

The Challenges and Prospects of Covid-19 Pandemic on Construction Firms across Geo-Political Zones in Nigeria

Sunday Segun Olutimayin¹, Caleb Michael Lawal², Abayomi
Joseph Fatoye³, Joy Agagwu⁴ Johnson Oluwaseyi Ayoola⁵

^{1,2,3,4}Department of Civil Engineering, School of Engineering, Kogi State Polytechnic Lokoja, Nigeria.

⁵Department of Mineral Resources and Petroleum Engineering School of Engineering, Kogi State polytechnic
Lokoja Nigeria

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ABSTRACT: -Social distancing, quarantine, self isolation, vaccination, COVID-19 and palliatives and many more emerged as the new nomenclature of the whole world of which construction firms are not exempted. It is exactly a decade from the last pandemic witnessed by human race. However, the most popular disease outbreak which was tagged novel corona virus disease 2019 (COVID-19) was announced which hit all the nations of the world within a period of 18 months. And was confirmed pandemic in late march year 2020. This destabilized so many global businesses around the world many of which are built assets procurements, shipping and facility management. The effects of this pandemic posed both positive and negative impacts in Architecture, Engineering and Construction. Its challenges have brought about innovative and diverse use of technology in an exemplary manner which may change the course of construction even after the extinction of corona virus. This study explores the challenges and prospects potential opportunities for construction firms through quantitative means. A survey was carried out on the challenges and prospect of construction firms across geopolitical zones in Nigeria. About 200 questionnaires were received for data collection from Architects, Civil/Structural Engineers, Electrical and Mechanical Engineers, builders, construction / project managers and Quantity Surveyors. SPSS (a social science statistical package) was used for the analysis of the data. The results reveals some of the challenges in the aspect of workflow and supply chain disruption, new policy issues, workers' anxiety as a result of lockdown of these construction firms in some areas. However, opportunities evolved in the field of modern procurement planning. This study is

essential to paving the way for development of additional contingency plans and a new working strategy in minimized human contact situation caused by pandemic.

Keywords: Construction firms, COVID-19, Challenges, Prospects, Pandemic.

I. INTRODUCTION

The likelihood of the world's economic recession is a major concern for many nations of the world in which construction companies is not excluded. For over 18 months and still counting, the Globe came to stand still with the outbreak of unprecedented pandemic –tagged coronavirus 'Covid 19'. This Bubonic plague affected not only human health but also operational health of businesses and organization the construction firms inclusive. Professional bodies such as COREN, NSE, NICE and the likes in an attempt to preserve "construction businesses" are rolling out strategies to enable smooth sailing and transition into the new dispensation. 'The roadmap to recovery' organized by construction and professional bodies requires the construction industry to reinvent by safeguarding construction businesses and work collaboratively as it restores (CIOB, 2020). The Nigeria economy was depressingly impacted in Abuja the capital and financial centre Lagos. The challenging condition creates insufficient revenues for some states to meet their immediate spending in terms of their annual budgets. The projection for the growth of the construction firms has been reviewed downward to 0.75% with possibility of further cut if actions in the short term are severely disrupted more than envisage by the COVID-19 (Global Data, 2020; Thomas, 2020). The possibility of the world's economic recession on construction

firms is a growing concern for many nations of the world. There have been predictions from economic and social analysts based on the effect of the novel deadly virus; 2019 coronavirus (COVID-19) pandemic. According to the World Bank Group (April 2020), the economic growth in sub-Saharan Africa as projected to decline from 2.4% in 2019 by a decreasing rate of -2.15% to 5.1% in 2020, causing the first recession in the region of 25 years, while hitting hard on 3 largest economies of Nigeria, South Africa and Angola. The economy of most developing nations encounter a shift in Gross Domestic Product (GDP), as such any outbreak affect economic strength of the nation. South Africa as one of the African country badly affected with Covid 19 was confronted with shortages, massive national debt and low spending on infrastructure due to weak economy (Hughes, 2020). The United Kingdom Office for National Statistics (UK-ONS) reveals that ever since 2008/2009 economic recession, the UK has not experienced a large (5%) GDP decline until first quarter of 2020 due to pandemic, where the construction sector falls by 2.7% (ONS, 2020, p.8). The long lasting and wide ranging impact of COVID-19 no doubt affected the world with virtually all the regions around the globe pulling to a standstill throughout the spring period, the government concentration sectors as we are approaching the lockdown easing is on placing the economy back on course (Ramboll, 2020). Remarkably, some construction sectors of sub-Saharan Africa are exploring the prospect that emanated with COVID-19 compared with many other nations of the world. Indigenous manufacturing is one of the capable sectors in the Sub-Saharan Africa with the interference to supply chain globally, emphasizing the significance of fostering the local capacity to encourage construction firms. This pandemic also divulged the need for investing in the communication infrastructure (Hughes, 2020). No doubt that this pandemic lockdown came with impacts and prospects as the evidence above. Therefore, this research seeks to explore the impact and the challenges of COVID-19 pandemic in the construction firms.

Aim: To examine the challenges and prospects of COVID-19 pandemic on some selected construction firms across geo-political zones in Nigeria

The objective of the research includes:

(i) to explore the current state of the construction firms, its periodic trend from March

2020 till date and readjustment of its workflow during and after pandemic lockdown

(ii) to explore the positive and negative impact of COVID-19 pandemic on construction firms across geo-political zones in Nigeria

(iii) to examine staff strength and their health status during and after pandemic

II. METHODOLOGY

Research Methodology

The method explored for this research was obtained through field study with the collection of primary data survey through in person, interviews, mails from construction field of professionals in Architecture, Building Engineering, Civil/Structural Engineering, Electrical Engineering, Mechanical Engineering, Construction/project Management and Quantity Surveying in building industries with reference to specifications in terms of designer or consultants, contractor/construction, client, or work in the development authority. The size of the organization of the participants considered were identified as <10 personnel (micro), 10-50 personnel (small) 50-200 personnel (medium) and >200 personnel (large). The years of experience are 5-10 years, 11-15 years, 16-20 years and above 20 years. The survey responses were retrieved from construction firms across geo-political zones in Nigeria. The primary data generated were analyzed with SPSS analytical tool. A total of 150 responses were received. The survey questionnaires were structured under the following subheadings: demography, project status and workflow due to COVID-19, impacts of COVID-19, and other comments. Therefore, responses in these perspectives (governments' guidelines, decisions and supports) are evaluated quantitatively and exclusively. On the other hand, the stoppage of work and the significance of pandemic's challenges/impacts were assessed quantitatively. The qualitative segment narrates respondents' experiences (lesson learnt) and government decisions. In comparison, the quantitative segment evaluates the importance in rating tendencies of the components

III. RESULTS AND DISCUSSION

Data Analysis

The data obtained from the survey is from respondents across geo-political zones analyzed using descriptive statistics. Figure 1.0 presents the distribution of these respondents based on zone to avoid clumsy presentation of data. The highest number of participants is from south-west, followed by North-West, North-Central, North-

East, South-South and south-East. The 18 states of participants including FCT are Lagos, Ogun, Oyo,

Kaduna, Kano, Zamfara, Enugu, Ebonyi, Imo, Edo, Rivers and Delta.

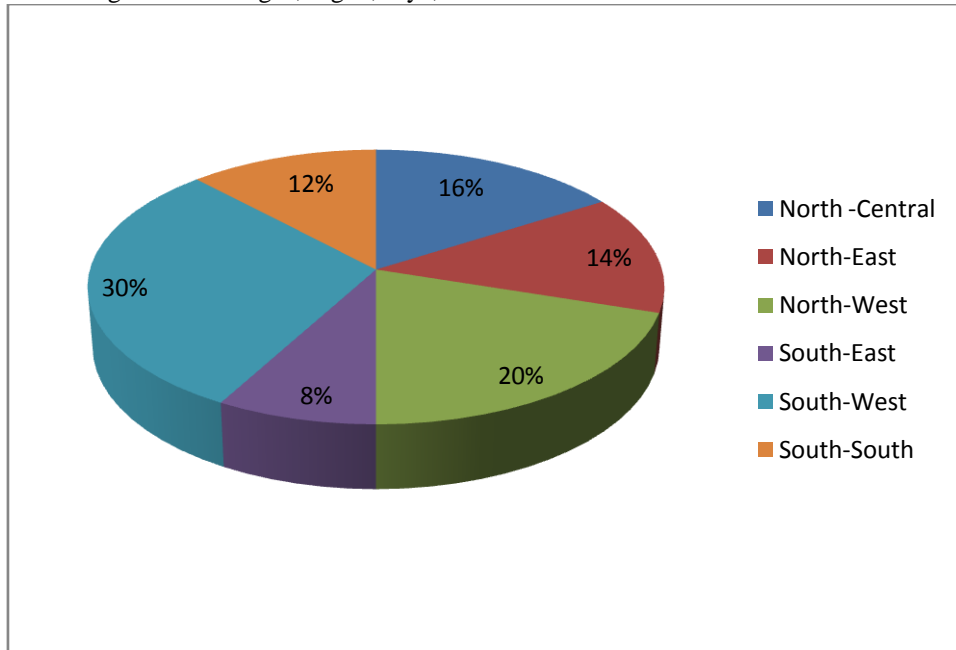


Figure 1.0 Participants Zones of Operation

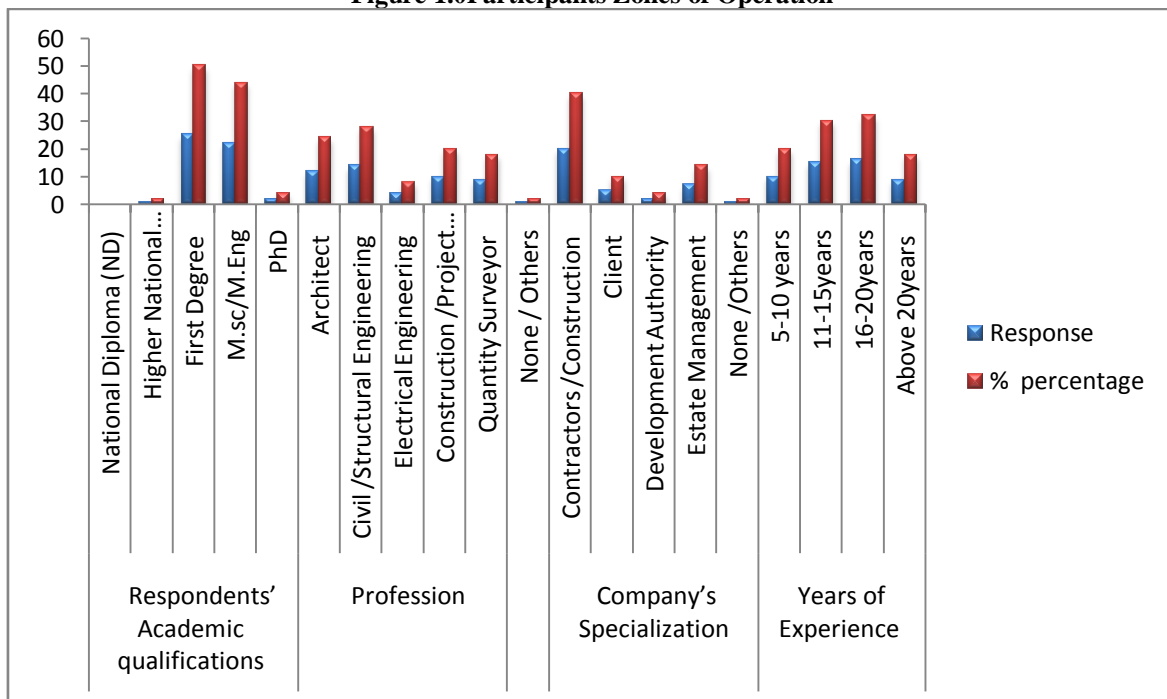


Figure 2.0 Demographic information of the participants' profile

The distribution chart of respondents in figure 2.0 shows that the participants are vibrant skilled professionals considering their educational level and qualifications with Over 50% of the participants are first degree holder, as such their responses regarding the study background are deemed essential and valid. Moreover, the

expertise areas of study interest are mostly built environment professionals (Architects, Civil Engineers, Construction/Project Managers and Quantity Surveyors). Construction firms areas of specialization per zones in accordance with the responses received from the respondents indicates that 40% engaged directly with construction or

contracts works, 30% are designers/consultants, 14% are Estate management, 4% are development Authority and 2% of the respondents don't have areas of specialization. Therefore, the respondents are highly experienced with over 75% of them having more than 15 years of company's experience. The size of technical personnel in the

organization ranges from 40% Micro (less than 40 personnel) which is the highest to large 30% (greater than 200 personnel), 20% small (10-40 personnel) and least of 5% medium (40-200 personnel).

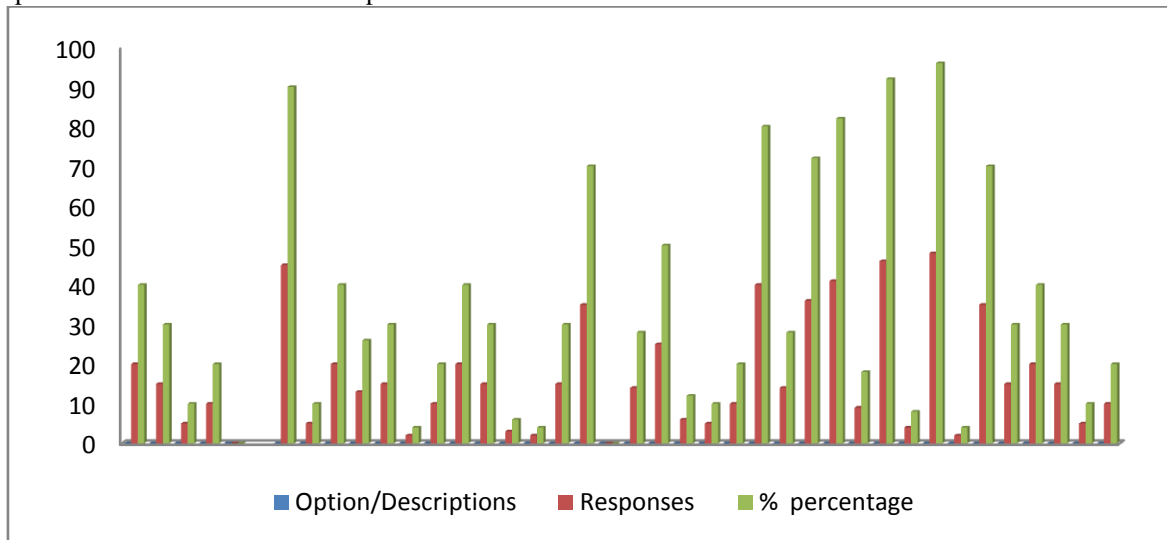


Figure 3.0 participants' Responses

From the chart above, it was deduced that 40% of the respondents obtained loan to fund their projects during pandemic, 30% through personal investment, and 20% through insurance. In the face of pandemic, 90% of projects was affected through COVID-19. About 40% of respondents indicated that their projects were partially stopped, 30% of projects were fully affected and 30% of projects experienced full stoppage. Many of the respondents otherwise said their projects were fully stopped at the initial stage and later turned to partial. While others respondents indicate no stoppage of projects claiming operation activities was restructured on a daily basis depending on the type of the projects handled on sites. While a few of the respondents experienced both full and partial stoppage as the case may be while quite a few numbers of the respondents had to stop work because of an infected staff. 80% of respondents do not get any benefits (Tax, VAT waver and furlough) from government to cushion COVID-19 impacts

whereas 20% claimed some of these benefits. 96% of respondents says emergence of COVID-19 frustrate their projects which subsequently affects work flow across geo political zones. 40% of the respondents pointed out that their work was stopped based on government decision, 30% claimed it was business decision and 10% of the respondents are based on personal decision. On the other hand, 20% of other reasons could be as a result of work 'from home strategy'. However, government and personal decisions influenced positively construction sites closure and corresponding impacts on construction projects. Government decisions appeared to be a major reason for work stoppage amidst COVID-19 pandemic. Moreover, the government decision to lockdown was the main reasons for full stoppage of work on site and partial stoppage of work to be complemented by work from home and skeletal operations where necessary.

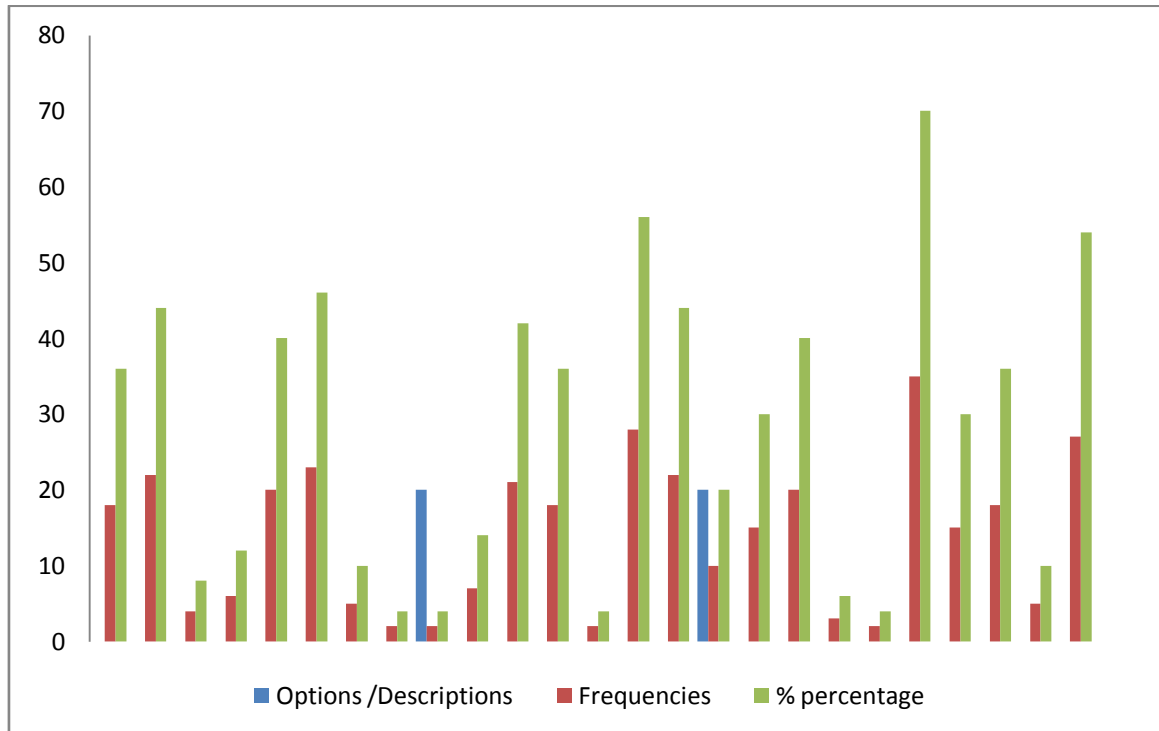


Figure 4.0 Participants’ responses after lockdown

After the ease of lockdown, 30% of construction firms across zones still impede workflow on sites, 44% minimal, 8% major, and 12% rapid of work done on sites. On projects execution, 40% of one to two (1-2), 46% of two to three (2-3) while only 10% of three to five (3-5) projects were executed which means COVID-19 impacts after lockdown still slow down work flow on some of the construction sites across geo political zones in Nigeria. Staff strength after pandemic indicated that 14% of twenty to thirty (20-30) were retained while others were dissolved, 42% of thirty to fifty (30-50) staff were retained and only 36% of fifty to seventy (50-70) of staff were retained under this category. 56% claimed company’s operation was active whereas 44% was inactive due to COVID-19 impact during

lockdown. After lockdown, 20 % of twenty (20), 30% of twenty-thirty (20-30), 40% of thirty to fifty (30-50), and 6% of fifty to seventy (50-70) staff agreed to be vaccinated. About 70% of construction firms accepted to the fact that COVID-19 have both positive and negative impacts on their workers after vaccination while 30% said it does not. As ease of lockdown approaches, there was generally a great sign of relief as 36% indicated that workers has returned with disruptions and progress affected, 10% of this construction firms still experiencing total lockdown on their projects .while 54% of respondents across geo political zones has returned to work without hindrance to weekly, monthly, quarterly and annual progress of work .

COVID-19 IMPACT WITH REFERENCE TO PARTICIPANTS RESPONSES AS IT AFFECT WORK FLOW



Fig 5.0 Flow chart of working process with reference to participants' responses across Geo political zones

IV. CONCLUSION

The research survey explored shows that in the field of professionals across geo political zones it is evidence that construction professional needs to adopt innovative technology to improve productivity as periodic trends as affected workflow in the field of construction due to COVID-19 as from march 2020. Also, majority of players in construction industry were unable to benefit one way or the other from various programme introduced during the peak of pandemic. There was a sigh relief as majority of their staff returned progressively to work in as much as they all agreed to be vaccinated. Lastly, most construction firms agreed to the fact that, COVID-19 has both positive and negative impact

on the staff strength and their health status across geo political zones in Nigeria.

RECOMMENDATIONS AND FURTHER SUGGESTION

- **Planning phase:** Plan construction phases avoiding large group of workers from 20 to 50 above & unnecessary overlap of crews. If work plan was developed prior to COVID-19 outbreak, consider reviewing and adopting when necessary.
- **Access to site:** only essential visitors (workers, supervisors, and managers) should be allowed on site;
- Fence off the construction site to ensure no one can enter or approach the workers without authorization

- **Prepare your work force:** Workers should be requested to maintain physical distance of 2m from others as much as possible and adhere to suggested practices for infection prevention and control
- Advice workers to wash their clothes frequently (daily if possible)

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