

# Impact of Covid 19 Pandemic on the Management of Construction Projects in Malawi

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## Abstract

Construction projects were massively disrupted by the Covid 19 pandemic. The pandemic significantly affected how construction activities are carried out on site. This study investigated in depth the challenges construction teams faced while managing the projects amidst the COVID 19 pandemic. The study collected data using a google form questionnaire. The questionnaire was distributed to 52 respondents in total who were actively involved in the management of the construction projects. The collected data was analysed using SPSS software version 26. Findings indicate that the COVID 19 pandemic caused disruption in the management of projects. The construction sites were abandoned by foreign skilled labours and left unskilled local workers on site. Results indicate that it was impossible to work on site because of the imposed restriction measures. Work was done online but proved to be a challenge since one needs to be on site to make decisions about activities. People lost jobs, lives and the local economy was disrupted. Supply chain of construction materials was disrupted because ports and borders were closed. The study recommends that projects must procure materials in advance, develop a policy of training local labours to transfer skills, encourage local manufacturing and workers to be vaccinated.

**Keywords:** COVID 19; Pandemic; Construction; Materials; Supply Chain; Labour

**Citation:** Mfuni, G., J., (2025), "Impact of Covid 19 Pandemic on the Management of Construction Projects in Malawi", *Project Management Scientific Journal*, 2025, 8(1): pp.200-204, DOI: <https://dx.doi.org/10.4314/pmsj.v8i1.8>

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Submitted: 22 December 2024 | Accepted: 03 January 2025 | Published: 28 January 2025

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## 1.0 INTRODUCTION

Discovered in December 2019, COVID-19 is an acronym that stands for Corona Virus Disease. The agent causing the disease is well known as SARS-CoV-2 (Severe Acute Respiratory Syndrome Coronavirus 2). On 11 March 2020, the World Health Organization (WHO) declared COVID-19 a global pandemic. As of 31 March 2022, the virus has caused 6,063,885 deaths (Worldometer, 2022). Like all other industries, the COVID 19 pandemic in several ways has also hard affected the construction industry. As Weber and Alfen (2017) established that, the construction industry significantly constitutes a large portion of any nation's economy because it massively contributes to job creation. On 20 March 2020, the President of Malawi declared a state of national disaster and subsequently COVID-19 was also declared a formidable disease on 7 April 2020. The United Nations Malawi office acknowledged that the restraint COVID 19 guidelines were meant to reduce disease transmission through reduction of human-to- human contact and were executed in several ways, which included an abrupt ban on all public activities and gatherings.

### 1.1 Purpose of the Study

With the devastating effects of COVID 19 still fresh on our minds and still the scourge continuing it is very important to study and unearth the impact of covid 19 pandemic on the management of construction projects in Malawi and provide recommendations on how the industry can thrive amidst the pandemic.

## **2.0 MATERIALS AND METHODS**

### *2.1 Impact of COVID 19 on Construction Projects Across the Globe*

#### *China*

Corona virus (COVID-19) outbreaks have severely disrupted the economy in China, with devastating effects on global trade and it has simultaneously affected households, businesses, financial institution, industrial establishments and infrastructure companies (Biswas et al, 2021). The economic crisis caused by the virus has hit many more organizations in China. Similarly, construction and engineering projects have been jeopardize in various way by the COVID-19 pandemic and many projects have closed. As a result, there has been a financial recession in the construction industry and has created unemployment.

#### *2.2 Nigeria/Africa*

In Nigeria, a study on the impacts of COVID 19 on construction sector was done by Kabiru and Yahaya (2020). The title of the study was “Can Covid-19 Considered as Force Majeure Event in the Nigeria Construction Industry?” From the findings, it was discovered that covid-19 has a great effect in the construction industry in Nigeria as it has hindered site work, affect bill of quantities, affect project completion, affect Law of contract and therefore is capable of causing force majeure event in the Nigeria construction industry.

### *2.3 Construction Project Management*

Project Management Institute [PMI] (2021) defines a project is a temporary undertaking which is geared towards creating a product, service or outcome. A project consists of start and finish dates of well-organized and planned activities that are carried out to achieve the project aims. Milestones are set within the project schedule to ensure that project goals are achieved (ISO, 2018).

### *2.4 Construction Project Delays*

Extending the time schedule for a construction project is common but has serious and devastating effects (Kazaz and Ulubeyli 2019). Construction project delay is defined as a state whereby a project fails to be completed as initially scheduled and agreed. This is usually caused by factors due to either the contractor, client, consultant or other reasons beyond the control of parties to the contractual agreement.

### *2.5 Construction Material Availability*

The supply and availability of construction material has been severely disrupted by the COVID 19 pandemic (Skyline Construction, 2020). As the pandemic scourge on critical construction materials became very scarce on the market together with other safety and hygiene materials.

## **3.0 METHODOLOGY**

The research philosophy for this study was Interpretivism. The way a researcher will collect, interpret and analyse data is linked to the fact that one cannot be entirely isolated from

their own values and beliefs (Flick 2014). The study used mixed methods that is qualitative and quantitative methods. The research study was conducted amongst the engineers who are currently involved with construction projects in Malawi during the COVID 19 pandemic. This study was conducted to a target population of 60 construction project workers. According to statistical tables a population of 60 with confidence of 95% and margin of error 5% will result in the sample size of 52 (Krejci & Morgan, 1970). Collection of data was done using a structured questionnaire sent out to the 52 respondents as hard copies, soft copies through email addresses and as a Google Form link. The respondents were given up to two weeks to respond. The collected data through the questionnaires and interviews was analysed using SPSS software version 26.

## **4.0 RESULTS AND DISCUSSIONS**

### *4.1 Demographic Characteristics*

More males than females took part in this study as respondents. This is a clear indication that the construction industry is still male dominated and that more needs to be done to bring more females to join the industry. A study by Rosa et al (2017) attributed this low participation of women to dealing with aggressive behaviour on site, long working hours, work family life balance and society negative perception of women working in construction sites.

### *4.2 The Effect of COVID-19 Pandemic on Work Routine*

As the COVID 19 pandemic scoured on the normal work routines changed. The project meetings moved from being physical to online. A study by Bsisu (2020) also noted the same trend of meetings moving from physical to online in the Jordanian construction industry. Platforms such as Microsoft Teams and Zoom were amongst the favourite to be used for meetings.

### *4.3 The Effect of COVID-19 Pandemic on Work Sites*

Work as we traditionally know it was disrupted on the project site. To contain the spread of COVID 19 social distancing of one meter were imposed on all gathering. Since working on a site involves a gang of workers closely interacting this made work very impractical. It is impossible to pour concrete while one meter apart from each other for example.

### *4.4 Long-term Implications of COVID-19 Pandemic on The Construction Industry*

Because of the COVID 19 pandemic people lost jobs in the construction industry. This led to loss of income for families of those employed on the project. Business ventures setup around the construction site were also affected since the purchasing power was reduced in the area. The noisy and joyful atmosphere commonly known for a locality hosting a construction project was no longer there. This loss of employment also contributes to the pressure on the government to provide jobs and encourages the people to resort to destructive ways of making a living like production of charcoal that leads to deforestation.

### *4.5 Ways to Mitigate the COVID 19 Effects on the Construction Industry*

Supply and availability of materials is key to any construction project. This is why procurement and ordering of materials should always be done in advanced to avoid delays. Project managers should ensure that they anticipate what materials will be needed at what stage and then ensure to place an order. Construction projects ought to have a deliberate policy and budget to train local labours to improve the skills. There should be a way to have the experienced and skilled workers mentoring the local workers. The issue of vaccination has been contentious. Some due to religious views or otherwise have refuse to embrace vaccination. On the other hand, some have fully welcomed the vaccination agenda.

## 5.0 CONCLUSIONS

In conclusion, COVID 19 affected the normal work routine for Engineers on construction projects. Supply and delivery of materials for the project was severely affected by COVID 19. The projects literary came to a standstill due to lack of materials on site. Skilled labor became scarce during the pandemic. Both the client and contractor were reluctant to made use of the Force Majeure clause in the contract which would have led to the project being abandoned. Socially the project workers were affected as they could not be allowed to gather in a place to relax after work.

### 5.1 Recommendations

This study recommends the following.

- Construction materials to be procured well ahead of time and prioritize procuring locally if possible.
- Local manufactures to be capacitated to manufacture goods/products which are highly sort after in the construction industry.
- Project cost to include a budget line for use in such unplanned emergencies.
- Projects to have a deliberate skills transfer to train local workers to do skill works.

**Funding:** The there was no funding for this research work.

**Declaration of Conflict of Interest:** There is no conflict of interest.

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