

International Journal of Engineering Research in Mechanical and Civil Engineering (IJERMCE) Vol 6, Issue 10, October 2021

Construction Industry in Bahrain: Update of Performance

Jimmy A. Nebrida

Graduate School, Samar State University, Catbalogan City, Philippines Bahrain Training Institute, Ministry of Education, Kingdom of Bahrain *jimnebrida@gmail.com; jimmy.nebrida@bti.moe.bh*

Abstract:-- This study was conducted to know the performance of the construction industry of Bahrain in terms of information available from related studies. Specifically, it aimed to identify the market value of the construction industry in the kingdom of Bahrain, know the causes of delays of projects based on available research on the internet, determine the effect of COVID 19 pandemic in the construction industry. Results showed that the construction industry is performing well from 2014 to 2018 that is before the pandemic. The construction sector of Bahrain is the fastest growing non-oil sector which contributes the significant development of the country. It has increased rate of growth in terms of market value between 2014 to 2018. It further showed that the construction is the top employer for expatriates reported as highest number of work permits - 13,073 or 33% of the total issued in the second quarter of 2018, the most recent statistics available. On the other hand, project delays affected the performance of the project which is related to contractor, owner, consultant, services and utilities, government regulations, and external environment. The effects of delays were identified as time and cost overrun, disputes, arbitration, litigation, breach of contract, total abandonment, delay to other projects, obstruction of economical and urban development, disruption of traffic movement, and discredit to the Ministry of works. In the explosion of COVID 19 pandemic last year 2020, the construction activities in Bahrain are affected as the budget government is shifted towards the fight of COVID 19. Evidence showed that there is decline in numbers of contracts awarded between 2019 and 2020 and that the construction sector recorded to have a reduction rate in GDP growth. It clearly manifests how pandemic affects the construction activities in the Kingdom causing number of projects to be delayed as budgets are being shifted to health services.

Index Terms:- Construction Industry; Construction Industry Performance; Project delays; Market Value; effect of COVID 19

I. INTRODUCTION

The construction industry is significant in the economic development of every country which plays a vital role in the delivery of services needed in the country such as in transportation, manufacturing, building services, water utilities, wastewater, etc. It is one of the biggest industries worldwide and one of the largest employment generators in the world which is broadly divided into the construction of vertical and horizontal structures, and special civil engineering construction.

Construction industry in Bahrain is one of the contributing factors for the physical, social, economic, and technological development of the country as it is noticeable in the kingdom of Bahrain, with new construction of high-rise buildings intended for commercial and residential purposes, and road constructions that cater improvement for smooth movement of traffic are currently commencing for development. In the report of Tamkeen on the Market Gap Studies, study revealed that the Construction & Real Estate have been active sectors in Bahrain, despite the general economic slowdown. With construction of buildings being the largest contributor to revenues in the construction services sector, the total revenue from the Construction sector in 2008 (value of production) was BD 2442 million, with the highest contribution to this revenue coming from the construction of buildings (76% of revenues) [1].

The ministry of work is a government organization which provides infrastructure according to the national strategic plan by the government of kingdom of Bahrain. It is the construction arm of the government that oversees the implementation of construction of government projects such as roads, buildings, and sanitary drainage. The services delivered by the Ministry include several small projects and services such as small schools, local access road sections, road safety works, signs and signals, sanitary house connections, repairs of the sewage network; in addition to medium-sized projects, the ministry is also responsible in delivering large complex projects of global community interest such as ports, airport, hospitals, bridges, complex interchanges, and sports facilities. They specifically deliver services such as design, construction, project implementation and maintenance of public buildings [2].

There are a lot of challenges in the implementation of the projects which are noticeable in the implementation of construction activities such as issues on time and cost overruns, quality of workmanship, disputes etc. It is for these



International Journal of Engineering Research in Mechanical and Civil Engineering (IJERMCE)

Vol 6, Issue 10, October 2021

reasons that this case study would like to assess the construction industry where challenges are needed to be addressed in the project implementation by the Ministry of Works. To ensure that the delivery of services in the construction industry will achieve the goal of providing satisfaction to the different stakeholders it is in this purpose that this study updates the performance of the construction industry in the Kingdom of Bahrain.

II. OBJECTIVES

This study aims to know the performance of the construction industry of Bahrain in terms of available information available from related studies. Specifically, it aimed to:

Identify the market value of the construction industry in the kingdom of Bahrain.

Know the causes of delays of projects based on available research on the internet.

Determine the effect of COVID 19 pandemic in the construction industry.

Research Design and Data collection method

This paper uses the case study method in determining the performance of construction industry in the Kingdom of Bahrain. The data of the performance of construction is collected from research report, related studies, and any available news report thru the website of ministry of works, construction companies and research centers.

III. FINDINGS OF THE STUDY

Mega-projects drive construction growth in Bahrain The construction sector of Bahrain is the fastest growing nonoil sector which contributes the significant development of the country. According to the Oxford Business Group, the following are the size and performance of Bahrain's construction industry [3].

In figure 1, the construction's total market value rose to \$8.4bn in 2018, from \$7.9bn in 2017. The rate of growth averaged 5.1% a year between 2014 and 2018.



Figure 2 shows the breakdown of industry's total value in 2018; energy and utilities accounted for 36.7%, followed by residential, at 22.8%; commercial, at 17.6%; infrastructure, at 16.6%, institutional, at 3.8%, and industrial, at 2.5%. Energy and utilities are expected to remain in the top spot, accounting for 35.9% of total construction through 2023.

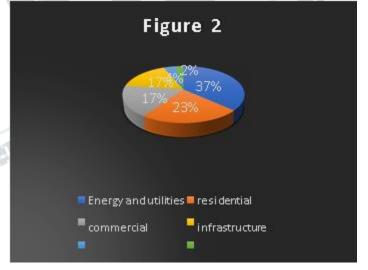


Figure 3 showed that the construction is the top employer for expatriates reported as highest number of work permits – 13,073 or 33% of the total – issued in the second quarter of 2018, the most recent statistics available.



International Journal of Engineering Research in Mechanical and Civil Engineering (IJERMCE) Vol 6, Issue 10, October 2021

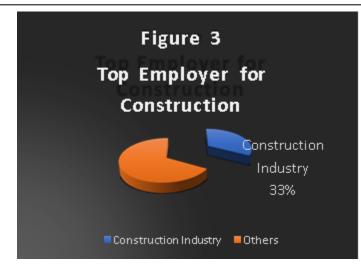


Figure 4 showed the contribution of construction sector to GDP which rises from 7% in 2017 to 7.3% in 2018 according to the Economic Development Board. Construction was the fastest-growing sector of the economy in 2018, expanding by 5.6% compared to 1.7% in 2017.



Construction's growth easily outpaced overall GDP, which expanded by 1.8%. Over the course of the year

119 tenders valued at BD278m (\$737.4m) were awarded for roads, sewage systems and buildings, while total spending on projects in this category reached BD48bn (\$127.3bn) for 304 projects.

Causes of Project Delays

In a study conducted by Hasan (2014) entitled, "An Investigation into the Delays in Road Projects in Bahrain", It revealed that causes of delays as well as frequency of delays affects the construction projects. Forty-seven causes were identified and classified by responsibility into six groups related to contractor, owner, consultant, services and utilities, government regulations, and external environment. The

effects of delays were identified as time and cost overrun, disputes, arbitration, litigation, breach of contract, total abandonment, delay to other projects, obstruction of economical and urban development, disruption of traffic movement, and discredit to the Ministry of works [4].

Effect of Covid 19 Pandemic in the Construction Industry.

The construction activities in Bahrain have trimmed down due to the explosion of the COVID 19 pandemic. According to Business Wire, with the outbreak of Coronavirus (COVID-19), the construction industry in Bahrain contracted by 0.2% in real terms in 2020, due to the lockdown restrictions imposed by the government. The industry has been affected by the delays in project implementation and the re-allocation of part of the government's budget towards its fight against COVID-19 [5].

In an article by the Construction Week (2021), Bahrain's Tender Board has revealed in its latest set of data that it awarded 1,688 tenders in 2020 worth a total of \$4.1bn. This yearly summary showed year-to-year contract awards were down by \$700,000 compared to 2019, and according to the Bahrain Tender Board, this decline in the figure is caused by the impact of COVID-19 on the global economy [6]. According to the report for Bahrain Economic Quarterly, construction sector recorded to have reduction rate in GDP growth of 2.1% which is largely impacted by the COVID 19 pandemic [7].

IV. DISCUSSION

1. Construction industry in the kingdom of Bahrain

This case study presents the performance of the construction industry of Bahrain being the Ministry of Works as the main construction arm of the country. The figure showed that there is an average rate of growth of 5.1% in construction's total market value from 2014 to 2018. It also showed that energy and utilities have the top value of 36.7%. Construction industry is reported to be the top employer for expatriates for a 33% issued work permits in the second quarter of 2018. In addition to this, the contribution of construction sector to the country's GDP rises from 1% to 7.3% in 2018 and considered to be the fastest growing sector in the country. This data simply means that the performance of construction industry in the kingdom of Bahrain is doing good as shown in its market value, employability, and GDP contribution. Danku, et al (2020), revealed that the construction industry plays a critical role in the socio-economic development of Ghana. It contributes substantially to the gross domestic product. New urban construction infrastructure, including offices, houses, schools, hospitals, water supply, sewerage and roads are emerging [8].



International Journal of Engineering Research in Mechanical and Civil Engineering (IJERMCE) Vol 6, Issue 10, October 2021

2. Causes of Delays of Projects

The delay of projects affected the performance of the project which is identified by Hasan (2014) on his study on "An Investigation into the Delays in Road Projects in Bahrain". The causes of delays are related to contractor, owner, consultant, services and utilities, government regulations, and external environment. Thus, effects of delays were identified as time and cost overrun, disputes, arbitration, litigation, breach of contract, total abandonment, delay to other projects, obstruction of economical and urban development, disruption of traffic movement, and discredit to the Ministry of works

3. Effects of COVID 19 pandemic in the construction industry

In the explosion of COVID 19 pandemic last year 2020, the construction activities in Bahrain are affected as the budget government is shifted towards the fight of COVID 19. Evidence showed that there is decline in numbers of contracts awarded between 2019 and 2020. It further showed that the construction sector recorded to have a reduction rate in GDP growth. This is very clear manifestation how pandemic affects the construction activities in the Kingdom causing number of projects to be delayed as budgets are being shifted to health services.

The major problem affected the performance of construction industry is caused by the pandemic as it disrupted the construction activities causing delays in project completion. The cause of delays cited by the study of Hasan does not directly pinpoint the delays of the project, but somehow there are issues I assumed causes to the said delay such as government regulations and restrictions in this time of pandemic, external environment pertaining to the effect of COVID restrictions in workplaces, and health considerations of all stakeholders.

V. CONCLUSION

This case study is focused on the services delivered by the Ministry of Works as an organization which plays vital role as construction arm of the kingdom, its main purpose is to study the performance of the construction industry of the kingdom of Bahrain, causes of delays of the project and effects of pandemic in the construction industry. Based on the discussion, we can conclude that the construction industry is performing well from 2014 to 2018 that is before the pandemic.

The ministry of works needs to investigate causes of delays such as related to contractor, owner, consultant, services and utilities, government regulations, and external environment.

In this time of pandemic, the ministry of works as construction arm of the country must address issues that causes to the delay of projects such as government regulations and restrictions, external environment pertaining to the effect of COVID restrictions in workplaces, and health considerations of all stakeholders.

Recommendations

The following recommendations are forwarded:

It is recommended to review the contributing factors for the good performance of construction industry from 2014 to 2018.

Consider the causes of delays studied by Hasan to help improve the construction activities especially in this time of pandemic, specifically related to contractor, owner, consultant, government regulations and restrictions, external environment pertaining to the effect of COVID restrictions in workplaces, and health considerations of all stakeholders.

The Ministry of Works to create a strategic plan considering issues of delays of the services they delivered.

Further thorough study about performance of construction industry specific to services delivered by the ministry are encouraged.

VI. IMPLEMENTATION

Based on identified issues, the Ministry of Works must implement changes on regulations with consideration on good practices during construction performance from 2014 to 2018.

Implement strategic plan to avoid project delays.

Review the COVID 19 pandemic regulations and restrictions specific for construction projects.

REFERENCES

- [1] Tamkeen, Market Gap Study: The Market Gap Report, 2020.
- [2] Ministry of Works, Bahrain, 2021.
- [3] Oxford Business Group, The Report: Bahrain 2020
- [4] R. Hasan, S. A. Suliman, Y. Malki, An Investigation into the Delays in Road Projects in Bahrain, February 2014.
- [5] Business Wire, Bahrain Construction Report 2021: Key Trends and Opportunities to 2025-Research and Markets.com, 2021.
- [6] Construction Week, Bahrain, 2021.
- [7] Bahrain Economic, 2020.
- [8] J. Danku, T. Adjei-Kumi, B. Baiden, and K. Agyekum, An Exploratory Study into Social Cost Considerations in Ghanaian Construction Industry. *Journal of Building Construction and Planning Research*, 8, 14-29, March 2020.