

# The Impact Of Covid-19 On Construction Projects In Kuwait

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**Abstract:-** This paper has been prepared to evaluate the impact of Covid-19 on Construction projects in Kuwait. A questionnaire survey has been carried out from a wide range of professional engineering, construction and architecture practitioners operating in Kuwait. The findings from this research revealed that delays in projects were due to Covid-19. The main conclusion drawn is that the delays can be reduced by proper planning.

**Keywords:-** Covid-19, Construction projects, Kuwait, Delay, Survey questionnaire, Telephone interview.

## Introduction

The construction sector acts as a fundamental pillar for the country, including economic and social development. The construction sector in Kuwait is expected to log record spending of nearly KD 34 billion (\$112.5 billion) to develop the infrastructure plan that can fulfil Kuwait's 2035 vision. However, the international construction sector is suffering delays and therefore failing to complete the projects on-time and on-budget.

Delays are the main issue in the construction projects that affect all the parties in the construction sector. Therefore, previous studies have identified six categories of delay in the construction projects. These six categories of delay are excusable delay, non-excusable delay, independent delay, concurrent delay, critical delay and non-critical delay.

**Excusable delay** is caused by events that are beyond control, which are unforeseeable. It can be classified as 'compensable' or 'non-compensable' depending on whether it was caused by a third party, the owner, or just an incident.

**Non-excusable delay** is not caused by the owner. This delay is caused by the contractor, the subcontractor, supplier for equipment, or supplier for material, therefore no extra time or funds are due for the contractor.

**Independent delay** is delay caused by a stakeholder involved in the construction project. This delay, depending on whether it was caused by the owner or a contractor, can be excusable delay or non-excusable delay.

**Concurrent delays** are delays happening at the same time. It is when one delay occurs followed by another, and therefore extra time and cost are required for the project. This is usually caused by any of the parties in the contract.

**Serial delay** is delay caused by previous non-overlapping delays in a construction project that occur on a single network path. For instance, a labour strike is a reason for the project delay that should be completed before winter, but the work would then be completed in winter.

**Critical delay** is delay in completion date for the project. This delay becomes a reality of the project when a contractor has not completed the project within the contract period. However, it can be reduced by proper planning.

Now that the introduction has been detailed, a brief overview of Covid-19 followed by the research method will be detailed. Then, the findings of this research will be analysed and a conclusion will be given at the end of this research.

## The Covid-19

The coronavirus (COVID-19) was explored in December 2019, in Wuhan, China among a cluster of patients with viral pneumonia who had visited the Huanan seafood market. According to Nature, the coronavirus (COVID-19) is becoming a pandemic due to more

than 100 000 people in 100 countries having been infected. As a result, the COVID-19 has created a wide range of reactions from governments. Common measures include bans on public gatherings, travel restrictions, school closings, new forms of social welfare provision, emergency investments in healthcare facilities, the augmentation of health systems, managing the economic consequences of these actions, contact-tracing, and other interventions to contain the spread of the virus. Therefore, this paper aims to evaluate the impact of Covid-19 on construction projects in Kuwait. The objective was to gather the opinion of architects, engineers, surveyors, construction management and coordinator practitioners of how the Covid-19 could be affected in construction projects. This was achieved through a questionnaire survey and telephone interview directed to construction professionals based in Kuwait.

### Research Methodology

Given that the impact of Covid-19 in construction projects is still being evaluated, the questionnaire survey is useful in collecting quantitative and qualitative data from a wide range of professionals. The questionnaire was sent to 205 construction sector practitioners working in Kuwait, including engineers, architects, surveyors, construction management and coordinators. The questionnaire was launched between 10<sup>th</sup> of April 2020 to 23<sup>rd</sup> of June 2020. A total of 55 completed questionnaires were received. The responses were from: 26 engineers, 16 architects, 10 surveyors, 5 construction management, and 2 coordinators, as shown in Figure 1. Additionally, a total of 10 practitioners completed telephone interviews.

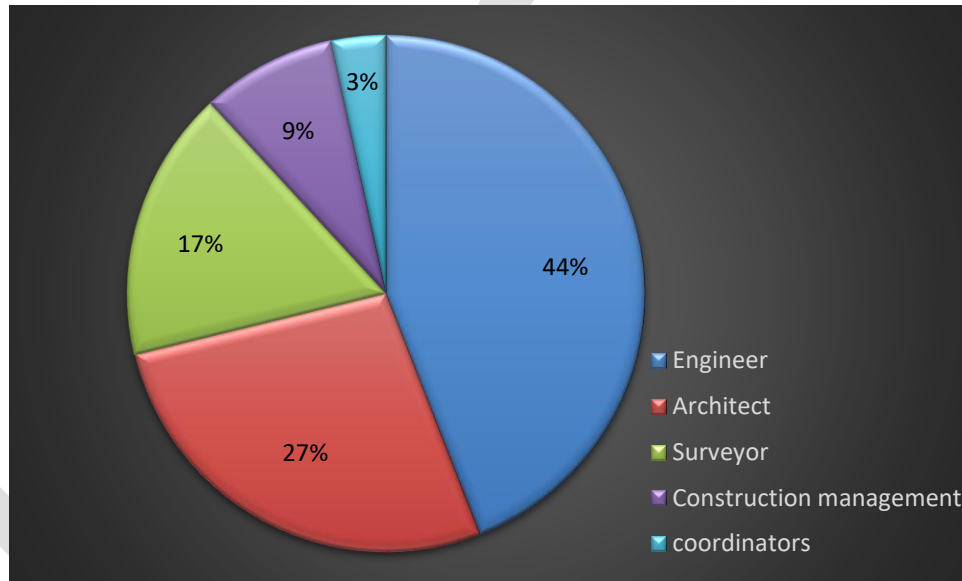
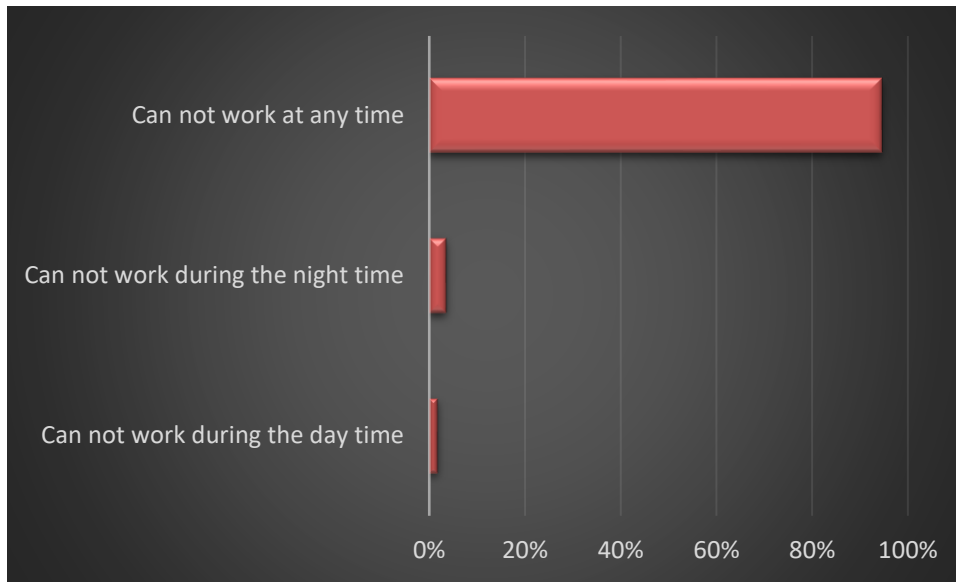


Fig 1:- Respondents' profession or current role.

### Findings

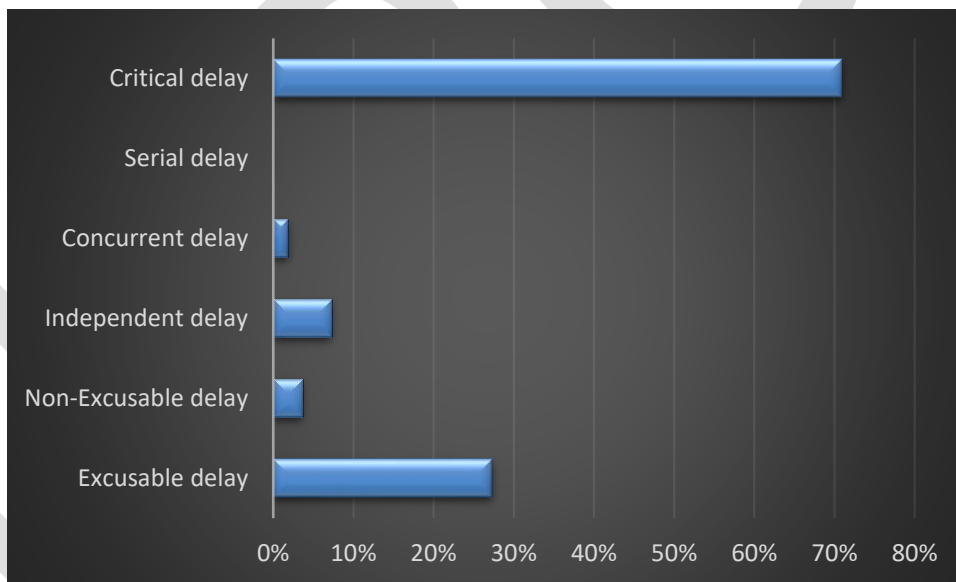
The majority of the respondents (39%) worked for small organisations. The annual turnover for 54% of the surveyed companies was less than £1.5m, while the annual turnover for 41% was between £7.5m and £37.5m. Respondents were involved in a variety of projects in the building, water supply, sanitation and water, and energy sectors. Respondents also had experience in both private and government sectors. The main findings of the questionnaire survey are presented below.

The results of the questionnaire showed that the respondents (95%) of the organisations in Kuwait were delayed in construction projects. The most common reasons for delays in projects were because the employees were unable to work at any time due to Covid-19 pandemic, as shown in Figure 2.



**Fig 2:- The main reason of delays in construction projects.**

Moreover, the majority of the respondents (71%) indicated that the delay in construction projects are critical delays, as shown in Figure 3.



**Fig 3:- The appropriate category of delay in construction projects.**

### Discussion

In Figure 2, it can be observed that the most common reasons for delays in projects because the employees cannot work at any time. Based on the telephone interviews, it was concluded that the employees cannot work at any time due to government reaction to the pandemic. Hence, this is in line with the previous studies which reported that the government has created a wide range of reactions due to Covid-19.

Moreover, Figure 3 showed that (71%) of the respondents indicated that the delay in projects are critical delays. Previous studies reported that the critical delays can happen if the contractor has not completed the project within the contract period. Hence, by proper planning, the critical delays in projects can be reduced.

## CONCLUSION

The Covid-19 in Kuwait has impacted on construction projects. The main conclusions of this paper are summarised as follows:

- The delays in projects were due to the employees being unable to work at any time.
- The delays in projects were identified as critical delays.

Clearly, further research is required to develop a better understanding. For example, face-to-face interviews with individuals currently in the construction sector and the monitoring of live projects that operate during or after Covid-19 may provide fruitful reality results. From this, it may be possible for organisations to develop proper plans for construction projects, which could then reduce the delays in completion date for the projects. Further research is also required to explore the experience from other professionals such as project monitoring and evaluation services consultants.

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