections. (Zamani et al, 2021).

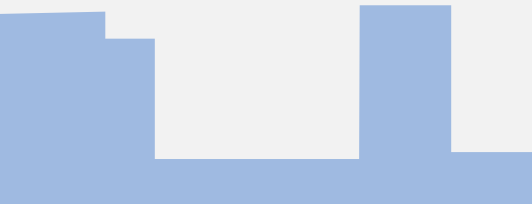


Figure 1 – themes & subthemes of problems

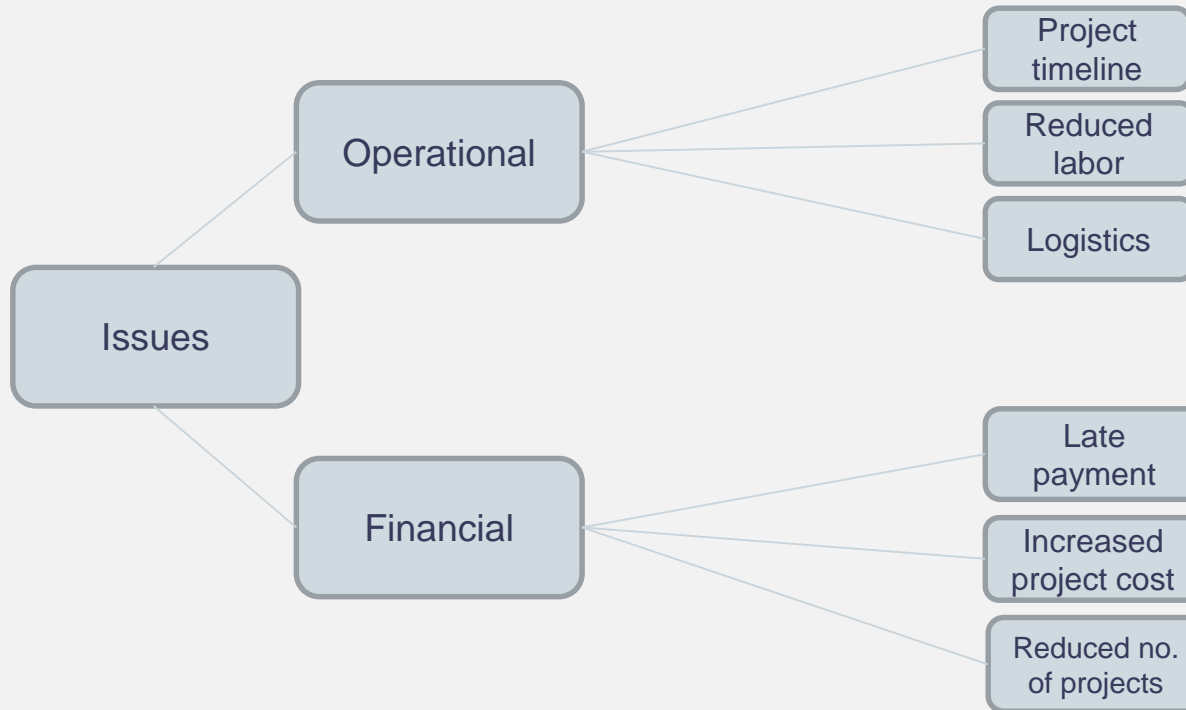


Figure 1. Overview of the problems the construction management is facing by COVID-19

05.

LITERATURE REVIEW



Literature review

While numerous studies have been undertaken to examine issues in the wider context of the impact of covid-19 on construction project management, comprehensive and continuous research in the area of construction industry, effect of covid-19 on the construction project management has been rather limited.

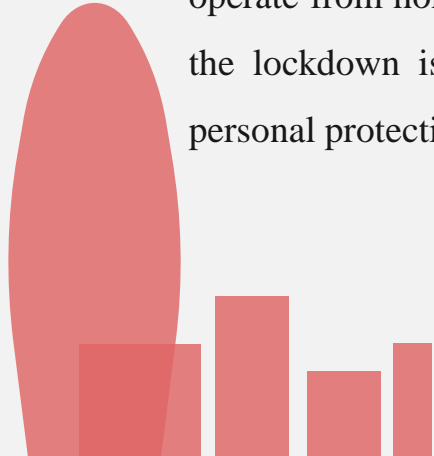


Literature review

According to (Zamani et al., 2021). A research study in Malaysia was to uncover COVID-19-related difficulties in the building construction industry, as well as strategies to mitigate COVID-19's detrimental impact. Individual interviews with 20 contractors working in building construction projects were conducted as part of the data collection process. The data is then evaluated using a thematic analysis method. COVID-19 is producing operational and budgetary challenges, according to the findings, and financial aid and complete information are required to mitigate the effects.

Literature review

Based on (Bsisu, 2020). A study conducted a statistical analysis the goal is to learn how Jordanian engineers felt about the lockdown, what they expect to happen as a result, and how they envision the civil engineering and construction business in the future. A cross-sectional study based on an online questionnaire was undertaken, with 150 respondents. The findings reveal that design civil engineers can operate from home with reasonable efficiency, but construction site civil engineers do not feel that after the lockdown is removed, construction workers will stick to social distancing and wearing needed personal protective equipment.

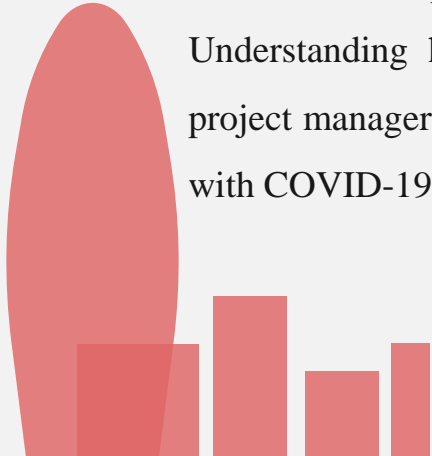


Literature review

In the United Kingdom a study conducted by (Ogunnusi, 2020) The study uses quantitative methods to investigate the implications of COVID-19 on built asset procurement and prospective prospects for the construction industry. For data collecting, a survey of constructed asset procurement specialists was conducted by architects, building engineers, civil-structural engineers, electrical engineers, mechanical engineers, construction project managers, and quantity surveyors completed 71 questionnaires. This study discovered that COVID-19 had a substantial impact on the acquisition of built assets and the construction sector, as a result of the authorities' decision to halt work in most cases.

Literature review

Another related study conducted by (Araya, 2020). His study aims to understand the potential impact of COVID-19 on construction workers using an agent-based modeling approach. Employees' activities are categorized as low, medium, or high risk, and the transmission of COVID-19 among construction workers in a project is simulated. Due to the spread of COVID-19, a construction project's labor could be decreased by 30% to 90%, according to this study. Understanding how COVID-19 spreads among construction workers might help construction project managers create appropriate working conditions for workers, reducing the risk of infection with COVID-19.



5.2 Reflection

Management in construction is an important element in people's lives and attitude, due to making everything obvious. Businesses nowadays have been affected highly from the Covid-19, especially the construction industry as its management relies heavily on it. Covid-19 has been effecting all kind of industries, in both positive and negative ways.

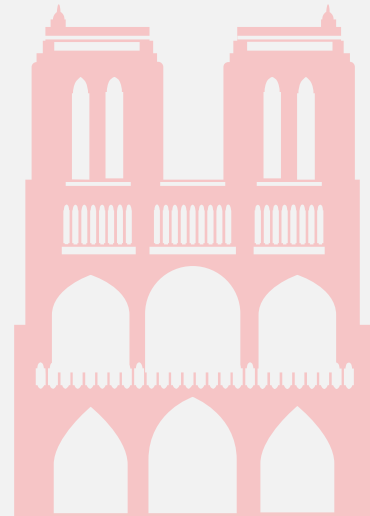
All the articles used the same data collecting methods, which are based on secondary and primary data, the majority of the papers used quantitative method, while some used qualitative method. People started searching about this topic after the increasingly impact of the pandemic, and how they started to have a huge impact on businesses and societies in general, which made this subject a world wide matter. This topic is a contemporary issue, therefore all the papers above are from 2019 until 2022.

Reflection

All the research papers reviewed agreed that construction industry experienced several adverse effects. As the papers mentioned how to help project stakeholders to realize the sequences of the sudden epidemic and prepare for the worst-case scenario during the planning stage of the construction projects. As all papers agreed on the impact of COVID-19 is causing operational and financial issues.



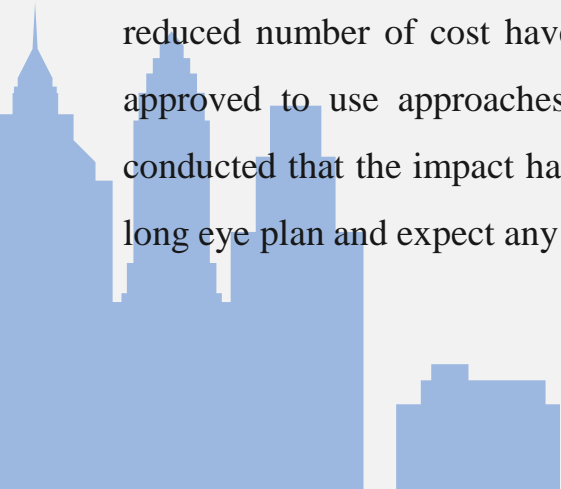
05. CONCLUSION



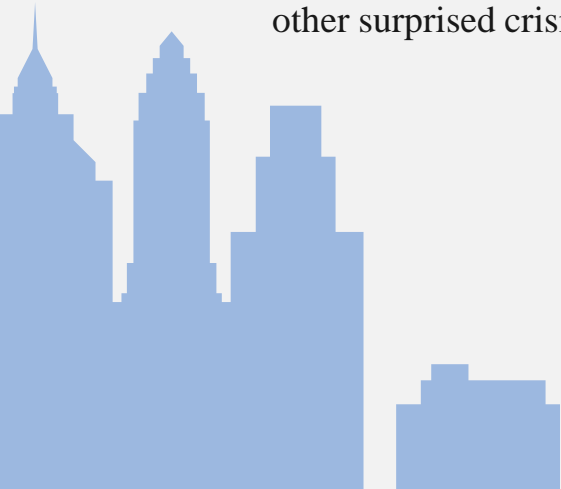
Conclusion

The COVID-19 pandemic has caused significant disruptions and hardships in a variety of countries and industries. This study has identified the problems caused by pandemic COVID-19 on the building construction industry.

According to the impact of Covid-19, the management of construction has faced changes in both operational and financial sections, where project timeline, reduced labor, logistics, late payment, increase project cost, and reduced number of cost have been the most factors that caused by the pandemic. Meanwhile, some studies approved to use approaches in the management of construction to gap the effected factors, while some conducted that the impact has improved the management of construction is strategic plan, where it develops a long eye plan and expect any other surprised crisis.



Meanwhile, this study is literature review has 60% deductive structured methodology papers that use quantitative method, while others are inductive semi-structured theories use qualitative method. Furthermore, some studies approved to use approaches in the management of construction to gap the effected factors, while some conducted that the impact has improved the management of construction is strategic plan, where it develops a long eye plan and expect any other surprised crisis.



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THANK YOU FOR YOUR ATTENTION

Do you have any questions?

